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DESIGN FRAMEWORK FOR THESUBVERSION (SVN) REPOSITORIES SYSTEM SOFTWARE

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ABSTRACT:
Today the Software system is a part of the Evolution in the software development lifecycle is a sign of the key role. Software Evolution (SE) is an important and challenging method in the field of the software engineering. Many research work studies have concluded that part of the 60% to 80% efforts is spent on the software evolution and maintenance. Software reserves, version control and big tracking systems, for example, are important pieces of the multiple software maintenance activities. The version control system is a growing version tracking system; introduced to avoid unnecessary overwriting of the files such as programming code, web pages, and records. It also helps in reducing misunderstanding affected by the duplicate or outdated data of the software system. The proposed study maintained the storage of the(SVNs) and analyzed for the msitone.wiki-spaces.com to minimize resources as well as efforts for the future consumers ideas. The Data from two semesters is taken as observations of analysis. The acquired archives were implemented and deployed to populations of local archives on an online server through a visual SVN server to make a store accessible to remote users. Turtle SVN tool is used as the (SVN) client for access to workplace storage. The analysis is seen with and without to implementing (SVN) Storage. The results suggest that the implementation of the SVN deposits is helpful for the maintenance of the workspace; it also reduces the cost, time, and effort season for their evolution of the software system. While without implementing SVN investments, the workspace had to build a software house by installing every piece from the very foundation.

Keywords: Framework, SVN, Subversion Repositories System, Software, SVN Architecture, Turtle SVN, SVN Relations, Software Repositories.

INTRODUCTION

This Software system is a part of the Evolution in the software development lifecycle is a sign of the key part. The Software Evolution (SE) is an important and most challenging method in this field of the software engineering these types of the tools helped as a repository, and that can be data extracted and how someone participates in the code

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commits and posting email. The source code controller is the central parts of the advanced software system process. A variety of the software SVN systems are presented like the “CVS” (Current Version System), and the “SVN” (Sub-Version), Gate, Mercurial, Bazaar. This is SVN means sabotage; it is the SVN system, introduced to the avoid superfluous over-writing of the files and reduces mistake infected with matching or out-of-date and data of the software system. The “Colb-Net-Inci” developed a revision control system in the 2022 (Colb-Net 2014), and it was used to maintain the historical version of the files system as well as existing the flies system such as the source code of the software system, web pages and documents of the software. This source code revision control software system is used to perform the changes to the code with the text based on the files, the codes of the software system. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, and Tortoise the SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. This software version was designed to replace the old CVN of the system. The SVN works on the directories, files are helpful in the managing them as well as changing them. This feature of the SVN facilitates return to the advance software system version of the program at any time created changings. The development of the SVNs is fast and at low risks of the software development mistakes. If a user inadvertently enters of the wrong code and loses all opportunities to the eliminate the code of the software system can restart the software codes from the any point. Some of basic command line usages of the SVNs are listed here by the [1]-[8]. The SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using the URLs, and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data of the software system. It had no access to multiple users of the software system and without repository, one could just manage or edit files locally in the software system. This is mostly edit option was more used for data analyzing and revisions numbers also the increase whenever edit any file that all files and pages information show through report browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different

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ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed.

1. Check out
2. create or edit
3. Update
4. Commit
5. Storage
6. This software system is consisting of five types of the sessions such as trunks, branches, and tag of the software repositories. The trunk consists of the latest progress software code, parts are multiple versions of the same software product start code line with text the for development time of the software can be used to the produce and tags any version is released to the public, with the source code version number tag of software system. This is SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without this SVN repository new versions could not be introduced. It was also time-consuming for the managing the data of the software system. It had no access to the multiple users. Without repository, one could just manage or edit files locally to the software system. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, the tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. The SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data. It had no access to multiple users. Without repository, one could just manage or edit files locally. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser

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option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions. This research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories.

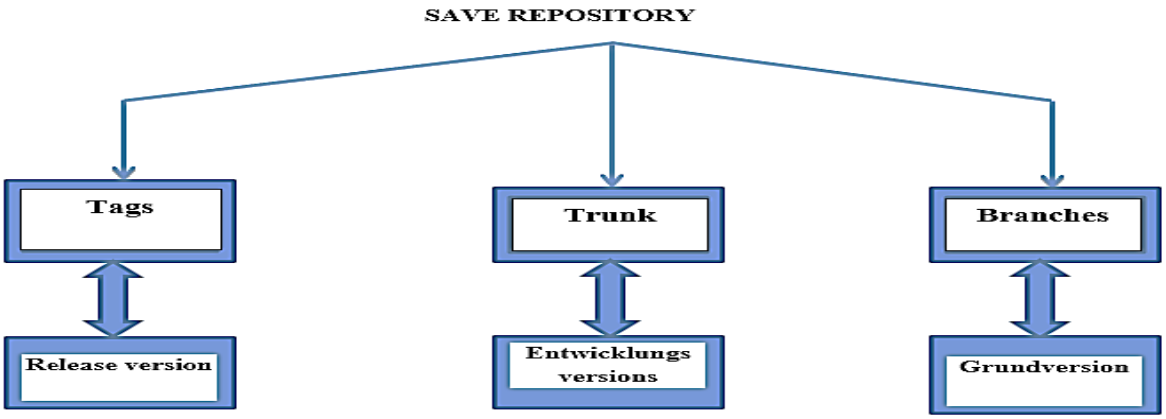

Figure1.1 Concept of SVN Save repository

The F/OSS (Free and Open-Source Software System) schemes participants use some tools like the CVS and SVN version control systems for the lists of the peoples and software bug tracking systems and so on. These types of tools helped as a repository, and that can be data extracted and how someone participates in the code commits and posting email. The F/OSS (Free and Open-Source Software Systems) foreign mission mostly use the repositories well to identify the developer's involvement (Sowe *al*., 2008) [9] to [12].The SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data. It had no access to multiple users. Without repository, one could just manage or edit files locally. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen

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(15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. A software system repository is a piece of the information about the database that is shared engineered artifacts created and used by the enterprise. Examples of such a sample include software, documents and Maps, information systems, and developed isolated components used by the systems such as industrial plants, electronic circuits, automobiles, and airplanes. The software storage services and tools are provided by a repository that is helping developer's they did not need to develop a tool-based on the database of the objects. A common software storage allows devices to the share information, or not shared storage, and that will need protocols for the exchange of the information between machines and software systems (Philip and O-mesure 1994). While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR).

The (MSR) (Mining Software Repository) launches to the significant challenge for both investigators and experts in the software system storage mining sector, encouraging them to the meet its practices, launching posture the (SQL) and Agra UML stake proposed by Tools Dataset (Via and Telia, 2006) at a common destination (General) for the assessment of the reserves. The subversion control system allows multiple people to the work on a project at the same time and for this purpose, it maintains the central repository of the software, hosted on the server. That central repository of the software system contains the version of the files and allows peoples to create the local copies of their personal computers in a process called check-out. The repository of the software system is a central location where different type of the data is stored, and maintained in the other words, we can say that the, a repository is a position where various databases or files are positioned over a network of the software system. The Visual SVN Server is used as a central and local software repository that can be accessible to the remote users of the

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software system. The Visual SVN Server provides a facility to manage software system, install a multi-functional subversion server easily on the windows platform. Tortoise SVN is used as a client tool is for the maintains the SVN repository by the applying their multiple functions and commands.It manages the projects that are in software system,a subversion repository. Kussmaul and College (2008) Emphasize an open-source software tool such as Trac and Moodle version control systems, wikis, work Trackers, and integrated system of instruments, including some in academia and industry experiences that define the use. This approach mainly such tools can explain how to solve common challenges these tools are unrestricted and have a variety of settings, and software development skills with faculty teachers and students can) observe, improve tools. It's very bad way floppy disk or USB drives such as the physical media, using the documents must pass many open source and proprietary VCSs, but the open-source Concurrent Versions System (CVS) and rebellion (SVN) is VCSs mainly designed to work with plain text files that also control other file data types. All the code, website pages, papers, examples, teaching notes, and hand-outs are assumed to use the SVN repository. Faculty and instrumentation projects and team dynamics, which can help identify and correct problems. German (2004) Proposed that the CVS logs be a rich source of trails. He described in what way soft change mines these trails and how improves these trails and allocate addresses of some challenges that researchers face from CVS fact extraction [13]-[18]. The challenges of mining CVS repositories like Mozilla, the repository is in a different computer file of more than 0.7 million different application needs, the process most definitely this tension, and it's a big piece of the bandwidth consumed. Some researchers point to a local snapshot of the project's the CVS repository of the software system can be avoided by having a test-cases are started using Mozilla as it will solve the problem of the software system repository.

REVIEW OF LITERATURE

Ali *et al.* (2019) Proposed study promotes and highlight and internationally position of (OAR) open access repositories. This research work and research study was wholly based upon those types of the data of the software that were collected from an open-source software system directory of the free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise. Their study focused stage of 2168 repositories only that was listed in the Open Directory of Open Access Repositories on the February 8-10, 2022. The open access software system repositories

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are yet over all the evolution in well-developed countries such as Japan, Malaysia, India, ChiWhile in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors.In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). The Taiwan they all countries contribute a good number of the repositories because they become aware countries, but Japan has more than 100 contributing repositories [15]-[19].

Björk (2018) Proposed first repositories in the initial 1990s and has already emerged in science a few areas, and they have a valuable route for broadcasting the results of research. Using very strict addition criteria were 56 subject repositories recognized from a bigger number of indexed which contains two indexes of the repository, A Near the study showed a high variety of organizational size Model, the functions, and topics. On the durable market demand, they first began to emerge subject repositories catered, but later developed an Internet search engine [16].It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors.In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wiseOnce the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines.

Cohen *et al.* (2017) Examine researchers how to use local education repositories at schools that research as well as directly related to the training and attitudes of teachers. In this research, they select 103 teachers from different four schools. A local open repository was created in a first school. The same local repository was established in a second school, but that repository divided into two separate parts, one that is opened for all but while the other was closed for all. Same as first and second school's repository

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was created in a third school, but the difference was that use was not incorporated but in the fourth school, no repository was developed. This research aimed was to discover the Open Educational Resources (OER) for teachers about training and usage. In this study, the use of repositories with their academic work helps teachers exposed. Dyer *et al*. (2017) Suggested that the software world takes the large software repositories means ultra-large-scale repositories, for example, source Forge (350,000+ projects), Git Hub (250,000+ projects), and Google Code (250,000+ projects). They contain an enormous corpus of software and information about software. Four problems occur while maintaining such repositories, the first problem is the experiments are often un-reproducible as an experimental setup requires immense effort. Second, the reusability of experimental infrastructure is typically small. Third, data connected and generated by such experiments are often lost and becomes unreachable and obsolete. Last building assessment infrastructure to process ultra-large-scale data efficiently very hard. To solve these problems, the author designed a domain-specific programming language for analyzing ultra-large-scale software repositories that are calling Boa. In this work, he presents Boa, a domain-specific language, and infrastructure to testing MSR (Mining Software Repository) related hypotheses. They implemented Boa and provided a web-based interface to Boa's infrastructure. They also determined that experiments conducted by using Boa are easily reproduced directly by re-running Boa programs offered by the previous researchers. They collected data thoroughly investigated based on selected factors wiseOnce the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.Their evaluation expresses that Boa substantially decreases programming efforts. Janis*et al*. (2015) Conducted Group at the University of Mannheim describes a large, unabridged dataset of Java source code collected and shared as part of the Mero base Component. This dataset represents one of the largest searchable collections of source and binary modules and these are available online recently made available for download and use in additional research projects. The making of searchable software for increasing reuse levels in software development heaving the web for reusable source files had restrictions since the found files relatively isolated. Most open-source hosts excluded crawlers from their browsable repositories on the web (via

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robots.txt) so that using the locations of CVS and SVN repositories was a more sustainable solution. Mero base's code repository was accessible to other researchers they have created a downloadable zipped tar ball file (compressed approximately 15 GB, unpacked nearly 50 GB) archived. They made the data set and the index underlying the Mero base software search engine publicly available with the hope that researchers find the artifacts contained useful and will maybe create novel, innovative applications for it. Nicholas *et al.* (2013) Proposed a survey of at least 150 repositories contains the impact and achievement of digital repositories. This research result shows the size, use of repositories. Only 8 of the 106 respondents report that the staff used to run the repository go above five FTE. The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by using repositories for new batches.They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions and this research shows the main differences of library directors between some fundamental problems and geographical regions. Klungthanaboon *et al.* (2013) Conducted this research main purpose was to explore the benefits of the use of IRs (Institutional Repositories) for the community of Thai scholars. In this research, they talk about the institutional repositories up to date position and common in Thailand. The concept of institutional repositories in Thailand was just too emerged and over the development. It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR).The client tool helps in the analysis of SVN by applying

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different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The main issue was to scholars as well as institutions faced difficulties about their research sharing or accessing outputs so they discussed may be IRs a sufficient production to solve this problem. Nicholas *et al*. (2012) conducted the address by recording how digital repositories are well used, used for what and thinking of a lot of researchers. Researchers aimed at the green free retrieve movement and digital repositories or records that are mostly created by libraries for storing purpose and create a green publication for all types or reachable are just not for general articles. This study determined four types of objectives, first is the researchers have used repositories or not. Second what the researcher has means by advantages or disadvantages? Third, whether researchers are agreed or disagreed with lots of suggestive statements for digital repositories fourth storage organization and the subject over three years will be more or less important whether researchers. High deposit rates were found, but possibly the most preferred model for collecting a large proportion of researchers in the physical scientists may be down. This type of material in a repository that is subject based central repository is as hard Archives charm physic. Shields *et al*. (2012) Studied how global the availability of quality student work researchers, practitioners, and educators that can be attached to how. The material properties and CAPSTONE papers download rate search machine optimization study the effects of factors. An online digital repository for public use, which is offered through the Texas State University MPA CAPSTONE all 290 papers reviewed. Open access digital institutional repository universities to be engaged in an exchange of scholars are using is a relatively new technology. Students find a research topic and their goal is to build the Texas State University CAPSTONE process is the difference between the two-course sequences is unique. Students following five research objectives, description, gauging the decision-making, or use one of the explanations should be. Results download rate search engine that shows strong support for the effects of factors. Covey (2011) conducted Carnegie Mellon faculty self-archive show that inspired many a website or disciplinary repository to collect their work will not encourage them to Institutional repository. The Scholarly Communication committee's future success in marketing efforts to leverage action plans [19]-[21]. Disciplinary cultures and belief

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systems to reduce the differences between the institutional repository to collect marketing and presents a significant challenge for the development of appropriate guidelines. Giesecke (2011) Conducted this research was aimed to explore the challenges that are faced while developing the repositories and economically managing repositories and then suggest developing successful services for a model. Some university campuses to choose from managing start working with other institutions repositories rather than start their repository. Kankanhalli *et al.* (2011) proposed a model that helped to describe the user's perception and motivation impact and available repository knowledge and their reuse value and then explore the performance benefits from using that system individually. The authors see the problem of this research is to Individual and technological factors, knowledge reuse and electronic knowledge repository performance gains can be achieved in determining the lack of understanding of how to communicate. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wiseOnce the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed They contribute that research in five different ways. First, developed a theoretical model. Second, they individually investigated KMS outcomes. Third, they employed a socio-technical perspective. Fourth, they search for interaction perceived knowledge repository. Fifth, they declare differently in the impact of intrinsic and extrinsic motivations. Wilson and Jantz (2011) Suggested that in 21 century IRs should be best and easy to use in universities and helped with scholarly researcher's contacts and their publications because Institutional repository (IR) due to insufficient faculty self-archiving to experience is largely unpopulated. They also explored several institutional repositories services. They argue that the members of faculty are unaware of what type of additional services that can be Powerful new means of scholarly communication, while at the same time advancing the development impact of their work to improve. Kingsley (2010) Conducted research that provided the institutional repository managers is used in Australia and internationally that gives an overview of awareness and advocacy techniques because the repository is more useful

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in a sense of regular basis updates of any academic record. He was finally getting results of research that the repository is more warmth for their daily workflow by providing appropriate assistance to education will be accepted if useful [22]-[28].

Mitchell and Subramanian (2010) Suggested this research affects the operation of the repositories to discover how to use the concept of scaffolding. They explored some factors that influence of adjustment and anchor choice. Within this work, they are still some ways left introduced. They work with repositories knowledge such as the use of scaffolding as the process involved in the concepts of anchoring and adjustment. Sowe *et al*. (2008) Suggested that the research methodology aims to developers in SVN and mailing lists associated with the simultaneous presence of the probe is to overcome the challenges. The F /OOS developers are posting on mailing lists SVN commits more investigate. Two or more repositories and their activities, contribution to the study of quantitative. Hypothesis H1 FLOSS developers mailing lists to store the code means that even more significant role. Zuccala *et al.* (2008) examined the act of digital repository manager and they discussed in the repository evaluation, managing, and proposed that the information science schools and library that create new repository management. That research showed the overall process of assessment and RM (repository management) teams and users should apply various objectives these interactions were important factors in determining how to measure the Repository for success. Kiefer *et al*. (2007) Emphasize Evo Not, is (Web Ontology Language) Evo Not OWL-based software repository data exchange format. After OWL software, bug-related, and release information was describing data semantics. the event, easily extendible arises by various existing tools and allows deriving claims over its inherent Explanation Logic thought abilities. The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by using repositories for new batches. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of

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Taufer *et al*. (2007) Conducted during the 2005 semester course they as a team showed their four open-source personal research collections Such as web-enabled tools calendars, notebooks, subversion repository, and a research document database interface is efficient at time management, schedule meetings, documents, software, data, minutes, Appointment of sharing and making calls, and tools. These UTEP activities and teams to help the research team used. They total asked questions from 15 different users like two faculty members, one staff member, and 12 students. The result showed that 60% use a web-enabled calendar, 66% use the electronic notebook and 80% document database and to use the software repository is the most difficult challenge. Gurp and Prehofer (2006) Proposed Source products in the software development industry in general, with a focus on the variability tool support for management proposals. They showed that tools are helping Software products and products for Source Tools Products, Source and variability management tools based on management's current version can be demonstrated that the different approaches to explaining how. Subversion is essentially

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a third-generation version management system is a super up example. Their approach new generation required a lot of common features in version control tools. Some essential features are rather than based file-based file systems. They produce better software to support source software with version management functionality based on the product source for variability modeling tools for the completion of the first ideas was outlined. Kim *et al*. (2006) Determined that Software repositories for analyzing received a lot of attention from researchers in recent years have been to, this first version control and issue tracking systems to extract the raw data is mandatory. This research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise. This stands two challenges the first extraction requires significant efforts and second the results depend on the heuristics used during extraction that require an extraordinary effort. Well, there is a TA-RE A-RE Projects Fund and a regular exchange language for mining software repositories identified by that address data and the RE project focuses on extracting a set of software to make a repository of data in a separate data collection project will be used to share. This research works as an Initial exchange language the only version of libraries will define a standard data exchange language that serves as a proposal. Steps of the project are, finalize exchange language, provide initial dataset, include other data sources. Mahemei and Koganuramath (2006) Study they JNU IR towards the implementation of the Central Library to talk about plans and explain some of the available IR software. Institutional repository of scholarly communication in the digital network environment opportunities and systemic issues offer both a strategic response. They also discuss that response to short-term benefits for universities and their faculties during the reaping and long-term research program to further change can be implemented immediately. Under the University's nine schools in more than thirty-six centers, respectively. Each year, nearly 1,000 research papers and awards degrees in about 2022 various fields. Voinea and Telea (2006) Showed that MSR Mining Challenge 2006 and his team analyzed the process of ranking solutions. They act quickly and large software projects team CVS grab tool used for the study was explained. Argo UML and posture the SQL system. The input data used for the MSR Task 2006 projects. They receive data and interactively Argo UML and Posture SQL development tool used to visualize CVS grab. They achieved summarized the solid CVS grab a large software repository mining using weak points. Mostly edit option was more used for data analyzing

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and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. The Beyer and Noack (2005) Introduced two-step methods Interpretable to identify historical co-change groups based on graph layout for identifying clusters. Let's suppose changes in software systems then it should be less expensive and less error-prone to affect only one subsystem, but often changed together are subsystem candidates from the hard left, and then rebelled. Two-step method, in the first step the Co-change graph model of software called a model of standard changes; the version control repository of the software system is obtained. Second, the design of the co-change graph co Page suggests that the sample group is divided. The basic model of the system software version control repositories and they expected that the clustering outcomes enhanced by deleting some limitations of this study. Zimmermann *et al*. (2005) developed the ROSE tool that is applied to version records to data mining that monitor programs besides associated variations. Their method has been understood their point tool is Rose and Rose GCC system for the stable version to recommendations for programmers learned from information stored in the archives, lots of roses and gives precise instructions and proposals. In 63 percent of all transactions rose more than 30% precision with 45 percent of their supplies is a recommendation. Shearer (2003) Study purpose was over a time record the variables if the input activity or use of IRs causal connection exists between whether to discover and describe the successful factors of IRs by Canadian association of research and he also discussed some challenges of this study. The real aim of this study was to introduce fundamental concepts of IRs (institutional repositories), and one of the major challenges for institutional repositories research interest generated was identified.Bernstein and Dayal (1995) proposed the definitions for “repository manager” and “repository” and discussed different approaches to tool addition and implementation problems. So, they described repository manager just like a database application which was used to support the various type of tasks for configuration management, content management, workflow control, and notification. They also discussed technical type issues with repositories like integrating tools, and they also discussed how to put changing in repository managers mainly

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focused on programming, execution, interoperability, and allocation. They also said that the repository systems are one of the important parts of database applications [31]-[39].While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wiseOnce the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed.

METHODOLOGY

3.1 SVN Design Framework for the WIKI-Space

In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories The version is an open source (version control system), used to manage the latest old version data such as coding, website pages and

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records. The proposed research maintained and analyzed the storage of SVNs for MSIT one. httpwikispaces.com to minimize the resources as well as efforts for future consumers. The MSITone.wikispaces.com page was designed wiki -this study analyzed the space page. Thei study focused on the data from the next batch of web pages reuse and evolution phase. So, this purposed archive framework visual SVN server also used Version Control provides users remote and local access to the manually stored archives of the wiki-spaces. The real aim of this study was to introduce fundamental concepts of IRs (institutional repositories), and one of the major challenges for institutional repositories research interest generated was identified. Bernstein and Dayal (1995) proposed the definitions for “repository manager” and “repository” and discussed different approaches to tool addition and implementation problems. So, they described repository manager just like a database application which was used to support the various type of tasks for configuration management, content management, workflow control, and notification.

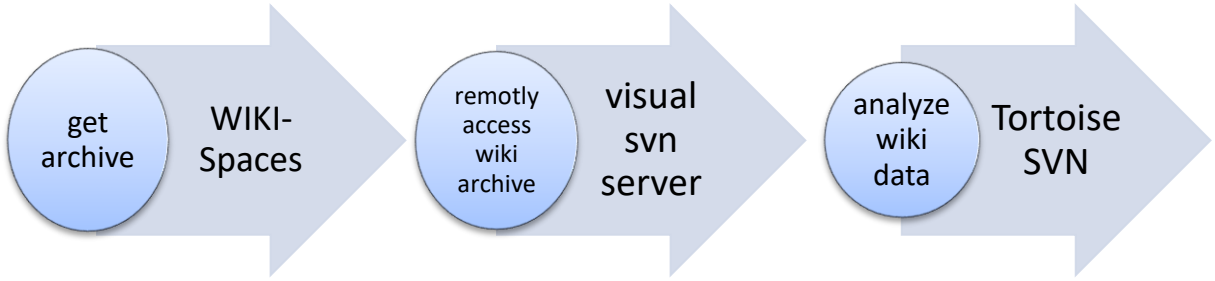

Figure 3.1 Conceptualdiagramforthe SVN to the WIKI-Space relation

1. Visual SVN Server:

The Visual SVN server facilitates easy to manage, install multifunctional version servers on the windows this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester’s academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access platform. It is allocated as ai

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separate installation set with the latest version of all required components. The Visual SVN server uses bullet-in the isolated violations on the HTTP to communicate with customers and web browser Apache HTTP server. The real aim of this study was to introduce fundamental concepts of IRs (institutional repositories), and one of the major challenges for institutional repositories research interest generated was identified for “repository manager” and “repository” and discussed different approaches to tool addition and implementation, they described repository manager just like a database application which was used to support the various type of tasks for configuration management, content management, workflow control, and notification.

Turtle SVN Client:

Turtle SVN is free software used by developers to manage differential versions of the source code. The Turtle SVN tool is used to maintain SVN storage by applying its multiple functions and commands. It manages projects that are a sabotage repository. The Turtle’s SVN storage has three types of the sessions such as tangs, branches, and trunks, which are discussed in the detail here and one of the major challenges for institutional repositories research interest generated was identified for “repository manager” and “repository” and discussed different approaches to tool addition and implementation, this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester’s academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access they described repository manager just like a database application which was used to support the various type of the tasks for configuration management.

3.1 Tags:

Tags are used to highlight the version in the history of storage before any version is released first. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. While in this study SVN repository was

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used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.

3.2 Branches:

Branches are used to create development lines for multiple versions of the same product such as storage space to fix bugs in stable release. Sideline development is also provided. The real aim of this study was to introduce fundamental concepts of IRs (institutional repositories), and one of the major challenges for institutional repositories research interest generated was identified. The SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data.

It had no access to multiple users. The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by using repositories for new batches. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.

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3.3 Trunk:

Trunks are the Maini leading line of the development in the SVN storage. It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc

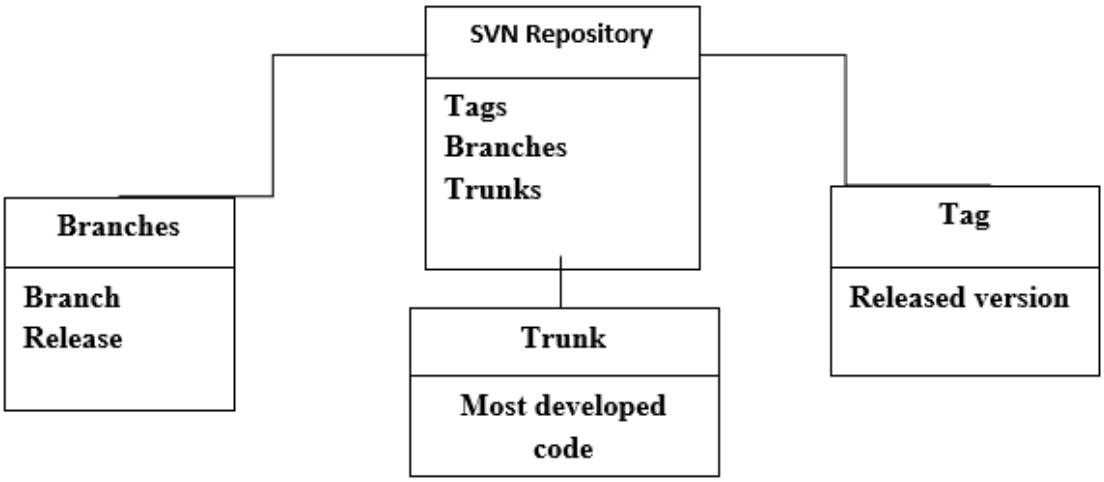

Figure 3.2: The SVN repository schemas

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4. SVN-WIKI-Space Architecture:

This research was carried out through SVN-Wiki-space architecture. This architecture provides full workflow in the step. The architecture is shown in the Figure 3.2. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions and SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories.

7. SVN Relations:

They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages in this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. New versions were introduced to save the efforts of users by using repositories for new batches.

5.1. File Revision Relation:

The SVN Repository file revision can be increased by applying more actions like an edit same file more times that the cause number of revisions also increased.

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5.2. Branch Revision Relation:

Tortoise SVN supports the use of multiple lines of code development (branches) a new file has been created when authors create a new branch in an SVN. This research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise.

5.3. The Revision Transaction Relation:

SVN defines what corresponds to a transaction as part of the relational schema. A transaction in SVN is used to distinguish uniquely a set of operations that lead to the new revision of a file. An operation in SVN, therefore, represents a set of operations that apply to a file before the current revision number is updated.

6. Mapping SVN Repository Schema to Wiki

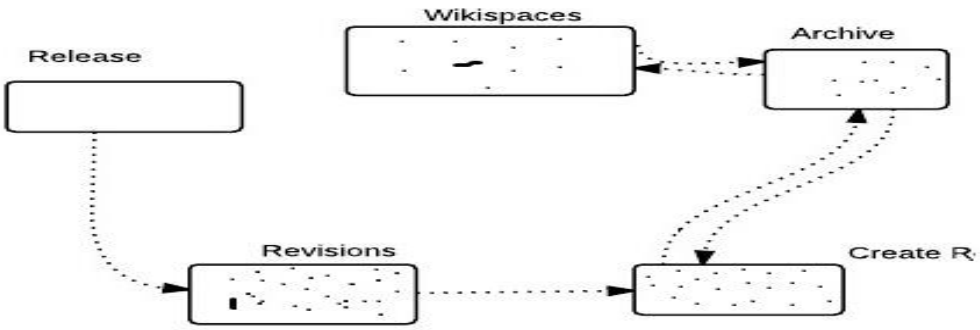

Figure 3.4 Mapping SVN Repository Schema to Wiki-space

The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by using repositories for new batches.

7. Data Collection:

In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications. It was downloaded from the Wiki spaces website,

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and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise.

8. Deploying the Tortoise SVN Tool:

Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.

9. Analyze the SVN Repository:

So many files' folders all types of data were imported in the repository, the tool facilitates so many actions option for edit, remove, update commit, checkout, repo browser, show log, export and so on. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors.

RESULTS

The results of the proposed research have been observed using visual SVN server and turtle SVN client. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions. The SVN repository was analyzed from the client and server tools by applying different methods and commands. Thei working process was carried out in the following steps:

- ✓ Settle workspace data archives on the server using the SVN server
- ✓ Create user/client for the remote access
- ✓ Accessing repository through Tortoise SVN Tool
- ✓ Checkout repository

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- ✓ Analyze files, directories from various aspects
- ✓ Graphically and statistically results of revisions and commits of the authors

1. Populate the archives of the workspace data over server using SVN server

A Workspace information was collected in the form of an archive then manually enter the entire data into the visual SVN server because we needed to access our data remotely. Thei Visual SVN server tool shows administrator Wiki data in Figure 4.1. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc.

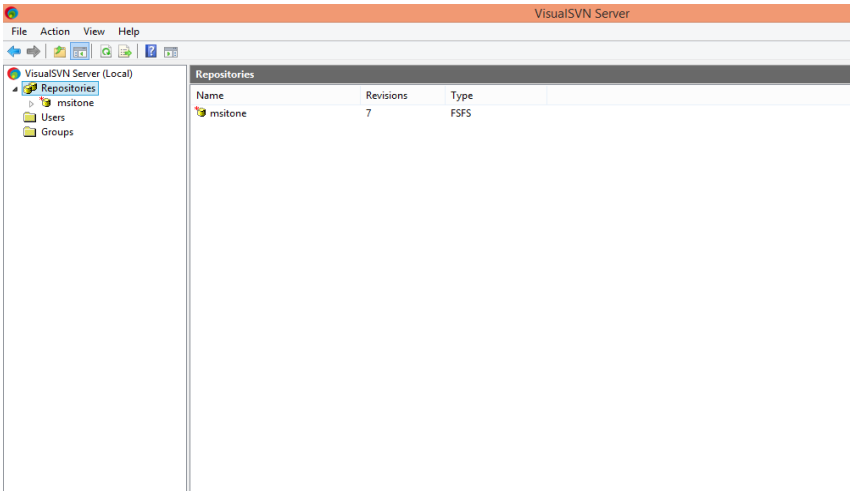

Figure 4.1 Insert manually data into Visual SVN Server

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2. Create user/client for remote access

The visual SVN server was not allowed to access your data without a user account. Create users and then easily access wiki spaces information remotely. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc.

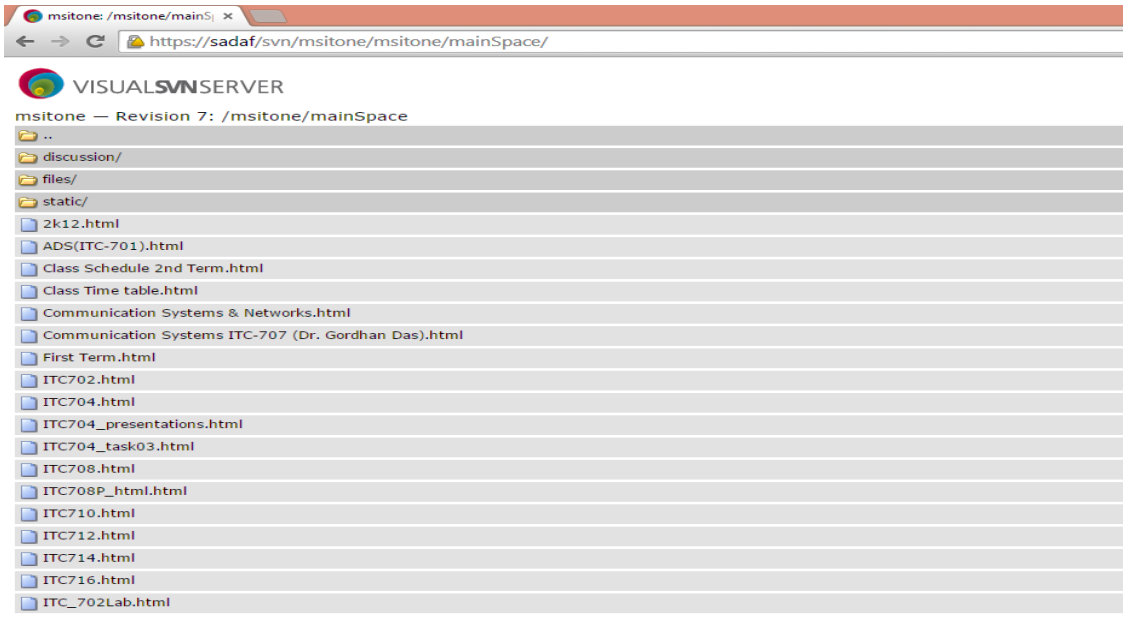

Figure 4.2 Remotely Access data from the server

The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by using repositories for new batches. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions

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3. Accessing repository through Tortoise SVN Tool

Turtle SVN client facilitates creation of a storage for historical data. The process was starting to create an SVN storage to analyze the information of this workspace and increase the revision of various authors. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed, the SVN tool on this data and the important thing was that the changes were automatically updated. The SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data. It had no access to multiple users. Without repository, one could just manage or edit files locally. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times.

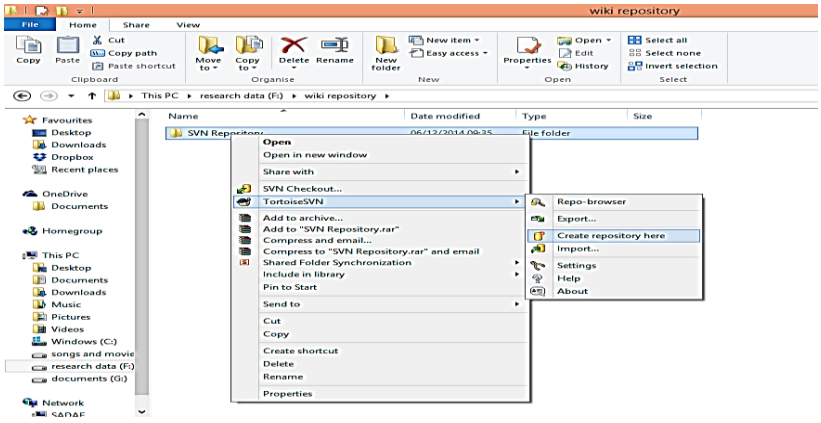

Figure 4.3 Process of the creating SVN storage using Turtle SVN Client-ID Tool

4. Checkout repository

The Checkout was a very important phase in the whole process. When checkout was applied to SVN storage, we used URL of the data which was accessible through visual SVN server and established link/interface between the two tools, and we easily analyzed

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SVN storage, the SVN tool on this data and the important thing was that the changes were automatically updated. It was also time-consuming for managing the data. It had no access to multiple users. Without repository, one could just manage or edit files locally. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times, Tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors. In this research study, an archive of two semester's academic data which include web pages, lectures, and notifications

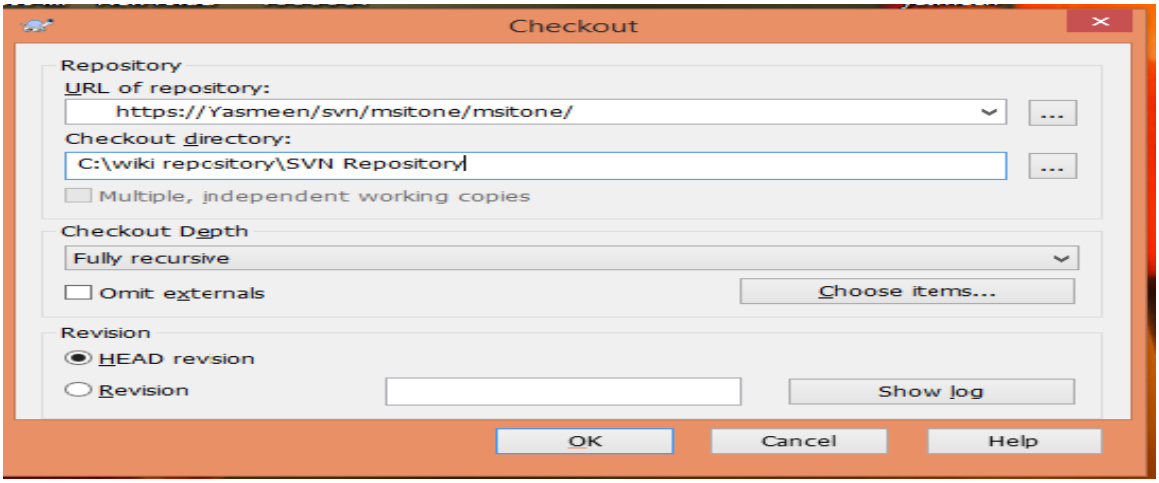

Figure 4.4 Apply check out on SVN Repository and give the server URL

After that username and password required for Authentication and then started the process of checkout. Like that it was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors.

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Analyze files, directories through different actions.

The analysis phase was initiated; applied go repo browser and then more measures the SVN tool on this data and the important thing was that the changes were automatically updated to the server then tortoise SVN tool also provided graphical information about revisions, Authors and generate general statistics report about revisions and authors in this research difference of using SVN repository and without using the SVN repository was analyzed. Mostly edit option was more used for data analyzing and revisions numbers also increase whenever edit any file that all files and pages information show through repo browser option. In this research about fifteen (15) users in the form of authors have analyzed data in different ways, dates and times. Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions.

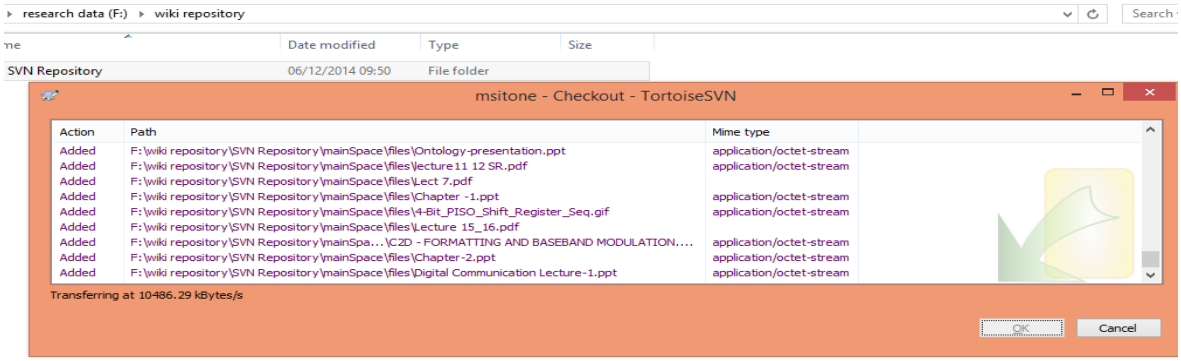

Figure 4.5 Show after the authentication process of checkout data from the server

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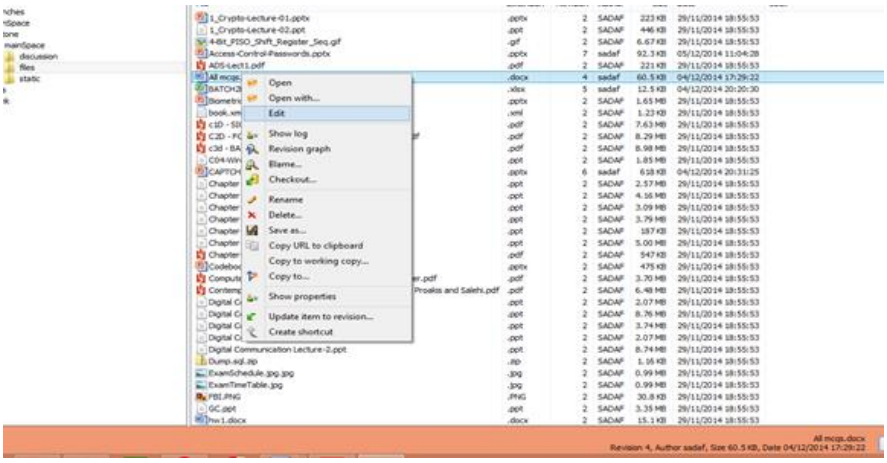

Figure 4.6 Various measures of the SVN Client Tool applied Revision by authors and graphic and data results of the covenant.

Turtle SVN Client_ID provides graphic and statistical results of all activities that were applied to this data. Results based on the comments, authors, history, and files etc.

6.1 Statistical results:

Statistical results have a total count of the revisions, pledges, files, authors and, most of the time, minimum users. These results are generated by turtled SVNs. One of the sample results is described in table 4.1 and 4.2. They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc. shows graphically and statistically output of the analyzed data according to changes occurred in the latest revisions. It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors.

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Table 4.1 Result of Generali statistical SVN Repository

Frist revision number	1
First revision number	**50**
Total file revisions count	**247**
Authors count	**15**
First revisionism date	**Jun 2, 2022, 01:37pm**
Lasti revisionism date	**March 2, 2022, 10:39am**
Most active authors	**A B Brohi**
Least actives authors	**Search**
Number of the weeks- count…,	**4**

Table 4.2 Top 5 files and 10 hot user List

Rank Number	Authors	Files
1	Yasmeen	Alli mcqs.docx
2	Forum	BATCH2K12-LIST.xlcx
3	Gulshan	1-crypto-lecture-02.pptx
4	Hasina	4-bit-PISO-Shift-Register-Seq.gif
5	Alisha	ExamSchedule.jpg.jpg

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6.2 Graphically results:

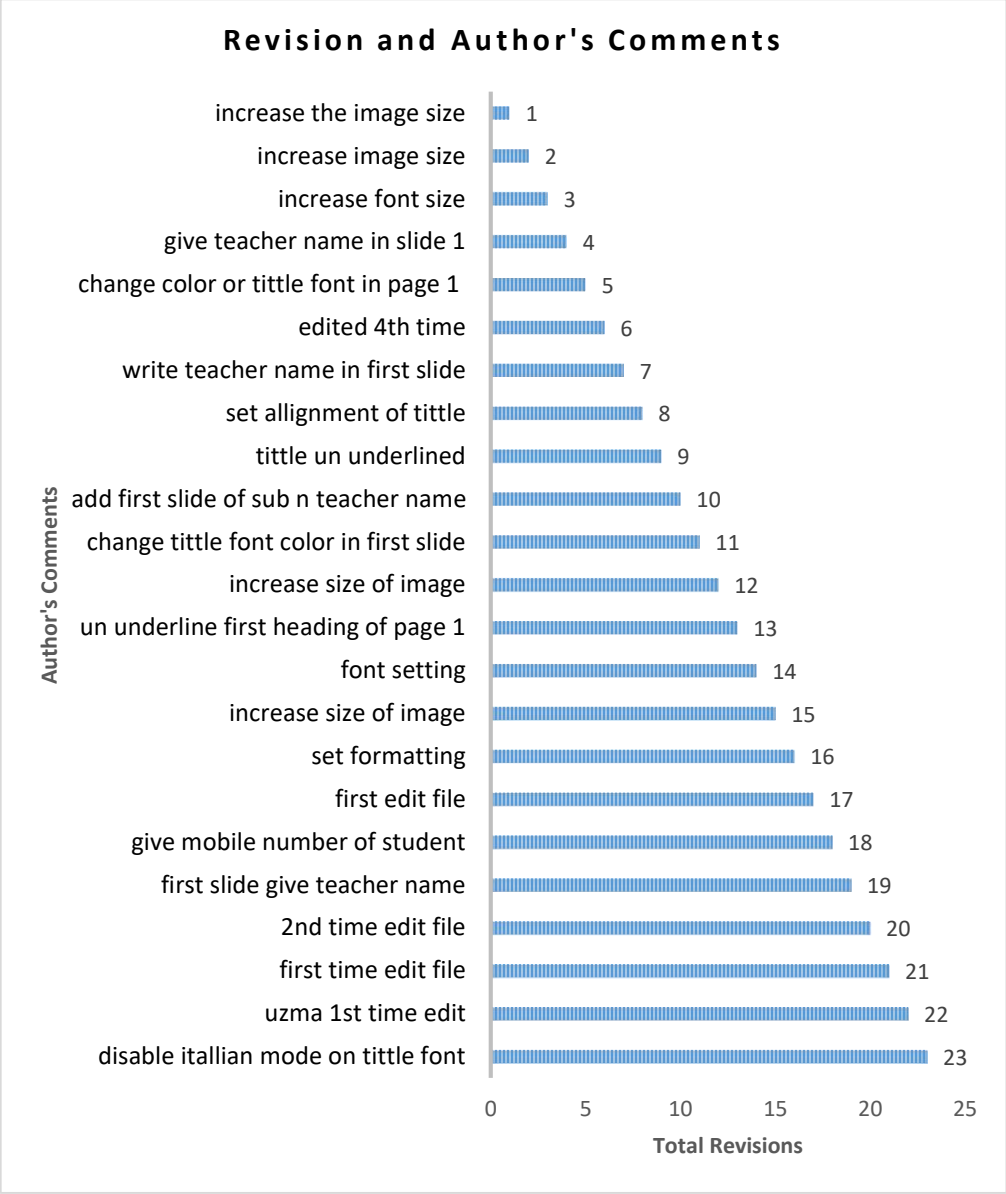

Figure 4.7 Commits to review and complete review

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Figure 4.7 Show all the comments given by the authors on various SVN storage files and dates and calculated the total number of revisions.

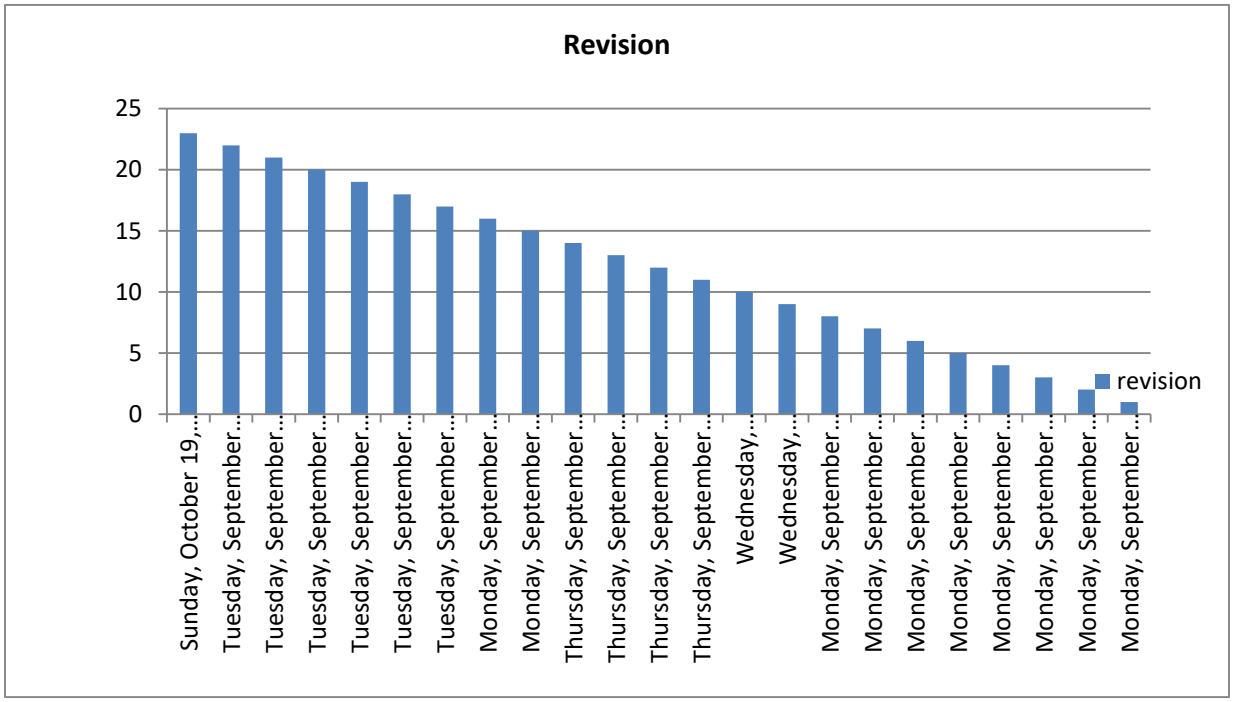

Figure 4.8. Revisions by dates

Figure 4.8 Explains the full review, and each revision has been made on multiple dates.

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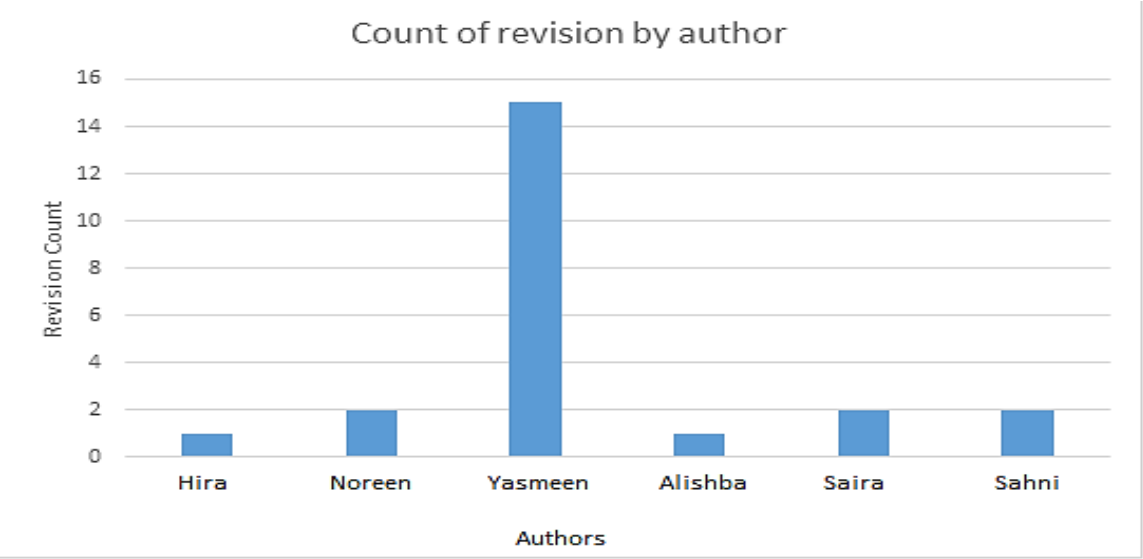

Figure 4.9. Authors and revision count

Figure 4.9 Shows the results of different authors and deletes the commit and applied change modification commands in any file that each author is participating in the form by SVN system percentage. It was downloaded from the Wiki spaces website, and it must be necessary that have an administrator user account on wiki space, this research or study was wholly based upon those types of data that were collected from an open directory of free access repositories (DOAR). They collected data thoroughly investigated based on selected factors wise Once the archives of the Workspaces were obtained the Tortoise SVN client was deployed on multiple machines. The client tool helps in the analysis of SVN by applying different actions such as commit, update, check out, edit, import, and export, etc.

CONCLUSION:

This research focused on the SVN repository of http://msitone.wikispaces.com data which includes daily lectures, assignments, notifications, and so on. The purpose of this research was to maintain thehttp://msitone.wikispaces.com repository in a well-defined manner. It was also used to introduce new versions by changing in directories, files, codes, and web pages. New versions were introduced to save the efforts of users by

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using repositories for new batches. In this research difference of using SVN repository and without using the SVN repository was analyzed. SVN repository used server and client-side tools, because of that data could be easily accessed remotely by using URL and automatically update on the server. While without SVN repository new versions could not be introduced. It was also time-consuming for managing the data. It had no access to multiple users. Without repository, one could just manage or edit files locally.

It was analyzed from the literature that SVN repositories were introduced for the institutional purpose of managing and remotely accessing. While in this study SVN repository was used for managing, remotely accessing and re-using older data for the next batch and teachers and introducing versions by different authors.

Future Work:

It was concluded from the results that by using SVN repositories efforts of users and resources could be saved. It was also concluded that using the SVN repository was better than manually updating data. If the newer version of the repository was not suitable, the user could revert to the older version.

References:

1. Ali, S., S.Jan and I.Amin.2013. Status of Open Access Repositories: A Global Perspective. In Journal,1(1):35-42.
2. Bernstein, P. A. and U.Dayal.1994.An Overview of Repository Technology. Conf-VLDB, Pp.705-713.
3. Beyer, D. and A. Noack. 2005. Clustering Software Artifacts Based on Frequent Common Changes. IWPC.1-10.
4. Björk, B.C.2013. Open Access Subject Repositories – an Overview. Journal(ASIST), Pp.1-20.
5. Cohen, A., S.Kalimi, and R. Nachmias. 2013.The Use of Digital Repositories for Enhancing Teacher Pedagogical Performance. Interdisciplinary Journal of E-Learning and Learning Objects, 9: 201-218.
6. CollabNet.2014. CollabNet Subversion. http://www.collab.net/news/press/ameritas-selects-collabnet-teamforge-its-agile-alm-platform-drive-cost-savings-and Last visited on: 3/16/2014.
7. Covey, D.T.2011.Recruiting Content for the Institutional Repository: The Barriers Exceed the Benefits. J. Digit. Inf,12(3):1-18.
8. Dyer, R., H. A. Nguyen, H. Rajan, and T.N. Nguyen. 2013. Boa: a language and infrastructure for analyzing ultra-large-scale software repositories. ICSE.pp.422-431.
9. German, D. M. 2004. Mining CVS repositories, the soft change experience: In Proc. Int. 'l Workshop on Mining Software Repositories, pp.17-21.
10. Giesecke, J.2011.Institutional Repositories: Keys to Success. Journal of Library Administration, 51(5/6):529-542.

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Journal of Tianjin University Science and Technology
ISSN (Online): 0493-2137
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Vol:55 Issue:03:2022
DOI 10.17605/OSF.IO/974KF

11. Group, J.V and C. Prefer. 2006. Version management tools as a basis for integrating Product Derivation and Software Product Families. In Proc of the Workshop on Variability Management-Working with Variability Mechanisms at SPLC, pp. 48-57.
12. Janjic, W., O. Hummel, M. Schumacher, and C. Atkinson.2013. An unabridged source code dataset for research in software reuse. J. MSR. pp. 339-342.
13. Kankanhalli, A., O.K(D).Lee. and K.H.Lim.2011. Knowledge Reuse through Electronic Repositories: A Study in the Context of Customer Service Support.J.inf-management,48(2-3):106-113.
14. Kiefer, C., A. Bernstein, and J. Tappolet.2007. Mining Software Repositories with iSPAROL and a Software Evolution On tology.In Proc. of the 4thInt'l Workshop on Mining Software Repositories.
15. Kim, S., T. Zimmermann, M. Kim, A. Hassan, A. Mockus, T. Girba, M. Pinzger, E. J. Whitehead, Jr, and A. Zeller. 2006. TA-RE. An exchange language for mining software repositories. J. MSR.22-25.
16. Kingsley, D.A.2010. The advocacy and awareness are imperative: a repository overview.conf(VALA).1-13.
17. Klungthanaboon, W., T. Leelanupab and M.Moss.2012. institutional repositories for scholarly communities in Thailand. KMITL Information Technology Journal, Pp.1-14.
18. Kussmaul, C. and M. College. 2008. Supporting teams with open-source software tools. J. NCIIA. Pp.141-147.
19. Mahomes, L.K, and M. Koganuramath.2006.Institutional Repository of Jawaharlal Nehru University Library, New Delhi.workshop on the development of institutional repository using Dspace (WDIR).64-70.
20. Mitchell, B.T. and M.R. Subramani.2010. Knowledge repositories and knowledgeable action .Conf(ICIS),Pp.195.
21. Nicholas, D., I. Rowlands, A. Watkinson, D. Brown and H. R Jamali.2012. Digital repositories ten years on: what do scientific researchers think of them and how do they use them? J. Learned Publishing. 25(3): 195–206.
22. Nicholas, D., I.Rowlands.,A.Watkinson., D.Brown., B.Russell. and H.R.Jamali.2013. Have digital repositories come of age? The views of library directors. Journal (We bology),10(2):1-16.
23. Rao, P.V.2007.Institutional Repositories: A Key Role For Libraries. In't CALIBER, Pp.689-695.
24. Shearer, K.2003.institutional repositories: Towards the identification of critical success factors. Conf ACSI, Pp.250-263.
25. Shields, P., N. Rangarajan, and l. Stewart. 2012. Open access digital repository sharing student research with the world. JPAE.18 (1): 157-181.
26. Sowe, S. K., I. Samoladas, I. Stamelos, and L. Angelis.2008. Are FLOSS developers committing to CVS/SVN as much as they are talking in mailing lists? Challenges for integrating data from Multiple Repositories. J. WoPDaSD. Pp.49-54.
27. Taufer, M., P.J. Teller, A. Kerstens, and R. Romero.2007.Collaborative Research Tools for Students, Staff, and Faculty. In Proc. of the Int'l SUN Conference on Teaching and Learning.Pp.1-6.
28. Voinea, L and A.Telea.2006.Mining Software Repositories with CVS grab: In Proc. of the 2006 Int'l Workshop on Mining Software Repositories, pp.167-168.
29. Wilson, M.C and R.C.jantz.2011. Building value-added services for institutional repositories (IRs): Modeling the Rutgers experience. IFLA satellite conference, Pp.1-14.

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online): 0493-2137
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DOI 10.17605/OSF.IO/974KF

30. Zimmermann, T., P. Weißgerber, S. Diehl and A. Zeller.2005.Mining Version Histories to Guide Software Changes. .IEEE Transactions on Software Engineering.31 (6):429-445.
31. Zuccala, A., C. Oppenheim. And R.Dhiensa.2008. Managing and evaluating digital repositories. Journal (inf.res),13(1):1-32.
32. Laghari, Asif Ali, Kaishan Wu, Rashid Ali Laghari, Mureed Ali, and Abdullah Ayub Khan. "A review and state of art of Internet of Things (IoT)." Archives of Computational Methods in Engineering (2021): 1-19.
33. Khan, Abdullah Ayub, Aftab Ahmed Shaikh, Omar Cheikhrouhou, Asif Ali Laghari, Mamoon Rashid, Muhammad Shafiq, and Habib Hamam. "IMG-forensics: Multimedia-enabled information hiding investigation using convolutional neural network." IET Image Processing (2021).
34. Khan, Abdullah Ayub, Zaffar Ahmed Shaikh, Asif Ali Laghari, Sami Bourouis, Asif Ali Wagan, and Ghulam Ali Alias Atif Ali. "Blockchain-Aware Distributed Dynamic Monitoring: A Smart Contract for Fog-Based Drone Management in Land Surface Changes." Atmosphere 12, no. 11 (2021): 1525.
35. Khan, Abdullah Ayub, Asif Ali Laghari, De-Sheng Liu, Aftab Ahmed Shaikh, Dan-An Ma, Chao-Yang Wang, and Asif Ali Wagan. "EPS-Ledger: Blockchain Hyperledger Sawtooth-Enabled Distributed Power Systems Chain of Operation and Control Node Privacy and Security." Electronics 10, no. 19 (2021): 2395.
36. Khan, Abdullah Ayub, Zaffar Ahmed Shaikh, Larisa Belinskaja, Laura Baitenova, Yulia Vlasova, ZhannetaGerzelieva, Asif Ali Laghari, Abdul Ahad Abro, and Sergey Barykin. "A Blockchain and Metaheuristic-Enabled Distributed Architecture for Smart Agricultural Analysis and Ledger Preservation Solution: A Collaborative Approach." Applied Sciences 12, no. 3 (2022): 1487.
37. Ayub Khan, Abdullah, Asif Ali Laghari, Aftab Ahmed Shaikh, Sami Bourouis, Amir MadanyMamlouk, and Hammam Alshazly. "Educational Blockchain: A Secure Degree Attestation and Verification Traceability Architecture for Higher Education Commission." Applied Sciences 11, no. 22 (2021): 10917.
38. Khan, Abdullah Ayub, Asif Ali Laghari, and Shafique Ahmed Awan. "Machine learning in computer vision: A review." EAI Transactions on Scalable Information Systems (2021): e4.
39. Sarwar, A. L., & Humair Nawaz, Z. A. (2021). Analysis Of Session Initiation Protocol with++++++++++++++++++++++++++++++VoIP In Multimedia Conferencing System. *International Journal*, *10*(3).