CHAPTER-2

LITERATURE SURVEY

Lang, M. (2011)

This Paper introduces Agile software development involves self-managing teams that are empowered and responsible for meeting project goals in whatever way they deem suitable. Management are required to place more trust in such teams than under a more traditional development methodology. This paper highlights how the use of agile practices can enhance trust amongst agile team members. It also presents challenges that agile teams may now face as a result of using agile practices, which are based on the findings from three case studies of agile software development teams.


In this paper there are various methods used in the development of software engineering projects one of the method is called the agile SD. Most of the agile SD are having methods and techniques. These techniques are very much helpful in the normal design of software and are more application oriented. Hither to there is not a single method which fits all the situation in one box. Hence there is a need of SEM the use of SEM helps to handle any situation which arrives in the project. this will avoid the risk of project failures and help in deploying an error free SE project [85].

Brown, N (2002)

The work described has been driven by the desire of an internationally recognized manufacturing company, Rediffusion Simulation Ltd. to improve the bid definition process. In the area of flight trainer manufacture, the
procedure of project bid delineation is one which is time-consuming, and yet must occur within very limited timescales. The procedures included in bid description are, supremely, correctly the same as those of full PM. The authors present research which investigates the use of the Information-based structure example in the domain of PM.

Shuai Zhang (2010)

In this Paper the author explains as cloud computing is growing day by day there is a requirement of various computing models to access the relevant data and the resources more efficient and provide effective outcomes. The basic framework of the cloud should be shared among various resources and the outcome should be a result of all the features extraction from the cloud infrastructure the various services provided by the cloud infrastructure should be used to yield better results and performance in the SE Project [86].

Chunye Gong (2010)

This paper includes the cloud computing is one of the booming fields in the research area’s today most of the research is carried out in various services of cloud computing which makes it different and unique from the distributed computing infrastructures and platforms thus there is a huge scope in the development of services in cloud computing [87].

S. Khan (2011)

This paper explains the development in the area of cloud computing results to an important bench mark which helps in improvement and utilization of various resources provided by the computer system’s like the processing power, the CPU utilization the hard disk utilization and the execution speed utilization bundled together with no extremes and more efficiency rather then
the previous systems which were more machine oriented than execution or result oriented these systems are more open and expandable as and when required by the software deployment on the cloud computing architecture and hence the uptime and resource utilization has boosted the results of most of the software’s which are deployed on cloud computing [88].

**Xu Wang (2011)**

This paper describes the various developments that have taken place in past few years with the technological advancement in the field of cloud computing. As the word cloud suffices maximum with no boundaries its important and in fact more enriching feature with help of which the limitation of the growing requirements of project can suffice otherwise it was very difficult to add speed in computing and more resource’s easily with the pay and go model its very easy to increase and decrease the resources as and when required by the project in the cloud infrastructure [89].

**Clark, B.K. (1996)**

This paper contributes the improvement in the various software development activities and its phases with improvement in overall activities of software engineering project management systems the effort in the various phases of software should be measured and the result of each phase and the effort employed should be measured using the COCOMO2.0 method all the data which is collected from different phases of software development should be cumulative to get better performance of software project [90].

**Zheng Li (2010)**

This paper the author addresses the main concern on the cost of a software project which will be designed under the SOA technology. The traditional
methods that are employed in measuring the cost of a software engineering project are not sufficient or inadequate of the SOA based software engineering project hence some new methods such as DandC should be used [91].

**Bin Mansor (2010)**

The author focuses on the various factors which should be considered while deciding the cost of a web based software project as the management needs the plan the budget and allocation of resources for the web based projects. According to the study made by the author he finds the COCOMO2 model of software engineering project cost estimation is appropriate once because it uses the function of reusability which is the key factor governing the web based software project cost estimation thus the management team can easily now assist the cost incurred in the development of web based software projects for the clients [92].

**Gerhard Chroust (1996)**

The author in this paper focuses on the challenges that management will face when they are planning to build a product for the company as most of the product development involves high risk and lot of resources and cost in the design and development of the features of the product and how the PMS can resolve the various conflicting issues in the design of the software products [93].

**Casper Lassenius (2002)**

In this paper the author explains how the software processes can improve and enhance in the growth of the SE projects as most of the companies specifically mid range or small companies still find it difficult to employ adequate manpower and resources to the projects so we need various tools to manage
the processes that will cater to the needs of the growing software industry. The various phases in the PMS need a management software so that the outcome of each phase can be monitored and notified to the PM of the project and accordingly the company can take appropriate decisions on the software project under development [94].

**Ephraim Feig (2008)**

In this paper the author explains the various strategies to be followed in the real-world implementation of SOA. The main challenges which will be more relevant and how to tackle these challenges of security, availability, accessibility, governance to be taken into consideration and handled by the management. It is more important and necessary to cater to the need of SOA utilization in the real-world infrastructure. What are the things that need to be exempted to get better performance and result of SOA in the real-world implementation [95].

**Jan Bergandy (2008)**

This paper emphasizes on most of the software engineering studies today are having less actual data for implementation. It is important for organizations who are running such type of programs to provide a bundled collaboration between the theory and the practice in the industry to bridge the gap between equation and implementation in the real world. There should be various processes which signify the correlation of theory with the real-world project of software’s [96].

**Barry Boehm (2009)**

In this paper, the author focuses on a specific university, which actually runs a program of software engineering. This educational perspective is closely related to the experimentation carried out in the industry. Students are
encouraged to get hands on experience on various research tools and use, deploy and get their results. The graduate school helps the researchers to use their infrastructure as the test bed for their research activity[97].

**Eric Ras (2009)**

This paper explains the various phases and steps that are followed by the project wiki’s which uses the implementation phases of SE and as the web technologies are growing at a tremendous rate its important to keep the content more updated so that the track of information is not lost so wiki’s should actually employ the software engineering practices and phases to get better results in development of products [98].

**Andreas Discher (2009)**

In this paper the author explains the technicality of the resource availability and the various web services employed commercially to get the appropriate result in a research project that is ongoing. There are lot of business services available in the market and how these can be available and utilized by the commercial software engineering development products so that the portfolio of the software engineering project can be maintained easily [99].

**Winnie W Hua (2009)**

This paper focuses and emphasis on how large-scale industries in software domain can make utilization of the emerging technology called SOA. The author explains about the roadmap which will guide these large industries to follow the footprints and achieve a full implementation of the SOA so that all the features and capabilities of SOA can be accessed and used more effectively and efficiently to get the maximum outcome and more results [100].
**Jun Liu (2009)**

In this paper the author is mainly concerned with the problems that are occurring while adoption of the SOA technology by most of the software engineering projects. There are lost of challenges that needs to be faced by the software engineering projects and if the technology for adoption is changed the various features which are designed for the software are also affected so SOA is one of the technological change which effects the present model changes [101].

**Ricardo Neisse (2009)**

In this paper the author is describing the dynamic behaviour of the service assignment to the business process. Most of the companies today are providing services for various domains in software engineering process but it is important to have an appropriate service provided to cater to the needs of business and ever increasing resource and infrastructure requirement of the developers to do so we need a model that dynamically and easily reassigns the required services to the best available service provider so that the business operations are not affected [102].

**Dejun Chen (2009)**

In this paper the author mainly focuses on the virtual enterprise control system. As most of the resources are available virtually its important to manage the enterprise virtually which allows various operations inside the enterprise to be managed effectively and efficiently to get the desired results from the SOAEMS the SOAEMS solution should be employed in the growing business so that enterprise management becomes more efficient and reliable [103].
Jonas Helming (2009)

In this paper the author explains the various tools that can be used to model the software engineering projects. Some of the tools are required at the initial stage of project management while some are required during project execution and some for organizational management all these tools are the best ones to manage their tasks but these tools do not provide integration so finally we need to have a tool that provides integration between all the phases of the software engineering process [104].

Zhao Yongyi (2009)

In this paper the author explains how the SOA can be used to control the workflow in an organization by designing a tool using SOA technology for workflow management a number of services bought together can also constitute to a workflow most of the SOA systems are designed keeping in mind the workflow management there need to be synergy between various workflow systems and their contribution in the scheduling of management workflows [105].

Nir Mashkif (2009)

In this paper the author explains how critical it becomes when shifting from a proprietary business model to the industry standard model which actually impacts the usage of SOA technology and its standardizations the standards need to be followed according to the needs of the growing industries and a exact composition of standards should be used to achieve better results the SOA collaboration should be such that critical outcomes can be easily achieved while shifting from proprietary business to industrial standard system [106].
Feng Jingchun (2009)

In this paper the author elaborates that most of the projects today are contract based projects it’s important for the contractor to select an appropriate model of contract which implies in the IT domain. This model should be related with various stakeholders and their contribution and the entity relationship should be drawn between the contractor and the stakeholders involved in this project. This paper implements some contract models and shows the relationship between various stakeholders involved in the IT project contract [107].

Stefanie Betz (2009)

In this paper the author explains how software engineering education has lost its focus on global collaboration of the project. As most of the graduates today are not trained to explore the distributed software design and development as most of the software industries demand this process most of the graduates lack in interpersonal skills and process management also due to inadequate knowledge of distributed collaboration of teams and knowledge [108].

Bin Xu (2009)

In this paper author explains how researchers today disagree that the software quality is adequate because there is no software to validate the software products that is delivered to the client is working efficiently and delivering the results accepted by the client so its important to have tools for validation of software that is produced by the company as a product for the client [109].
**Kam Jugdev (2011)**

In this paper the author explains the major contribution in the various key factors that are governing project management the most important is the outcome of the software engineering project and also the factors that are dependent on the PMS software its outcomes with reliability most of the researchers today are contributing in the competitive outcomes of PMS to improve more productivity in less time [110].

**Roy Rada (2001)**

In this paper the author explains that there are number of models to manage a software project most of the PMS software’s are managed using the models and the models are selected depending on the company standards and their inclination towards the specific companies PMS solutions most of the companies which are corporates follow the Microsoft SF which is useful to manage the ongoing and developing software product this depends on the inclination of the company towards the Microsoft standards and their contribution in the real world systems. Other models which is used by the defense system is the Capability Maturity Model which is widely accepted in the defense systems of USA. Depending upon which organization is using which model according to their requirements and the outcomes accepted from that model is important [111].

**Leping Chen (2009)**

In this paper the author explains that the resource utilization for the various PM software and how the analysis is done for multiple projects the allocation of resources for the multiple projects is a critical point in the growing software industry today. So its important to have a dynamic characterized software to
manage these resources [112].

**Robert B. Rowen (1990)**

In this paper the author explains the prototyping of the requirements in the software engineering project. Most of the Gov. organizations fail to give the requirements in time and most of the requirements are ambiguous most of the times so its important to remove the ambiguous requirements in the early phases of software development its important to frees the requirement of the users and the Gov. organizations most of the time the requirements given by the Gov. organizations are also incomplete its important to have adequate requirement which should be achieved before the prototype of the software is ready. Its also important to prototype the requirement in a graphical manner so that the ambiguity can be resolved in the requirements phase of SDLC [113].

**Robert Neumann (2011)**

In this paper the author identifies the key challenges a medium-sized software organization is facing in migrating towards Software Product Line Engineering (SPLE). The software engineering context of the company is characterized by a two-fold access to the market – core customer driven product enhancement and product development for a broader, anonymous market – and the embedding of software engineering in multi-disciplinary systems and solutions engineering.

Based on a characterization of the business, the software product subject to migration towards SPLE, and the goals and background of the SPLE initiative, seven key challenges with respect to the migration are identified. These challenges relate to process diversity in the face of multiple reuse approaches;
the management of requirements and variability; the integration of requirements traceability and variability management; legacy software and discipline- vs. software-specific modularization; integration with systems engineering; costing and pricing models; and project vs. product documentation.

Maximilian Koegel (2010)
In this paper the author explains software based configuration management system, its important to have good models that connect and correlate the different phases of SDLC most of the graphical models are difficult to configure and manage so its important to have an auto configuration model for the graphical systems and they should also support concurrency control since they are geared towards textual artifacts and do not take the graph structure of models into account. The approaches for conflict detection in these systems show many false positives, since they require a merge every time the same configuration item — in this case the same file — is changed. In this paper, we propose operation-based conflict detection, which detects conflicts directly on the operations that change the model. We compare operation-based conflict detection to file-based conflict detection in a multi-case study and show that operation-based conflict detection results in fewer conflicts and therefore requires fewer merges [114].

Dino Mandrioli (2010)
The author of this paper would like to focus on the key importance of software engineering projects which are executed and presented in the S.C.O.R.E contest its important to express the students that the work done is appreciated
and of good quality this paper also explains the difficulties which were faced by the organizing members of the committee to run this event. This event is different from the normal project exhibitors conducted by most of the colleges around the world [115].