

Software Project Life Cycle – Management (SPLICE-M)

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Abstract: Splice-M is a Web based application which provides suit of Project Management services. It provides common entry point to the team for PMLC, PDLC, SCM, Quality and Time booking activities. It is developed in ASP.net technology and uses SQL database in backend. Time booking service is one of the services from the suit. It facilitates Project Managers (henceforth referred as PM) to share the Project Management Plan with the team and assign Project Tasks to Team Members (henceforth referred as TM). TMs book their time against assigned Tasks.

TMs also have facility to add Non-MPP and Non-Project tasks. PMs have all the facilities which TMs do. In addition to that, PMs are provided with the dashboard where in they can view their Team Member's Time booking. Splice-M application is secure, it neither expose any web-service nor provide direct access to database.

Keywords: Time sheet, Task Assignment, Reports, Task Tracking, Reviewing.

I. INTRODUCTION

SPLICE-M stands for "Software Project Life Cycle – Management".

It is a tool developed by L&T InfoTech to automate the various software development life cycle processes.

It is a web-based tool that can be accessed through Intranet or Internet.

SPLICE-M application has one centralized server for Organization data maintenance and the individual location specific server to maintain project specific data.

Organization data and centred specific data are synchronized periodically.

II. EXISTING SYSTEM AND LIMITATION OF EXISTING SYSTEM

The Existing system is an earlier version of proposed system. The existing system was developed using ASP technology and oracle backend database. It monitors and manages the project development life cycle. The working process is slow and less security because of limitation of asp technology. The existing system look & feel is bad due to less features provided by the asp technology and it is very difficult to maintain various software development life cycle processes using asp technology. Very less development and debugging tool available. It had no in built validation control and Error handling was very poor. In ASP if you need to update code on the existing page then it was mandatory to restart the server to get reflect. It has limited oops support and not having built in support for xml. There was no facility to create reports with SSRS (SQL Server Reporting Service).

To overcome above issues and upgrade the existing system it is proposed to redesign in asp.net technology because .net provides various features to overcome difficulties and issues of existing system.

III. LITERATURE SURVEY

For this, the need arises to understand the viewpoint of two important entities: Top management and users.

In order to gather information, I interviewed the Top Management and asked the following questions:

- How the present work is going?

The present work is done on Web based Application which developed in asp . The working process is slow and less security. Very difficult to maintain various software development life cycle processes.

- What all drawbacks are in the present work flow?
 - Difficult to understand Risk Management
 - Resource Allocation
 - Time Estimation
 - Security issue
 - Slow Process
 - Manual Documents
 - Requirement Specification Documents
 - Approval/Rejection by SQA.
- What is their vision about the new system?
 - Security i.e. authentication and authorization
 - Mail Server for mail notification.
 - Project Connect (ESA) for project details.
 - Role Allocation.
 - Requirement Specification Template.
 - Project Estimation.
 - Project Tracking for Client and PM.
 - Risk Management Monitoring.
 - Making Tickets for TM.
 - Software Configuration Management.
 - Audit Logs and Audit Dashboard.
 - Who will be authenticated to access data and his/her access rights?

In this system the Admin and the employees of L&T InfoTech are the users of the system.

They have different writes to access. The writes are maintained in the Master Database (Center).

Project Roles

Role name	Role Description
CCB	Change Control Board
CL	Configuration Librarian
CUST	Customer
DH	Delivery Head
DPG	Defect Prevention Group
OSC	On Site Coordinator
PL	Project Leader
PM	Project Manager
PMO	Project Management Office
QL	Quality Leader
QM	Quality Manager
SM	Senior Manager
SQA	Software Quality Assurance
TM	Team member

Group Roles

Role name	Role Description
CH (Center)	Center Head
CSA (Corporate)	Central System Administrator
CQA	Corporate Quality Admin
DDBA (Corporate)	Defect DB Administrator
DPC (Center)	Defect Prevention Council
LSA (Center)	Local System Administrator
QH (Corporate)	Quality Head
RDBA (Corporate)	Risk DB Administrator
SBUH (Center)	SBU Head
PET (Center)	Process Excellence Group
SG (Center)	Support Group
CC	Compliance Coordinator
METRICS	Metrics

To find more about present system's working mechanism such as the ways of getting inputs and providing outputs, I interviewed the current employees of the L&T InfoTech by asking following question:

- Are they comfortable with the working system?

As per the interviews of the employees they are not satisfied with the working system because the slow process and the maintaining problem of the documents and role allocation and project estimation.

- Do they feel the necessity of new automated system?

Yes they fill the necessity of new automated system because of the drawbacks of the working manual system.

IV. NEED OF PROPOSED SYSTEM

With current system it is very hard to maintain and track entire software development life cycle processes. Proposed System is developed in ASP.NET and backend is Oracle and based on Agile Methodology.

V. OBJECTIVES OF NEW SYSTEM

- To Maintain Timesheet of Employee.
- To Track Project Cost Estimation
- To Track Risk Management
- To Generate timesheet report
- For Role Allocation
- Project Tracking for client
- For Ticket Tracking for Team Member
- To Track Team Member Work Efforts
- To track Employee Performance

In this system the Admin and the employees of L&T InfoTech are the users of the system.

They have different writes to access. The rights are maintained in the Database.

Users of this application include all the employees of L&T working on different projects and the clients and customers included by the respective project group.

Splice-M is a secured application and all the users are authenticated by a valid username and password.

Splice-M on valid login opens the project central screen where all the modules included in this application are displayed depending on the access level of the user.

The project activities are classified into Menu which has options and sub options.

The various options and module access available to a user is based on his/her role in a project (for eg. Project Manager, Team Member, Customer, etc.)

A user can have multiple roles in a project or can be a part of multiple projects. In Splice-M one can access all the projects he/she is working on, based on the base location set for the project

VI. ADVANTAGES OF THE PROPOSED SYSTEM

The proposed system will have following features:

- Security i.e. authentication and authorization
- Mail Server for mail notification.
- Project Connect (ESA) for project
- Role Allocation.
- Requirement Specification Template.
- Project Estimation.
- Project Tracking for Client and PM.
- Risk Management Monitoring.
- Making Tickets for TM.
- Software Configuration Management.
- Audit Logs and Audit Dashboard
- Defect Tracking (Testing)
- Report Generation

VII. TIME SHEET MODULE

This is the first screen that is displayed to the user on logging to SPLICEM. Project list and the role are shown in the right side.If a person has more than one role and

allocated in more than one project then it is shown in the drop down list.

Role based access is provided for Menu, option and sub options and the icons shown.

Task alerts and the Event alerts are shown at the right and the left side of the Home page if present for the user.

Buttons in the Tool Bar Home,General,Timesheet,Logout .

Home : It shows the role based Icons and the buttons .

General : It shows a dropdown list link specific to the roles like MyProfile,Tickets,RiskCentral.

TimeSheet : It shows the dropdownlist link specific to the role logged in.

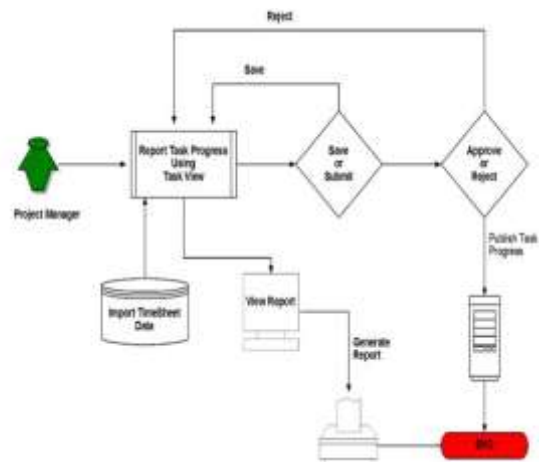
Logout : User can logout by clicking the button.

Icons	Description
My Projects	It shows the list of the Projects and the allocation details. Planning done for the projects and the start ,end date,completion status of all the projects allocated is shown.
My Planning	Planning details ,task details and charts of all the resource according the date filter is shown.
My workforce	Booking of the efforts planned for the task allocated in the Project.
TimeSheet	
General Mail	Mail can be generated and send.
MOM	Minutes of meeting can be created using the MOM.
WIMS	New workitem can be created for the project. Audit log,PAL,RISK log,review log,training details,BUG report, planned audit for the project
Project Status report	customer Status report can be generated.
Client status	
Review	New review log for the project can be created. All the review log the user logged in will be shown .
Review Central	Authorization Central page where authorization plan and Authorization workbench is shown. Defect charts, Category Wise impact,CauseWise impact and the PCI charts of the Project is shown.
Dashboard	Billing Timesheet Central page to create new billing,sent to accrual can be made.
Billing	

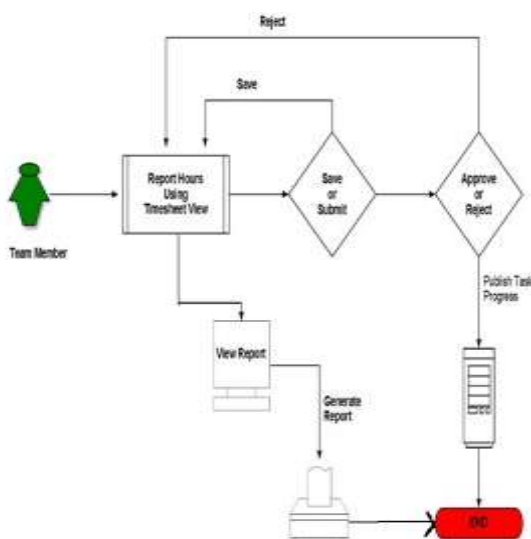
WORKFLOW DIAGRAM FOR TIMESHEET-



PROJECT MANAGER WORKFLOW-



TEAM MEMBER WORKFLOW-



PROJECT MANAGER HOME SCREEN-

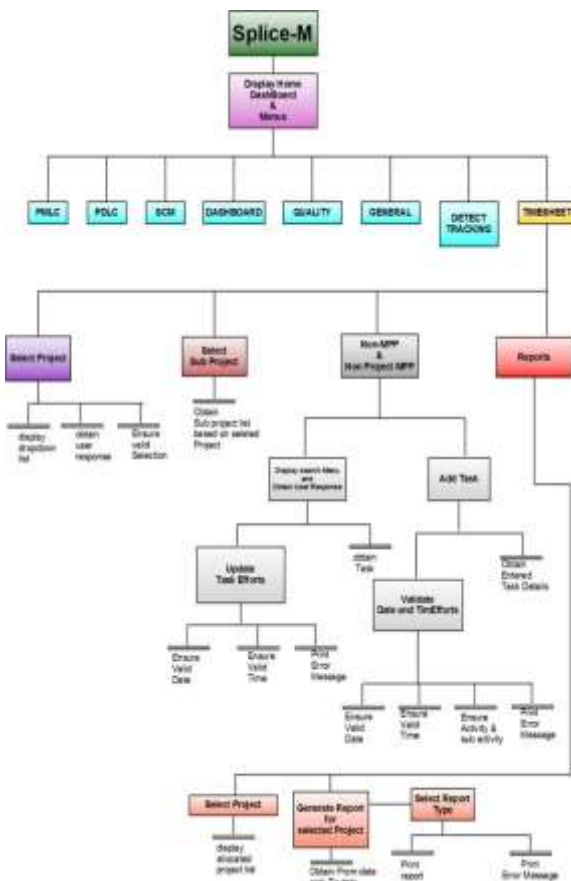


HOME SCREEN (TEAM MEMBER)-

ADD TASK EFFORTS (TIMESHEET PROJECT MANAGER)-

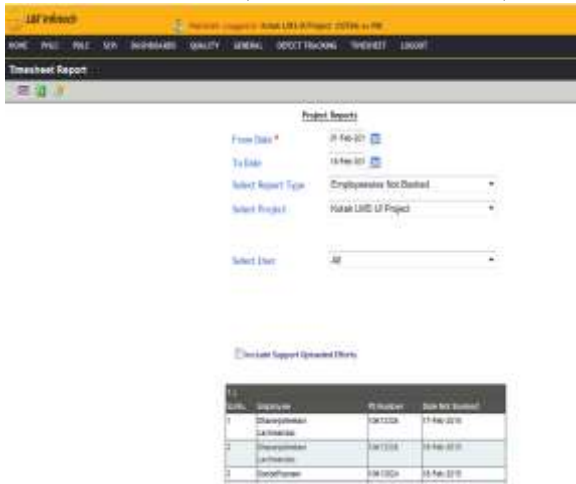


MODULE HIERARCHY-



SCREEN SHOTS-
 LOGIN SCREEN-

REPORT (PROJECT MANAGER)-



VIII. CONCLUSION

The overall goal remains to deliver a site that is easy for users to use and valuable to the business

We have strived to prevent the occurrences of the errors using different methods like error detection, correction and tolerance (e.g. Exception handling).

The Performance and the quality of the system is improved

The major advantage of the system is Report Generation using SSRS is achieved .

IX. REFERENCES

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