Software Requirement Specification

Version 1.0

Project Management System

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Semester - 5

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1.Introduction

1.1 Purpose

To develop a fully functional and user interactive online tool which can enhance and help various project management users to manage and compile their work efficiently and productively

1.2 Scope

- Create different users with varied roles and scopes.
- Confirm each member by providing activation codes.
- Manage all project details like tasks, deadlines, team members and resources.
- Assign different tasks to different members.
- Provide documentation to the members about the tasks being added
- Update all members about new proceedings in the project.
- Bind all the information provided by the team members at one place and show it to all others.
- Maintain start date and end date of each task
- Maintain the overall timeline of the project.

1.3 Definitions, Acronyms and Abbreviation

OPM – Online Project Management.

Admin – Administrator.

PM – Project Manager.

HTML – Hyper Text Markup Language.

XHTML – extensible Hypertext Markup Language.

HTTP – Hypertext Transfer Protocol.

Angular - Angular JS

Node - Node JS

1.4 References

IEEE SRS Format.

1.5 Technologies to be used

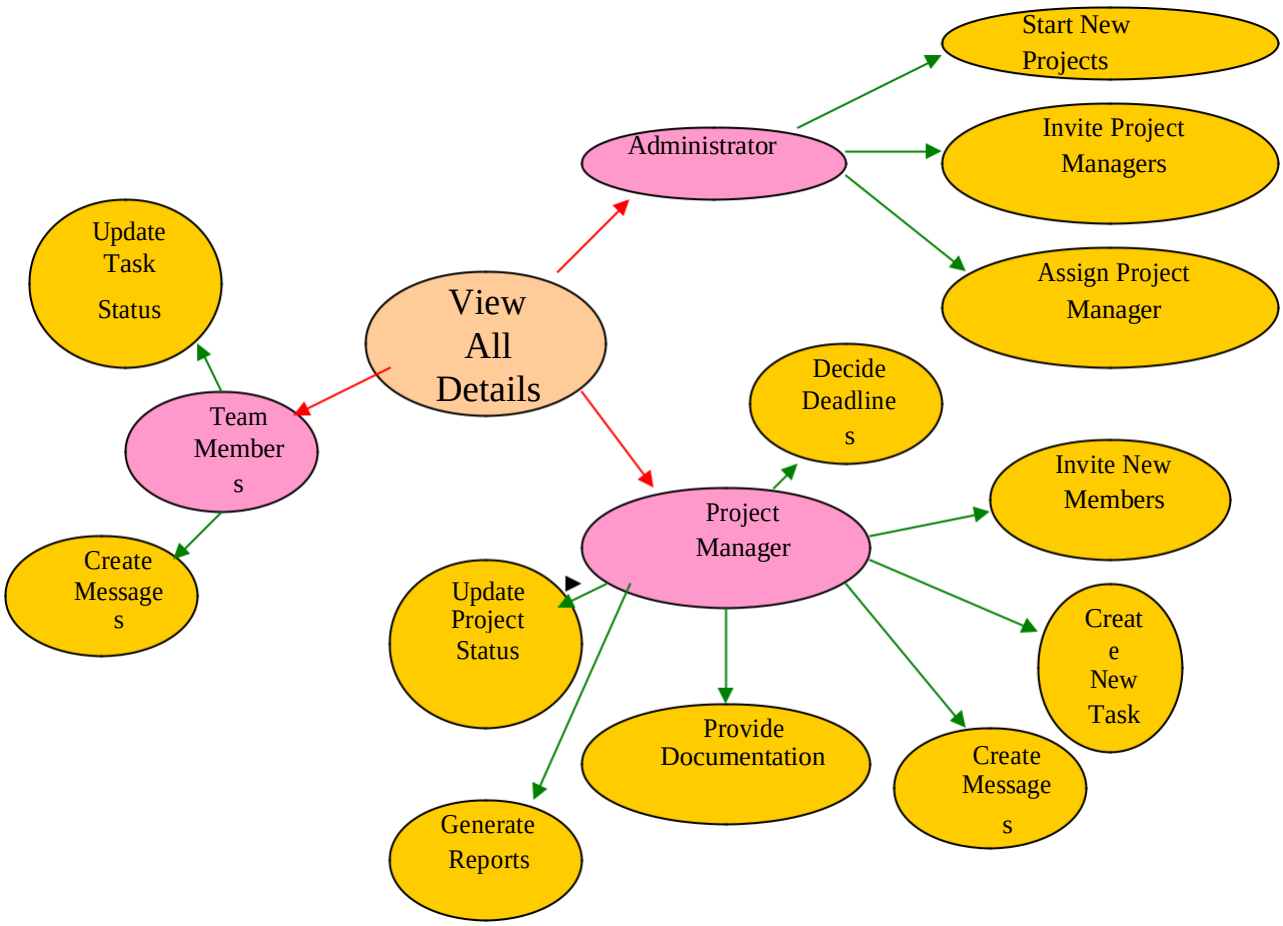
Application Architecture	-	Microservices
Database Application	-	MongoDB
Development tool	-	Visual Studio Code
Web Deployment Server	-	Herokuapp
Designing tool	-	Adobe XD CC

1.6 Overview

This project is a tool to help in managing projects. It is more useful in current market situation where an organization is not close to a door or a city or a nation. In this case sharing document & data related to project from one corner of the world to another by using internet makes our work for easy. But still it is unmanaged to manage this work we are making this tool Online Project Management System (OPM).

2. Overall Description

2.1 Use-case Model Survey



1. Administrator: - is responsible for registering with the tool and creating a profile with the company name.

    a. **Start New Project: -** Admin logs into the OPM and create a profile with his company name and initiates a project.

    b. **Invite Project Manager:-** After starting a project the Admin Invites a Project Manager.

    c. **Assign Project Manager**: - When the invited Project Manager agrees to the Admin he/she is being allotted the project initiated.

2. Project Manager: - is responsible for dealing with all the proceedings of the project.

    a. **Invite New Team Member**: - After the Project is being allotted a Manager, the PM invites various team members to work on the project as well and sends them invites.

    b. **Create New Task: -** The PM create new tasks and assigns them to the desired members.

    c. **Create Message: -** The PM can create Message for the other team members notifying them about project updates etc.

    d. **Provide Documentation: -** The PM gives documentation for the various tasks.

    e. **Generate Report: -** The PM can generate reports for the various task and project.

    f. **Decide Deadline: -** The PM can decide the time needed for the task to be completed.

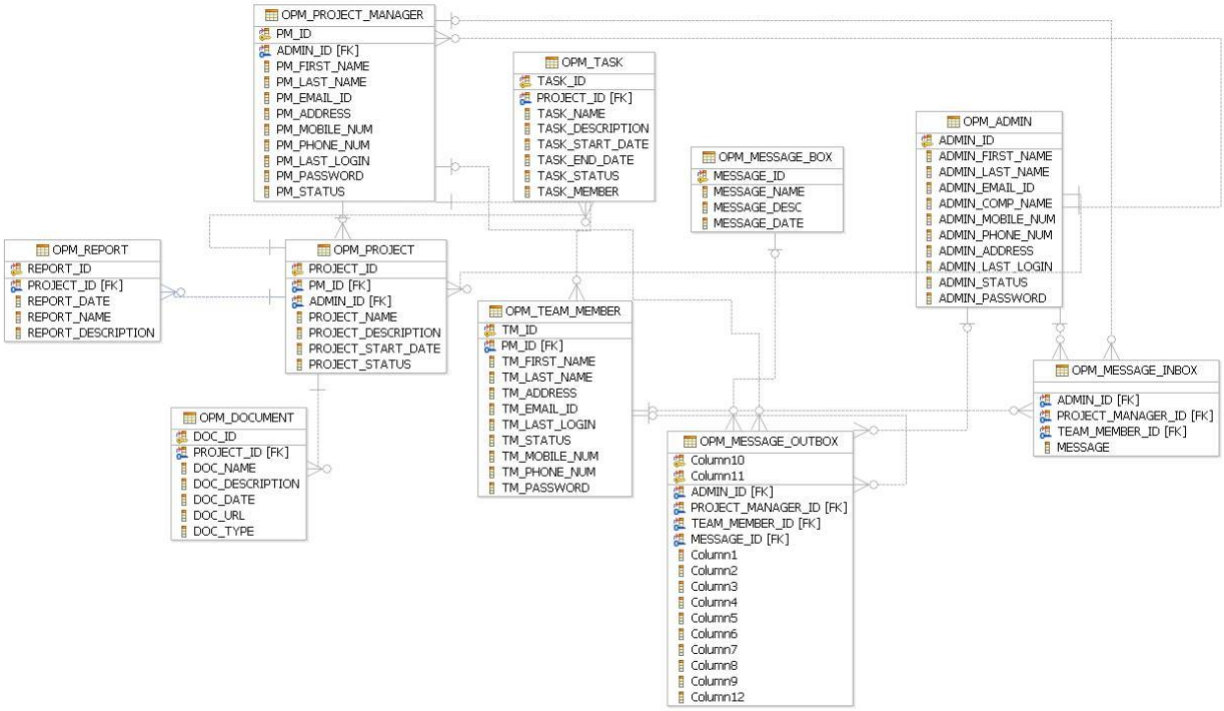
    g. **Update Project Status: -** The PM can update the completion status of the project on time-to-time basis

3. Team Members: -

    a. **Update Task Status: -** the members working on the particular task can update the task completion status.

b. **Create Message: -** the members can also create messages to make aware other members about the task proceedings

2.2 ER Diagram



2.3 Assumptions and Dependencies

- The Project Manager from same company is not being assigned to two projects.
- Administrator can also be a project manager for a project.

3. Specific Requirements

3.1 Use-Case Reports

1. **Administrator**- is responsible for registering the company and initiating a project, sending invitation mails to the project manager.

   - ✓ **Start New Project**- the admin starts the project which needs to be managed and supervised by the project manager. The Admin provides with the relevant information to the system and initiates a new project.
   - ✓ **Invite Project Manager**- the Admin sends an invitation email to the desired project manager who will be responsible for managing the project so created.
   - ✓ **Assign Project Manager**- the Admin assigns the project manager a particular project on which he/she needs to work.

Name of Use Case - Start New Project.

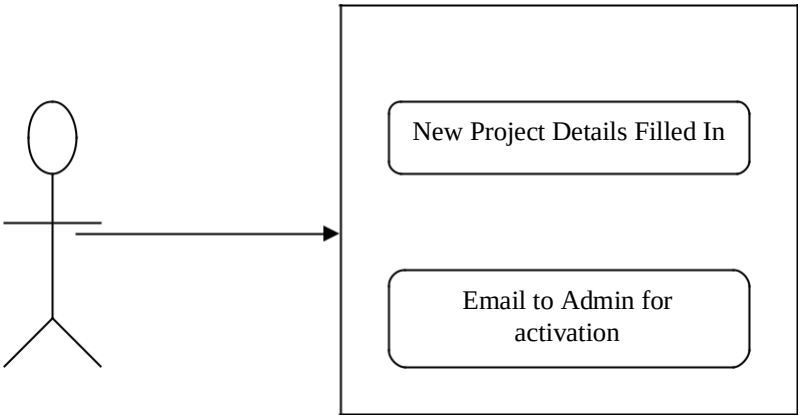
Description – a new project will be created for the company.

Pre-Condition –The Admin should be logged in the system.

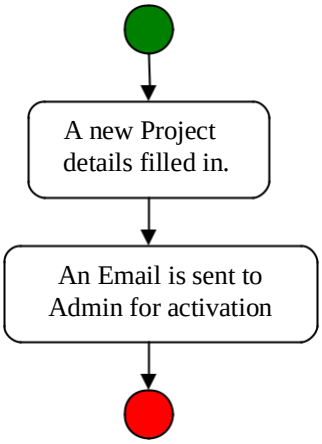
Normal Flow of Events –

- A form will open, necessary information will be entered
- A query will be fired to the database.
- An invitation email will be sent to the desired project manager
- Relevant output will be given to the user

USE CASE DIAGRAM



Work Flow Diagram



Name of Use Case – Invite Project Manager.

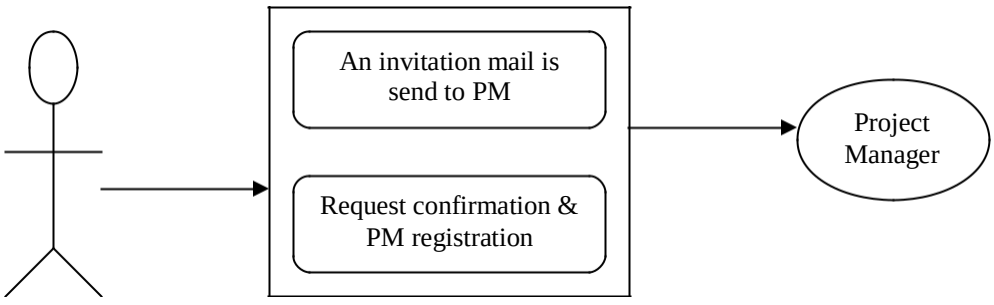
Description – an invitation email will be sent to project manager for confirmation.

Pre Condition The Admin should be logged in the system.

Normal Flow of Events –

- An invitation email will be sent to Project Manage
- Project Manager will confirm the request.
- Project information will be completed and status will be updated to ready.

USE CASE DIAGRAM



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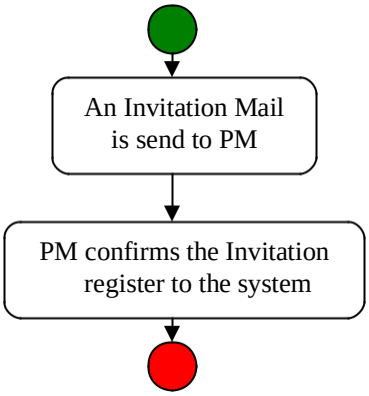

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2. Project Manager – is responsible for managing the overall project, it's tasks, messages, reports, related deadlines and documents

- ✓ **Invite New Member** – the PM is authorized to invite new members for the project and he/she do so by sending them invitation.
- ✓ **Create New Task** – The PM is responsible for creating a new task and assign members to it
- ✓ **Create Messages** – PM can add messages to the project and these messages will be displayed to all the users.
- ✓ **Provide Documentation** - The PM is responsible for providing documentation for the various tasks involved.
- ✓ **Generate Reports** – The PM can generate various types of reports whenever he feels a requirement.
- ✓ **Update Project Status** – The PM can update the project completion status by analysing the various task completion statuses.
- ✓ **Decide Deadlines** – The PM is responsible for setting project and task deadlines i.e. the start date and the end date.

Name of Use Case – Invite Team Member.

Description – an invitation email will be sent to team member for confirmation.

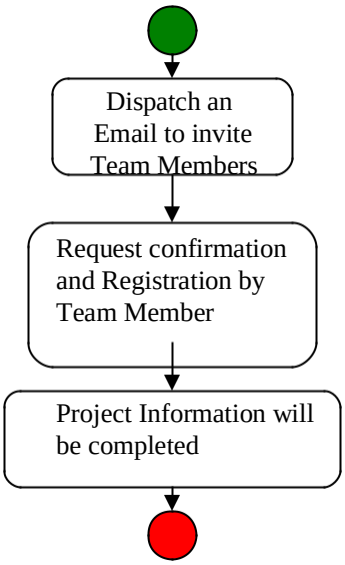
Pre-Condition –

- ✓ The Project Manager should be logged in the system.

Normal Flow of Events –

- ✓ An invitation email will be sent to Team Member.
- ✓ Team Member will confirm the request.
- ✓ Project information will be completed and status will be updated to ready.

WORK FLOW DIAGRAM



Name of Use Case – Create New Task

Description – PM starts new task and assign team members to it.

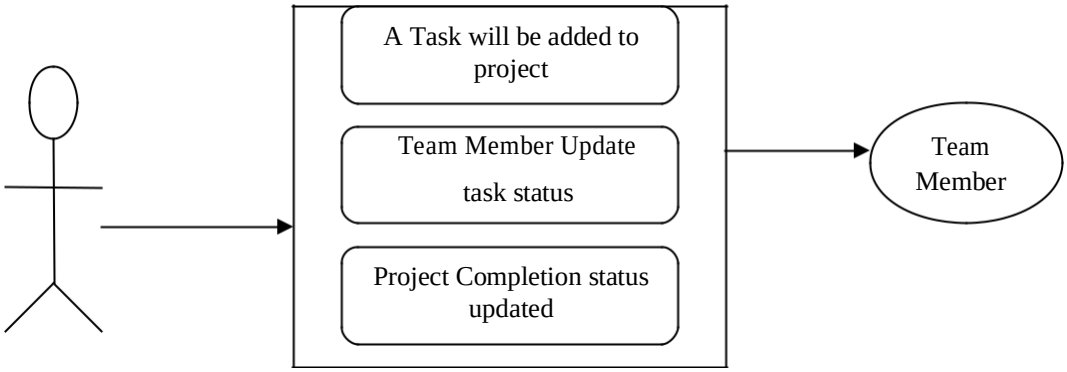
Pre-Condition –

- The PM should be logged in the system.

Normal Flow of Events –

- A task will be added to the project and timelines will be displayed
- Team Members will update the task status.
- The Project completion status will also be updated.

USE CASE DIAGRAM



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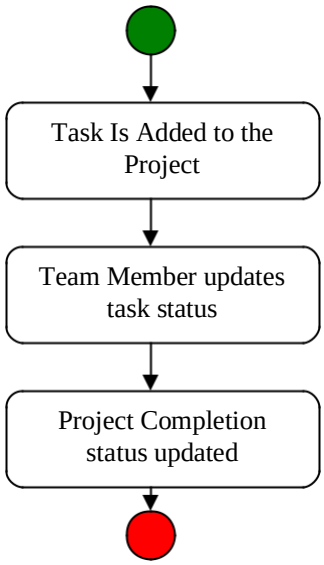


Name of Use Case – Create New Message.

Description – a new message will be created which will be displayed to all the users.

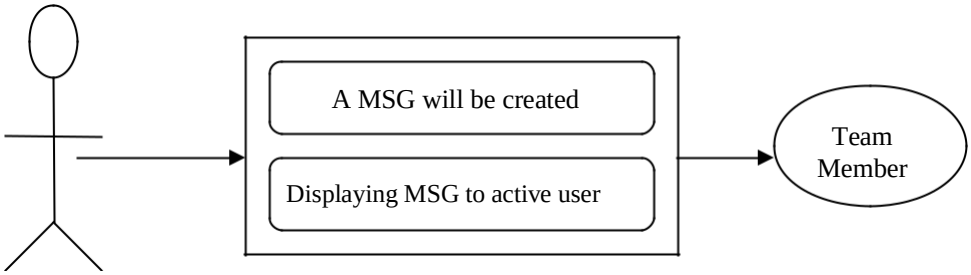
Pre Condition –

- PM should be logged in the system.

Normal Flow of Events –

- A Msg will be created by filling in details of the msg.
- This msg will be displayed to all the active users of the project.

USE CASE DIAGRAM



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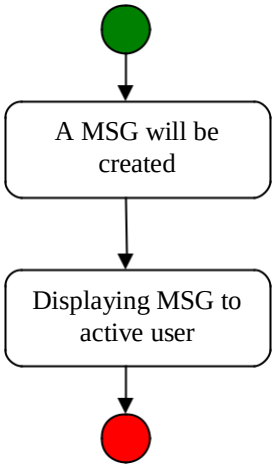


Name of Use Case – Provide documentation.

Description – a task or project related document will be given to the team members for their guidance

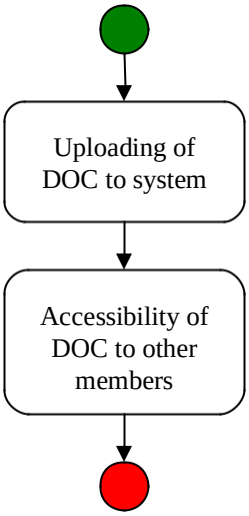
Pre Condition –

- The PM should be logged in the system.

Normal Flow of Events –

- A document will be uploaded to the system.
- Other team members can read the doc.

WORK FLOW DIAGRAM



Name of Use Case – Generate Reports.

Description – a report can be generated by the PM at any instance of time to view the project completion status

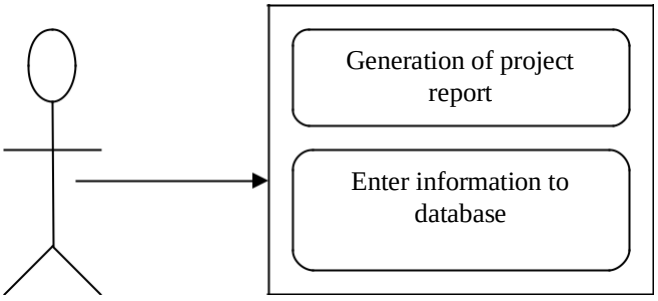
Pre Condition –

- The PM should be logged in the system.

Normal Flow of Events –

- A project report will be generated
- A database entry would be made.

USE CASE DIAGRAM



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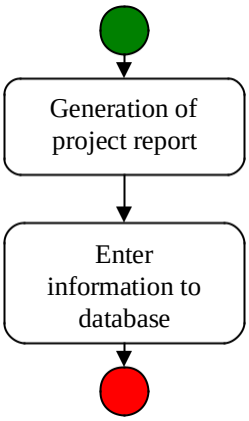


Name of Use Case – Update Project Status.

Description – a PM can update the project status by looking at the task completion status.

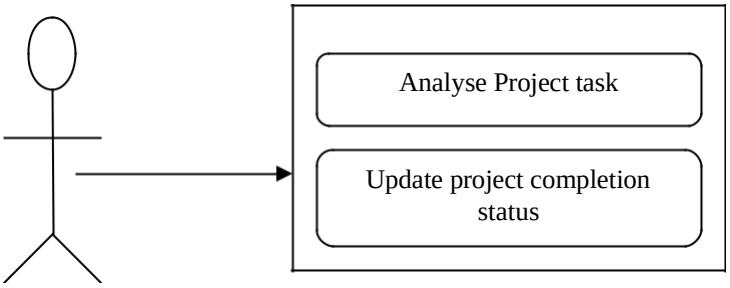
Pre Condition –

- The PM should be logged in the system.

Normal Flow of Events –

- Analyse project tasks.
- Update project completion status.

USE CASE DIAGRAM



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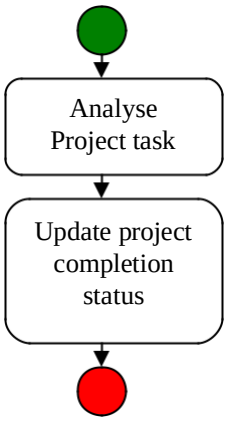

Name of Use Case – decide deadlines.

Description – a time line i.e. a start date and an end date would be set for every task.

Pre-Condition –

- The PM should be logged in the system.

Normal Flow of Events –

- Set a start date and an end date.
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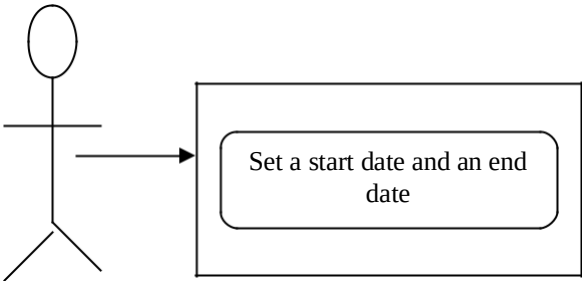
USE CASE DIAGRAM



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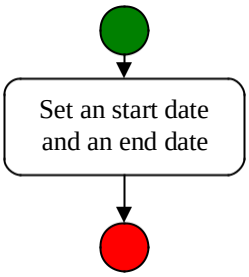


3. Team Member – is responsible for updating task status and completing the task so that the project may not get delayed.

- ✓ **Update Task Status** – the team member is responsible for updating the completion status of the project.
- ✓ **Create/ update MSG** – the team member can create and update the msgs.

Name of Use Case – update task status.

Description – completion status of the task could be updated.

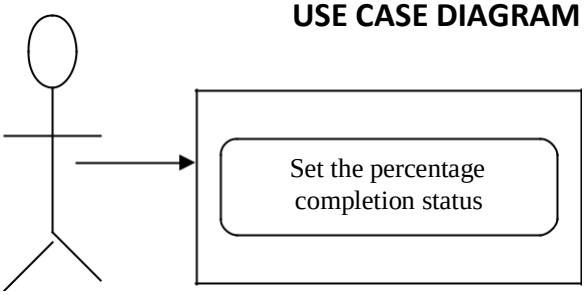
Pre-Condition –

- ✓ The Team Member should be logged in the system.

Normal Flow of Events –

- ✓ Sets the percentage completion status.

USE CASE DIAGRAM



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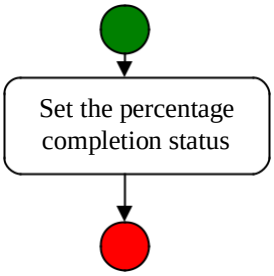


Name of Use Case – create/ update MSG.

Description – a new MSG will be created or an already existing MSG will be updated.

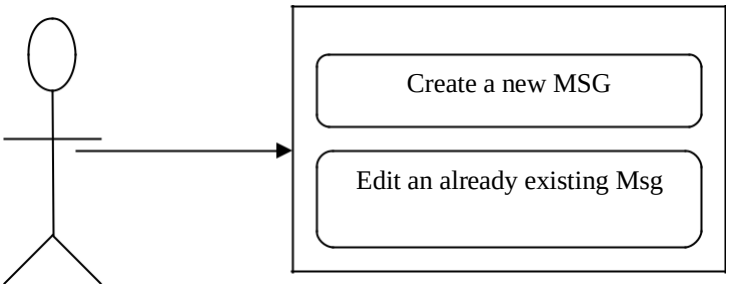
Pre-Condition –

- ✓ The Team Member should be logged in the system.

Normal Flow of Events –

- ✓ Create a new msg
- ✓ Edit an already existing msg.

USE CASE DIAGRAM



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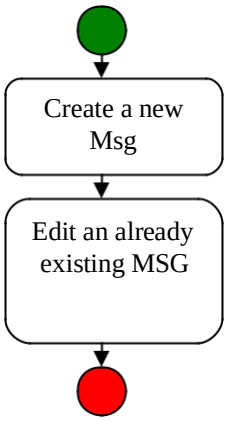

3.3 Non-Functional Requirements

1. The system is resistant to faults within the system.
2. The system can be accessed from anywhere at all times.
3. The system is secure with attack protection, attack prevention by code side (Cross-Site Scripting), encrypted communication channels (https)
4. The system can be accessed from mobile devices and desktop computers.
5. Supports the number of users at the same time more than 100 people.
6. The system can be used easily.
7. The system can support the growth of user base.

3.4 Supplementary Requirements

Since this a tool which can be used from anywhere and anytime in the world, so the server should be well managed for such kind of requirement.

The users using this and importing the reports from this tool should have supporting software to run them.

To use the application in the best possible way please read the tips displayed while using the tool.