**Software Project Management (SE3080) : Assessment 1**

**Brief description of the project and the responsible functions of each member**

|  |  |  |  |  |  |  |  |  |  |  |  |
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| **Description**   |  | | --- | | The proposed system is a project management / employee management tool that can be used to effectively track the employees progress throughout the projects. The system is essentially a marriage between a project management tool and an employee management system. The core aspects of this system focus on a matrix based organizational structure. The system will focus mainly on 4 functionalities   * Employee management (login / profile management / attendance / salary management / admin employee addition) * Project management (PM project allocation / admin project creation etc / Team allocation) * Employee progress evaluation (Employee task progression / PM project overview / task time estimation) * Sprint analysis / feedback   There are 3 vital roles in the system,   1. Admin 2. Project manager 3. Employee (Marketing, Developer, tester etc.)   All the aspects of the system is centered around the admin.  Admin Role  In the system, admin is can,   * Register / Login * Manage projects in the system (Add, update, delete etc.) * Manage employees in the system * Get an overview of the employee salaries * Assign projects to Project managers   Project Manager role  In the system PM can,   * Login * Mark attendance * Get overview of the attendance * Recruit employees to the allocated project * Create tasks * Break tasks into sprints * Assign the allocated employees with tasks for each scrum * Get an estimation for each task / scrum * Track the progression of tasks / project * Analyze sprint * Analyze performance of each employee   Employee role  In the system, employee can,   * Login * Mark attendance * Get an overview of the tasks assigned and estimate the time * Progress through task lifecycle in the Kanban chart (tasks that are completed, in progress, to do etc.) * Edit tasks * Manage profile * Give feedback about each sprint   Now that the roles in the system are properly understood, lets progress further in breaking down each function separately,  Employee management   * In this function, all aspects of employee management are considered. This includes login, registration of admin, login of employee and PM * Profile management part of the employees are also handled here * Attendance tracking and calculating the salary based on the attendance is also done in this function * Adding employees / PMs to the system will also be done in this system   Project management   * All aspects of project management are considered within this function * Project allocation to the PM * Project creation / updating / deletion by the admin * Team recruitment by the PM * Creating sprints * Allocating tasks to the sprint and eventually scrum for each member   Employee progress evaluation   * This function focuses on how the assigned task is progressed throughout the scrum / sprint * The employee will estimate a time for each assigned task. based on that estimation and how the employee has performed previously with respective to the evaluation, the system will estimate a time for each task * The progress of each task through the Kanban chart is handled here * PM can get an overview of the project based on each progression in the dashboard   Sprint analysis and feedback   * At the end of each sprint the employees can give feedback about the sprint (add/update/delete) * The PM will evaluate each employee work within that sprint, that functionality will be handled here |   **Responsible function**   |  |  | | --- | --- | | **Student Reg. No** | **Responsible Function** | | **IT19132310** | Employee management | | **IT19139036** | Project management | | **IT19120980** | Employee progress evaluation | | **IT19146898** | Sprint analysis and feedback | |

**Product Backlog**

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| --- | --- | --- | --- |
| **Ref no.** | **Product Backlog Item (PBI)** | **Priority** (1 -10, 1 is highest) | **Reason for selecting Priority (Business Value, ROI, Time, Dependencies)** |
|  | Employee login | 1 | Employee login is the most important segment when it comes to the project management aspect of the system. Employee will need to login to have the proper authorization to manage the tasks that are assigned to them. All other functions such as employee task management and progression directly depend on this. Therefore, it is a high priority item. Based on the afore mentioned facts, it can be concluded that this should be implemented fast. The return on investment is low, but to implement further functionalities this should be implemented  ET: 1 weeks  Dependencies: Employee task management / progression |
|  | Attendance submission | 5 | Attendance submission is also a main function in the system. The salary calculation functionality directly depends on this. Therefore, this has a higher priority than that. Since we can track the employee's attendance properly and pay the salary based on that, the ROI is high.  ET: 2 weeks  Dependencies: Salary calculation |
|  | PM login | 1 | PM login is the most important segment when it comes to the project management aspect of the system. PM will need to login to have the proper authorization to create tasks, recruit members etc. Other items such as PM attendance submission, employee evaluation directly depends on this. This should be implemented fast. Although ROI is low, since all other functionalities directly depend on this, the priority should be high  ET: 1 weeks  Dependencies: PM attendance submission / employee evaluation / project management etc. |
|  | Admin registration / login | 1 | The system is centered around the admin. All other functionalities of the system directly / indirectly depend on the functionalities of the admin. Therefore, proper authentication and authorization of the admin should be done in order for the admin to give privileges to perform the relevant task. Therefore, the priority is high.  ET: 1 week  Dependencies: |
|  | Admin – Employee management | 1 | All the employee management functionalities are handled in this item. For the system to function User (PM / Employees) should be added. Therefore, this is a high priority item  ET: 2 weeks  Dependencies: All PM / Employee functionalities |
|  | Admin – Project management | 1 | The admin must add projects for all the subsequent functions to work. The PM is assigned a project and all the project management will occur after that. therefore, this is a high priority item that should be implemented early. If the return on investment is considered, proper management of the project will higher productivity therefore ROI is high  ET: 2 weeks Dependencies: All project management done by the PM / task progression and management of the employee |
|  | User – Profile management | 8 | This functionality allows the user to manage to manage their profiles, this includes employee profile management where an overview of the completed, in progress and to do tasks will be displayed. This is a low priority item since this doesn’t affect the functionality of the system and rather give an overview to the user  ET: 2 weeks  Dependencies: none |
|  | Admin – Salary overview | 9 | This displays the calculated salary of the employees in the admin dashboard. Since salary calculation doesn’t essentially have to be automated, this is a low priority item. The displaying of salary is not that important to the system  ET: 2 weeks  Dependencies: none |
|  | Salary calculation | 9 | This will calculate the salaries of the employees based on the attendance. As mentioned earlier, since salary calculation doesn’t essentially have to be automated, this is a low priority item.  ET: 1 weeks  Dependencies: Admin – Salary overview |
|  | PM – team recruitment | 2 | The project manager has to recruit members to a given project in order to move forward with the workflow. therefore, this is an important item to be implemented first  ET: 2 weeks  Dependencies: Employee task progression and management |
|  | PM – Project management | 3 | The PM has to add tasks to the system that need to be managed / break them into sprints and eventually scrums and assign members with the task for the tasks to be managed. Therefore, this is considered as a high priority item considering that this is essential for the functioning of the system  ET: 2 weeks  Dependencies: Employee task progression and management / Sprint feedback / evaluation |
|  | Employee – Task progression / management | 5 | This function tracks the tasks assigned to the employees through the task lifecycle. This is a comparatively low priority item since This doesn’t hinder other functionalities of the system and the employee can perform the tasks without tracking them that are assigned by the PM  ET: 2 weeks  Dependencies: PM – project management |
|  | Employee – Sprint feedback | 7 | This functionality allows the employees to give feedback about the sprint. (Something like a sprint retrospective). This is an extremely low priority item since it does not affect other functionalities.  ET: 1 weeks  Dependencies: none |
|  | PM – evaluate employee | 8 | This functionality lets the PM evaluate each employee for the sprint. This is an extremely low priority function since this doesn’t affect the usual workflow of project management but rather helps to evaluate employees  ET: 2 weeks  Dependencies: none |

**Sprint Backlog: Sprint 1**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Backlog Item** | **Epic** | **User stories** | **Decided Story Points** | **Planning poker estimate of** | | | | **Reasons for estimate** | **Responsible member**  **of user story** |
| **Lasal** | **Senura** | **Dilmi** | **Ayodya** |  |  |
| Admin registration / login | As an admin I want to get authorized/ authenticated | As an admin I want to Register to the system | Create a form for Registration | **3** |  |  |  | Need to design a registration form, design the UI and add validations | Ayodya |
|  | **3** |  |  |
|  |  | **3** |  |
|  |  |  | **2** |
| As an admin I want to Login to the system | Create a form for Login | **3** |  |  |  | Need to create a Login form, design the UI and add validations | Ayodya |
|  | **3** |  |  |
|  |  | **3** |  |
|  |  |  | **2** |
| Admin – Employee management |  | As an admin I want to manage employee accounts | Create a form for add employee | **2** |  |  |  | Have to develop the interfaces and the relevant page to add employees to the system | Lasal |
|  | **3** |  |  |
|  |  | **3** |  |
|  |  |  | **3** |
| Table for display all employees | **2** |  |  |  | Create a table to display the employee details which are retrieved from the database | Lasal |
|  | **3** |  |  |
|  |  | **3** |  |
|  |  |  | **3** |
| Admin – Project management | As an admin I want to manage projects | As an admin I want to add projects | Create a form for add projects | **2** |  |  |  | Need to design a form to add projects, design the UI and add validations | Lasal |
|  | **3** |  |  |
|  |  | **3** |  |
|  |  |  | **3** |
| As an admin I want to add project manager into a project | Create a page for add project managers into projects | **2** |  |  |  | Need to create a page to add project managers and make it responsive | Lasal |
|  | **5** |  |  |
|  |  | **5** |  |
|  |  |  | **3** |
| PM login | As a project manager I want to login | As a project manager I want to login | Create a form for Login | **3** |  |  |  | Need to create a Login form, design the UI and add validations, UI enhancements | Senura |
|  | **2** |  |  |
|  |  | **5** |  |
|  |  |  | **3** |
| PM – team recruitment | As a project manager I want to manage the team for a project | As a project manager I want to add employees for a project | Create a form for add employees | **5** |  |  |  | Have to develop the interfaces and the relevant page to add employees to the system | Lasal |
|  | **3** |  |  |
|  |  | **2** |  |
|  |  |  | **3** |
| As a project manager I want to remove employees form a project | Implement a table to display and add a remove button | **3** |  |  |  | For UI designing and implement the backend | Dilmi |
|  | **3** |  |  |
|  |  | **2** |  |
|  |  |  | **5** |
| PM – Project management | As a project manager I want to manage sprint | As a project manager I create a sprint | Create a form for add sprint | **2** |  |  |  | Need to design a form to add sprints, design the UI and add validations | Senura |
|  | **1** |  |  |
|  |  | **2** |  |
|  |  |  | **2** |
| As a project manager I want to assign task | Create a form to assign task | **2** |  |  |  | Need to design a form to add tasks, design the UI, add validations and do the backend implementation | Senura |
|  | **1** |  |  |
|  |  | **3** |  |
|  |  |  | **3** |

**Sprint Backlog: Sprint 2**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Backlog Item** | **Epic** | **User stories** | **Decided Story Points** | **Planning poker estimate of** | | | | | **Reasons for estimate** | **Responsible member**  **of user story** |
| **Lasal** | **Senura** | | **Dilmi** | **Ayodya** |  |  |
| Employee login | As an employee I want to login | As an employee I want to login | Create a form for Login | **3** |  | |  |  | Need to create a Login form, design the UI and add validations | Ayodya |
|  | **3** | |  |  |
|  |  | | **3** |  |
|  |  | |  | **2** |
| Attendance submission | As an employee I want to manage attendance | As an employee I want to mark my attendance | Create a page for mark the attendance | **3** |  | |  |  | UI designing, backend implementation | Senura |
|  | **2** | |  |  |
|  |  | | **3** |  |
|  |  | |  | **3** |
| As an employee I want to mark leaves | Create a form to add leaves | **2** | |  |  |  | Backend implementation and frontend development | Senura |
|  | | **1** |  |  |
|  | |  | **2** |  |
|  | |  |  | **3** |
| User – Profile management | As a user I want to manage profile | As a user I want view my profile and check whether all the details are up to date | Create a page for user profile | **3** |  | |  |  | Get user details from HR department, make a responsive page | Ayodya |
|  | **2** | |  |  |
|  |  | | **2** |  |
|  |  | |  | **1** |
| Admin – Salary overview | As an admin I want to view salary of the employees | As an admin I want to view salary details of the employees in the admin dashboard | Create a page to view salary of the employees | **1** |  | |  |  | Make a responsive page to view salary of the employees and UI enhancement | Lasal |
|  | **2** | |  |  |
|  |  | | **3** |  |
|  |  | |  | **2** |
| Employee – Task progression / management | As an employee I want to view tasks | As an employee I want to view the tasks that have been assigned to me | Create a page for employee task allocations | **2** |  | |  |  | Make a responsive page to view and track the employee’s tasks and authorize the access | Dilmi |
|  | **3** | |  |  |
|  |  | | **2** |  |
|  |  | |  | **3** |
|  |  | As an employee I want to change the progress/status of the task | **2** | |  |  |  | Dilmi |
|  | | **2** |  |  |
|  | |  | **1** |  |
|  | |  |  | **2** |
| Employee – Sprint feedback | As an employee I want to give sprint feedback | As an employee I want to give the feedback of the previous sprint | Create a dashboard to add sprint feedback | **1** |  | |  |  | Create a user-friendly dashboard | Lasal |
|  | **2** | |  |  |
|  |  | | **2** |  |
|  |  | |  | **3** |

**Contribution to the assessment**

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| --- | --- | --- |
| **Student Reg. No** | **Student Name** | **Contribution** |
| **IT19132310** | L.S Hettiarachchi | Made a requirement analysis and decided the core functionalities of the system, added the respective tasks in sprint backlog, Added the description, Created product backlog |
| **IT19139036** | A.S.V Jayadeva | Made a requirement analysis and decided the core functionalities of the system, added the respective tasks in sprint backlog, Created product backlog |
| **IT19120980** | D.N Palliyaguruge | Added the respective tasks in sprint backlog, added reasons for estimation, Created product backlog |
| **IT19146898** | A.B Fernando | Added the respective tasks in sprint backlog, created product backlog, planed the time estimation |