**App-Idea**

* Our Initial inspiration for this project came from working on previous projects that didn’t have any mechanism for keeping track of uncompleted/completed/deterrents of tasks.
* Therefore, creating a software system that could uphold activities such as creating, updating, deleting and saving project plans/tasks was the most viable option that we came up with to successfully keep track of project accomplishments, hindrances and drawbacks.
* We decided to keep the operation of the system simple and easy to use for maximum efficiency and transparency for both manager and employee.
* The system would work in a comparable scheme where manager-maintained control over the complete system adding, deleting, updating, saving tasks, projects and employees.
* Employees can view assigned tasks and other colleagues who are also apportioned to those projects. In addition, they can indicate a ‘completed task’ option when a task is concluded.

The implemented user story:

***As a*** team manager,

***I want*** to be able to assign tasks, set Deadlines and supervise my teams progress

***So that*** project runs smoothly.

Project Progress – Summary of key events

24 January: This day was the due date to choose project theme. A theme of “Project Management” was chosen, with an aim to create a project management system.

26 January: This date was the due date to submit user stories. Each team member compiled their idea of what a user would wish to get out of the application. A single user story was created by combining submissions for a more thorough user story.

31 January: database design and hosted on Gear Host.

1 February: Create first class layout – the project manager’s main screen.

6 February: Scene builder was used to create a prototype for the design of the application.

10 February: The application’s first layouts were made using java fx.

13 February: A new GUI design was put forward and GUI’s for pop-up menus were created.

20 February: The initial app prototype was created.

12 March: A second iteration of the application was created, and a CSS file was created.

21 March: The final application was submitted for final bug testing.

**Software architecture**

Presentation layer

For the main page the code is designed to construct the layout in three different parts, them being the Users panel, the Task detail panel and the Users task panel. Depending on the users’ permissions will change how each part interacts with the user and what data they show. The User and Users Task panels both have their own buttons which depend on user permissions. These buttons each have a popup layout assigned to them for the user to fill out the details to complete functions.

Business Logic layer

The logic is mainly used to control what is seen on the presentation layer using the data received from the data access layer. The user can either be a “User” or a “Manager”. Users can complete tasks that are assigned to them and the request approval for their tasks. Managers can add/remove users from projects, create and assign tasks and delete them and create and delete projects.

Data Access layer

Each time the database class is loaded a connection is made to the database and this connection persist as long as the class is in memory. If a connection cannot be made due to either a database failure or a firewall issue, the program will refuse to run and will give an error page.

Data Persistence layer

In the database class functions exist to facilitate the buttons and functions as seen on the presentation layer. For the create ones, they are designed so that the database is secure as to avoid accidental and non-accidental Sql injection attacks by using prepared statements. When outputting data it uses a CSV format that the rest of the program can sort through. For file uploads there is a server limitation of 5MB. If more then 5MB of files are uploaded over the given lifespan of the program, the server will shut down and may have to be reset in order to get functionality operational again