**CSCI 4805 Project Proposal**

1. Project name

Hobby Pro  
   
2. Team member names

Candelario Aguilar Torres

Yazmin Alvarado

Dustin Bailey

Samuel Fletcher

3. Abstract

Hobby Pro is a web-based project management application designed for hobbyist to keep track of individual projects. Projects can be created and broken up into stages, with each stage having dedicated tasks to be completed. Users can create each stage, along with the tasks, track hours, and add any associated notes.

Hobby Pro was designed to be made simple, and intuitive. It will also feature pre-built tracker templates for various hobbies like Quilting, Crocheting, Woodworking etc.

4. Description  
 When a user interacts with Hobby Pro, they will start at the login page. After they have logged in, they will be brought to their homepage. At the top they will see a row of tabs with options such as Projects, Completed Projects, and others. On their homepage under the default tab of Projects, they will see all their active projects. The list will include the name of the project, brief information about the project such as Start Date and estimated total hours worked and a progress bar. The progress bar will be based on the number of tabs the project has and the number of completed tasks per tab. On this homepage there will also be an option to create a new project.

Once the user has selected a project from the homepage. They will be taken to that projects page. The layout will be like the homepage with a row of three tabs at the top. There will be a default overview tab. Next tab will be the add new tab where users can add steps necessary to complete their project. The third tab will be a menu tab.

The default overview page will have the name of the project, an area for more detailed notes about the project, an area for images and a method for keeping track of the time spent on a project. There will be options for adding new notes and images.

On a new tab the user will be able to put in information about a large step of the project. These pages will look similar in layout to other pages with a row of tabs at the top. Under each tab the user will be able to assign many smaller tasks allowing the user to have as many or as little number of tasks as they want. There will be an area for detailed notes or lists and an area for photos or other helpful visual media. There will be an area that will allow the user to edit the time spent on a step and a display that will show the project's total time. On each page and on each step within the page there will be a task complete button. Each project will have an option to return to the user's home page.

From the homepage the user can select other available tabs. There will be default tabs for: Project Library, Completed Projects, and Year in Review and Library. The Library tab will bring the user to the library page where users can upload PDF files such as patterns or manuals. This page will display PDF files the user currently has and provide the user with the ability to upload completed patterns of their own. Users can filter their files like any other file system by category, data uploaded alphabetically etc.

The Completed Projects tab will lead the user to their completed projects. This section is for users to view their past projects. Once a project is completed, users will have the option to add a photo of the completed project and add notes about lessons learned, or any adjustment made while in the process of completing the project. This information will be listed for each project on the Completed Project page. Additional information will include how long the project took to complete.

The Year in Review page will take the user to a page that will contain information about the current year. Information on things like what projects were worked on the most, what projects were completed or started that year, The total number of steps completed, the total amount of time spent on their projects in total and in a break down by project.

All pages will have a similar layout with tabs at the top, and access to a menu and other reoccurring buttons on the layout in consistent places. Hobby Pro will have a simple clean look, a consistent color and theme through all its pages.

Hobby Pro, being a web-based application, will have a front end written primarily in JavaScript. The team plans to use either React.js or Vue.js to build the Graphic User Interface (GUI). For the backend, the team plans to use Java as the programming language with the Spring framework. For database integration, the team plans to use a Structured Query Language (SQL) derivative. The associated database will be in the industry standard of third normal form (3NF).

5. Feature list

1. A list of features that will be completed by the end of the semester
   1. Users can login
   2. Users can view project progress on the main page.
   3. Project View; Users can change the way they view/filter their projects on the main page i.e., List, by Date, Category
   4. Simple tracker tabs with the ability to add as many tabs as necessary.
   5. Premade tracker template of various hobbies i.e., Quilting, Crochet, Woodworking.
   6. Users can add notes, upload images within project tabs
   7. Users can add hours worked for individual projects
   8. Completed task button in each section tab that updates to the progress bar in the main page
   9. Completed project are automatically moved to a Completed Project Section where users can later view
   10. Completed Project Prompt. Once a project is completed a user can upload an image of the finished project and add notes of lesson learned or tips that are viewable in the Completed Project Tab
2. A list of features that will be completed if there is time
   1. A Library where users can add PDFs to save patterns, manuals etc.
   2. A Year in Review Section where users can view projects completed in the current year
   3. Stats in the Year in Review Section such as hours worked, most worked on project
   4. Users can add Deadlines to projects
   5. Deadline projects will have timer countdown in the main page
3. A list of features you would like to implement but cannot be completed this  
   semester.
   1. Users can export printable PDF containing all information of their specific project
   2. Themes options for a customizable look

6. Technology

The technology the team has decided on so far is:

* Platform:
  + Hobby Pro will be a web application that will primarily be used on desktops but is also mobile responsive. It will be hosted using Amazon Web Services.
* Operating system:
  + The team will be developing their individual computers using Windows/Linux.
* IDE:
  + The IDE to be used is IntelliJ.
* Programming languages:
  + HTML, CSS, JavaScript, Java, SQL. Since this is a web application that will be hosted on a server, the team will build a website for this application and implement background access to a database securely since this will involve user data.
* 3rd party libraries and tools:
  + Vue.js (Framework to develop UI), Spring (Framework to develop server), MySQL (Database), Git (Version Control), GitHub (remote repository).
* Server software:
  + Spring Framework
* Communication:
  + Main form of communication will be Discord. Team members will check regularly to ensure they are up to date on the project.

7. Server information

Hobby Pro will be deployed on a server utilizing Amazon Web Services.

8. Data sources

This project will rely on user entered data. Initial data will come from team members who have current projects in their respective hobbies. Additional data will come from later testing. Test users should contain hobbies of several types to validate whether the project is easy to use and understand.

9. Team members’ backgrounds.

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| --- | --- | --- |
| Team Member | Familiarity Level | Responsibilities |
| Candelario Aguilar Torres | HTML: Familiar  CSS: Familiar  JavaScript: Familiar  Java: Proficient  SQL: Proficient | Develop server components/ database schema |
| Yazmin Alvarado | HTML: Familiar  CSS: Familiar  JavaScript: Familiar  Java: Proficient  SQL: Proficient | Design and develop user interface |
| Dustin Bailey | HTML: Familiar  CSS: Familiar  JavaScript: Competent  Java: Proficient  SQL: Competent | Develop server components/ database schema |
| Sam Fletcher | HTML: Familiar  CSS: Familiar  JavaScript: Only used once  Java: Competent  SQL: Familiar | Design and develop user interface |

10. Dependencies, limitations, and risks

1. Project members with limited large project experience.
   1. The team will handle this risk by asking the instructor for help when necessary as well as advice for navigating any problems
2. Possible issues integrating a JavaScript front-end with a Java based back-end.
   1. Team members will look over and discuss any issues with integration ahead of time to ensure the integration process is a success.
3. One team member is running a Linux box while the others are all using Windows
   1. This team member will use a computer at home that uses Windows or available computers on campus.
4. Not every team member is familiar with all technologies and tools
   1. The team will handle this risk by helping each other with any questions. Team members will also learn on their own the technologies and tools as the semester progresses
5. Limited experience using web servers.
   1. Team members with limited experience will refer to team members with experience, go and try and learn about said servers and how they will work, and try to do examples to help with the final development process.
6. Time Constraints on Schedules or short Window to make changes/fixes
   1. If something unexpected happens inform team members immediately of the issue and document what could have caused it so future incidents can be avoided.

11. Timeline

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| --- | --- | --- |
| Week | Date | Deadlines |
| 1 | Jan. 22 | Project Ideas. Start on Project Proposal |
| 2 | Jan. 29 | Completed Project Propossal finishing project designs |
| 3 | Feb. 5 | Git repository created. |
| 4 | Feb. 12 | Project designs complete, finalize project dependent technologies |
| 5 | Feb.19 | Design UI and identify potential entities to be modeled by the database. |
| 6 | Feb.26 | Front-end homepage working, a working test database, |
| 7 | Mar. 4 | Develop UI for registration/login page. develop server functionality to handle registration/login. |
| 8 | Mar. 11 | Develop UI for homepage. develop server functionality to deliver necessary data to homepage when loaded. |
| 9 | Mar. 18 | Develop UI to create tabs as necessary. develop server functionality to deliver necessary data to each tab. |
| 10 | Mar. 25 | Develop UI for progress bar and functionality. |
| 11 | Apr. 1 | Front-end, back-end and database fully integrated |
| 12 | Apr. 8 | Testing |
| 13 | Apr. 15 | Testing |
| 14 | Apr. 22 | Last minute issues or any final changes |
| 15 | Apr. 29 | Finished |