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| Project Plan – Modular Study Application | Abstract  A plan outline for the development of a Modular Study Application for students. The plan outlines what the product is, methods for project management, resources to be utilized, makeup of the team, potential obstacles and project schedule.  Kory Bennett / Brock Allton / Dylan Sawyer / Justin Casey / Dan Page / Cale Ward  UMUC 495 6380 20 January 2020 |

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7. **Project Description & Objective**

The Modular Study System is a program that can be utilized by students at any level from grade school through college. The purpose is to allow the user, a student, to load practice test questions on each subject and then test themselves on those questions. The program will store the questions that are loaded, the questions that are asked, the answer given for those questions, and keep track of how many times the questions were answered correctly or incorrectly.

1. **Project Management**
   1. **Methodology**

The Modular Study System team will be utilizing Trello and Gantt charts for progress tracking of this project. Due to the rather quick deadline for the project, and the different items that will be in constant motion, the Gantt chart will provide an excellent visual representation of all tasks displayed against a timeline of the life of the project. Gantt charts can adjust automatically and display up to date project schedule and timelines. Since meetings will not be taking place daily, the Gantt chart will make it easy for all team members to understand and follow the progress of the project. Before the Gantt chart can be created all requirements of the program will be thoroughly laid out and understood by all team members.

For the purpose of tracking each portion of the project, the team will utilize Trello. The Trello system provides an excellent source for not only keeping track of to-do-lists, files can be shared amongst members, cards can be easily inserted and removed as required as the project progresses and are edited with comments to easily keep team members informed of the tasks current state. Below is a list of cards that will be used to track the progress of the project:

* Project Plan: tracks all tasks for the completion of this plan
* Test plan: tracks all tasks for the completion of the test plan
* Coding: track the different modules being created for the project
* Testing: track the testing of the different modules as they are completed and being put together

Each of the boards listed will be used on three separate lists: Not Started, In Progress and Completed. The Project Manager will be responsible for upkeep of the cards once the task is assigned. The cards will reflect the specific item to be worked, who is to work on it, when the due date for that item is completed and the positioning of the card on the appropriate list. Although constant reminders will be sent out on what is going on for the week, due dates or items and so on, all team members will be responsible for constant monitoring of Trello and the Gantt chart.

* 1. **Communication Tools**

The primary method of communication for the Modular Study System team is via Hangout. This app will allow all members of the team to stay in near constant contact with one other through messages as the app can easily be installed on a phone allowing access anywhere and anytime. The application also allows for video conferencing in the case that face to face communication needs to happen at that moment.

The Modular Study System team will also conduct two video conferences per week, one on Monday and one on Saturday. These meetings will be conducted through WebEx. The meetings on Monday will be to discuss upcoming assignments for the week, who will be responsible for what aspect of the assignment, and when the due date will be for the deliverables. The meeting on Saturday will primarily be for reviews of the class deliverables due that Sunday and to address any concerns or feedback from individuals not brought up throughout the week.

* 1. **Analysis, Design & Development Tools**
     + Plan Monitoring and Analysis Tools
       - Trello for plan progression and assignment monitoring
       - Excel for deliverables due dates and requirements
     + Design Tools
       - Draw.io for program diagrams
       - Lucidchart for class UML diagrams
     + Development Tools
       - GitHub for documentation sharing/submission
       - NetBeans for all class designs
       - MySQL for questions database
  2. **Peer Reviews**

All team members will conduct peer reviews on all deliverables before final submission. The items for review will be available for peer review on the Friday before the due date, and all reviews will be completed by the Saturday before the due date. All comments and suggestions from the reviews will be incorporated into the final product for delivery. Peer input on material can also be done during the Saturday video conference if needed to allow for any last-minute inputs.

**3. Resources**

This project will employ the use of various software products that will be used in the capacity communications, program review and coding. Below is a listing of the resources used:

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| --- | --- |
| **Name** | **Use** |
| GitHub | Documentation Repository |
| Trello | Project Review |
| IDE Software | Coding |
| Excel | Gantt Chart Milestones |
| Word | Written Report |
| Google Hangouts | Team Communications |

**Roles and Responsibilities:**

|  |  |
| --- | --- |
| Name: Kory Bennett |  |
| Role | Team Lead |
| Responsibility | Team organizer / Documentation |
|  |  |
| Name: Brock Alton |  |
| Role | Project Manager |
| Responsibility | Co Team Lead / Documentation |
|  |  |
| Name: Dylan Sawyer |  |
| Role | Team Member |
| Responsibility | Lead Developer |
|  |  |
| Name: Dan Page |  |
| Role | Team Member |
| Responsibility | Software Developer |
|  |  |
| Name: Justin Casey |  |
| Role | Team Member |
| Responsibility | Software Developer |
|  |  |
| Name: Cale Ward |  |
| Role | Team Member |
| Responsibility | Software Developer |

**4. Risks**

|  |  |  |
| --- | --- | --- |
| **Risk** | **Impact** | **Action** |
| Team Availability | Team is split across two time zones and with different work schedules. Lack of communication could cause delays in project development/deliverables. | Rely on online communication via hangout and email correspondence. All team members are aware to check Hangouts and email on a regular basis, and to notify when unable to attend a scheduled meeting. |
| Compressed Schedule | 8-weeks is a very quick timeline for a group project, especially when team members are geographically separated. Possibilities of missing deadlines. | Ensure all team members are aware that this is a joint effort, and each contribution is significant. If one person cannot meet obligations, then informing Team Lead and Project Manager is paramount and another person or people can pick up the task. |
| Family/Military obligations | Family and military obligations will always play a primary concern in day to day activities, and can have a large impact on the availability for meetings and having sufficient time to completed assigned tasks. | Communication is key to inform team supervision of possible conflicts stemming from family or military. When a conflict arises, tasks will be adjusted as needed to meet deadlines. |

**5.** **Project Schedule**

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| --- | --- | --- | --- |
| Task | Duration (Days) | Start Date | End Date |
| **1. Planning and Design** | **45** | 20 January | 08 March |
| 1.1 Project Plan | 7 | 20 January | 26 January |
| 1.1.1 Documentation Writing | 5 | 22 January | 26 January |
| 1.1.2 Document Review / Submit | 2 | 25 January | 26 January |
| **1.2 Test Plan / User guide** | **7** | 27 January | 02 February |
| 1.2.1 Test plan | 5 | 27 January | 31 January |
| 1.2.2 User Guide | 1 | 01 February | 01 February |
| 1.2.3 Document Review / Submit | 1 | 02 February | 02 February |
| **1.3 Project Design** | **7** | 03 February | 09 February |
| 1.3.1 Initial Design | 5 | 10 February | 14 February |
| 1.3.2 Design Review | 1 | 15 February | 15 February |
| 1.3.3 Document Review / Submit | 1 | 16 February | 16 February |
| **2. Testing and Implementation** | **14** | 17 February | 01 March |
| 2.1 Sprint | 7 | 17 February | 23 February |
| 2.2 Sprint | 7 | 24 February | 01 March |
| **3. Project Close and Deliverable** | **7** | 02 March | 08 March |
| 3.1 Code Review | 2 | 02 March | 03 March |
| 3.1.2 Test Data | 2 | 04 March | 05 March |
| 3.1.3 User Guide Review and Revision | 2 | 06 March | 07 march |
| 3.1.4 Project Submission | 1 | 08 March | 08 March |