CS391 S1 Spark!Bytes Course Project
Further Details on Project Plan using an Agile Development Methodology

There have been some questions about the Course Project Plan so I am providing additional information about what is needed.

There are three critical elements to any project:

- Tasks – what needs to be done
- Schedule – when the tasks need to be done
- Resources – what is required to do the tasks, in the case of Spark!Bytes, who on the team is doing the tasks

The Agile model of software development organizes these three elements as follows:

1. What are the **requirements** for Spark!Bytes?
   For example, do recipients of excess food need to show their BU ID?

2. What are the **tasks** that need to be done?
   In this example, the task might be to check if the BU ID number is valid. The Agile approach creates a full list of tasks in a Backlog.

3. What is the **schedule** for the tasks to be completed?
   You need to define when tasks need to be completed and which tasks are dependent on other tasks. The schedule will be organized in what Agile calls Sprints. In the case of Spark!Bytes, we have defined eight one-week sprints. So, your schedule will assign tasks from the Backlog to the Sprints.

4. **Resources** that are required to complete the tasks.
   In the case of Spark!Bytes, the resources are the time of the team members to complete the tasks. Organize the team/resources, for example:
   a. Developers (Team?)
   b. Designers (all, or only some team members?)
   c. Testers (who is responsible for this?)
   d. System Administrators (who makes sure the app can be deployed?)

5. To manage a team project like Spark!Bytes, you must have a **communications and collaboration** plan.
   These typically include regular meetings and how the team is going to communicate between meetings. Your team should plan a weekly meeting which reviews the status of your project overall, refines the Agile plan, and reviews your performance. This meeting is called a Planning and Retrospective meeting. In addition, the Agile model recognizes that teams need to check-in on any issues or dependencies regularly, which is normally done in a Standup Meeting (the attendees stand up at the meeting to keep it focused and short). Standups can be daily but in the case of Spark!Bytes you should plan for one to three standups each Sprint.

The Project Plan defines these five elements in advance so your team is doing "Ready-Aim-Fire". Your project plan therefore should include these five components.

1. Requirements
2. Resources
3. Tasks

4. Schedule
5. Communications and Collaboration Plan

Without these five items, you are likely to not develop a working system by the deadline.

The Project Plan was originally due on Tuesday, 15 October at 11:59 PM ET. But given our additional clarity in this document, we will allow the teams more time and it is now due Thursday, 17 October at 11:59 PM ET. You only need to submit one per team. Please include all the team members' names in the project plan when you submit it.

Project Plan Example:

1. Requirements:

Goals
Spark!Bytes will enable Boston University constituents to access extra food from university events.

Details
Additional requirements will be a consolidation of the requirements from your previous work.

2. Resources:
Role/resource assignment:
This is an example that your team should fill in with the specifics about your plan.

Name	Roles
John Doe	Developer or Develops Module n
Tisha Jones	Designer, Developer - Designs Module X and Develops Module Y

3. Tasks:
High Level Project Plan Details
Expand this and add your details

Phase	Deliverables	Tasks	Timeline	Resources
Planning	● Requirements & Scope Document ● Work Breakdown Structure (WBS)	● Define project goals, requirements and stakeholders ● Create WBS	*Sprint X or if multiple sprints in n days*	Team
Design	● System Design Document ● User Interface Prototypes	● Conduct requirements gathering ● Create design specifications ● Develop prototypes	*Sprint X or if multiple sprints in n days*	Developers, Designers

Development	• Code Modules • Unit Tests of Each Module	• Write code • Conduct unit testing • Integrate modules	*Sprint X or if multiple sprints in n days*	Developers, Testers
Testing	• Test Cases • Test Reports • Fixed Testing Problems	• Develop test cases • Execute testing • Analyze results and remediate problems	*Sprint X or if multiple sprints in n days*	Testers
Deployment	• Completed Web Application • Deployment Plan, • User Manual, System Design, and Other Documentation	• Prepare deployment environment • Deploy software • Create documentation	*Sprint X or if multiple sprints in n days*	System Administrators

Tasks Assigned to Backlog

Create this specific to your project plan

ID	Task	Description	Sprint	Status
1	Create User Registration Form	Design and implement a form for new users to sign up.	1	Not Started
2	Implement Login Functionality	Develop a login system for existing users.	2	In Progress
3	Integrate Food Registry	Connect the platform to a payment processor.	2	Not Started
4	Design Dashboard Layout	Create a visually appealing dashboard for users to view their data.	2	Not Started
5	Develop Email Notifications	Set up email notifications for various events (e.g., new orders, password resets).	3	Not Started
6	Test User Interface	Conduct usability testing on the user interface.	4	Not Started
7	Optimize Database Queries	Improve the performance of database queries.	4	Not Started
8	Add Social Media Integration	Allow users to sign up or log in using social media accounts.	5	Not Started

Tips:

1. Once assigned, do **NOT** change the ID for an item
2. If you have to break an item into sub tasks, create new items with new ID's
3. Add new columns as needed to help you manage the backlog (like Phase, Team Members, etc.)
4. Use status column as needed to help you manage the backlog

4. Schedule:

Tasks in Backlog Assigned to Sprints

You should include in the backlog the planned Sprint(s) to do each task. Or this could be in a separate schedule.

Sprint Plan

By following a structured sprint plan, teams can improve their productivity, reduce risk, and deliver higher-quality software. For every sprint lay out the following in a short document:

Sprint Goals (example):

- Complete user registration and login.
- Create a basic user dashboard.
- Implement email notifications for password resets.

Sprint Tasks from Backlog:

List the tasks from the backlog to be implemented and by WHOM. Add columns as needed to help you manage this. Make sure to do this as a team and have each team member pick up and agree to their tasks.

Additional Schedule Considerations:

1. *Sprint Length: For the Spark!Bytes project we use 1 week sprints. Industry-typical sprints can last from 1-4 weeks.*
2. *Velocity: The amount of work the team can consistently deliver in a sprint.*
3. *Status Column (often included in what is called a Kanban Board): This is representative of the workflow, with statuses for "To Do," "In Progress," "Done", and others as needed.*

5. Communications Plan:

As a team, negotiate and agree on how you will communicate with each other.

Regular Stand-ups:

Team members meet at a schedule you define to discuss their progress, blockers, and plans for the day. This helps identify issues early on so you can address them before they become too large. Often there are daily standups but since your project team is not full-time, you likely only want to do one to three per sprint.

Sprint Planning & Retrospective:

At the end of the sprint, the team will review the completed work and gather feedback from team members and stakeholders as needed.The team will reflect on the sprint, identifying what went well and what could be improved. This is a really important step that helps improve team communication and team dynamics. In this same meeting, the team will refine and adjust the plan for remaining sprints to address any issues and manage the project to on-time completion.

For example:

Purpose	Location	Address
Weekly Meeting	CAS Building	B20
Standups	WhatsApp	Group name
John Doe	Google Meet	Meet address
Tisha Jones	Slack	Slack address