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***SELF ASSESSMENT AND PERSONALIZED LEARNING PATH***

***Project website:*** ***http://lms.digi-safari.com/***

***Project Owner:*** *Digi Safari*

***Team Members:***

*A B M Kamrul Islam Riad*

*Hassan Alfeshkhi*

*Md Saiful Islam*

*Prathyusha Kommineni*

***Instructor:*** *Dr. Meng Han*

***Course:*** *IT 7993 Capstone Project*

***Submission Date:*** *November 29, 2020*

**Overview:** The intent of this document is to provide a sample application development project plan. The scope of this document covers the project planning phase and demonstrates how a Work Breakdown Structure and associated Resource Breakdown Structure might be incorporated into key project documents. This document also provides a structure for presenting:

* Project deliverables
* Project risks and challenges
* Estimated Time taken
* Project resource information
* Project solution report

**Project planning and management:**

For the better communication of the project, we have scheduled the meetings on every alternate day for the project discussion. For the effective and fast progress of the project, we have divided the project and each milestone into different subtasks.

Also, we updated the Gantt chart according to the completed tasks and uploaded in d2l with every milestone report.

**Milestone review:**

[Milestones](https://www.projectmanager.com/blog/milestones-project-management) are the major phases of our project. They are a good way to break up the larger project into smaller and more digestible parts. The milestone review lets us note where we are in terms of meeting those milestones in the [project’s life cycle](https://www.projectmanager.com/training/what-is-the-project-management-life-cycle).

**Good management practices we followed:**

**1. Information collection:** First, we have known the project inside and gathered all the required information for the project. For example, we considered Purpose, Goals of our project which really helped us to reach our target milestones.

**2. Milestones and Meetings:** We have set the events of a web application development project as milestones on a Gantt chart, which is easily viewable by the project development team.

Creating milestones and having every alternate day team meetings are quite beneficial to show our progress. We as a team believed that if there are no milestones and discussions, we will probably delay the delivery of the project.

**3. Followed clear communication:** To run our project smoothly, we should have the continuous and effective meetings between the team members and project owners. For the effective communication we have used Microsoft Teams, Slack and Outlook as our communication media.

**Tools and Techniques:** We have used some online project management tools like, Gitlab, GitHub, Gantt charts, customized workflows, etc. to establish collaboration within the team.

**Milestone 1 Deliverables:**

1. Learning & Hands-on Front-end development using HTML5, CSS3, Bootstrap, JavaScript & Angular.

2. Learning & Hands-on Back-end development using Spring, Spring Boot & Microservices.

3. Design thinking & architecture of the capstone project

**Milestone 2 Deliverables:**

1. Learning Gaps: Java

2. Design thinking & architecture of the capstone project

3. Learning & Hands-on Back-end development using Spring, Spring Boot

**Milestone 3 Deliverables:**

1. Design thinking & architecture of the capstone project

2. Learning & Hands-on Back-end development using Spring, Spring Boot. We are expected to learn and get hands-on developing backend APIS (RESTful Webservices) by working on the capstone project which cover Spring, Spring Boot.

**Team members:**

1. Md Saiful Islam: Team Leader

2. A B M Kamrul Islam Riad: Team Member

3. Hassan Alfeshkhi: Team Member

4. Prathyusha Kommineni: Team Member

As a team we equally contributed to every task and phase of the project. Below are the contributions by each individual.

### Learning & Hands-on Front-end development using HTML5, CSS3, Bootstrap, JavaScript & Angular.

### Learning & Hands-on Back-end development using Spring, Spring Boot & Microservices. Design thinking & architecture of the capstone project.

### Developing Quiz Service (Back-end) & Question Bank Service (Back-end)

### Implementing Authentication & Authorization. Developing Question Play Service (Back-end)

### Developing Analytics Service (Back-end Webservice)

### Developing UI using Angular part 1 and Angular part 2

* Implementing Unit Testing and E2E Testing and code Refactoring and Integration

**Manhour Workload Summary:**

For each milestone or phase, as a team we have spent an average of 110-140 manhours. Which means for complete project it has taken 350-400 manhours.

* Each individual has spent around 100-130 hours for complete project.
* Each individual has spent on an average of 40-50 hours for each milestone.

**Project success factors:**

The explanations/teaching was very clear and detailed. We like Instructor’s style of teaching with quite simple examples.

Project instructor provided feedback about every single detail for improvisation in the assignment. Compared to our initial assignments and recent assignments, there is a lot of improvement by implementing his feedback.

**Team collaboration and communication:**

We haven’t faced any major issues or challenges with respect to the project. As we are from different backgrounds, initially we have spent few weeks on individual assignments to gain basic knowledge on the technologies we are going to use in project. After completing few assignments on certain technologies, as an individual we all have gained some experience.

To run our project smoothly, we should have the continuous and effective meetings between the team members and project owners. For the effective communication we have used Microsoft Teams, Slack and Outlook as our communication media.

We have a repetitive weekly meeting (3 times in a week). Each week we set milestones for the next week tasks and deliverables.

**Weekly Meeting Time:**

Monday – 12:00 PM

Wednesday – 12:00PM

Friday – 12:00PM

**Communication media:**

**Microsoft Teams:** We used Microsoft Teams for alternate day meetings, file sharing, inputs and thought sharing for milestones and other.

**Slack:** We used slack for casual discussions where we need inputs or suggestions from project instructor.

**Gitlab:** We pushed our individual tasks to Gitlab and given access to project instructor and other team members for integrating/merging our individual tasks.

**Challenges:** As we are from different backgrounds, initially we have spent few weeks on individual assignments to gain basic knowledge on the technologies we are going to use in project. After completing few assignments on certain technologies, as an individual we all have gained some experience.

Other few challenges we faced while working on our project are:

* Clearly defining the goals
* Performance and speed
* Scalability
* Integration

**Areas for improvement:**

1. As a team we believe that we need to spend more time on project planning which includes milestones according to the time schedules.

2. Every team member of the team should have a prerequisite knowledge of the technologies which we are going to use in project. It will help to save time and work on capstone project without the learning gaps assignments.

3. While integration we faced some version and formatting challenges. Its good if everyone follow the same versions and formats, so that integration will be done without any challenges.