Project Name: Online Bus Ticket Reservation System (Group 11)

Assignment Name: Implementation of project with Scrum

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Product Backlog:

Product Backlog refinement is the act of breaking down and further defining Product Backlog items into smaller more precise items. This is an ongoing activity to add details, such as a description, order, and size. Attributes often vary with the domain of work.

The developers who will be doing the work are responsible for the sizing. The product owner may influence the Developers by helping them understand and select trade-offs. Multiple Scrum Teams often work together on the same product. One Product Backlog is used to describe the upcoming work on the product.

As a...	I want to be able to...	So that...	Priority	Sprint	Status
Administrator	Login to the system	I can explore the system	Must	1	
User	Login to the system	I can explore the system	Must	1	
User	Cancel my reservation	I can make changes of my decision	Must	1	
User	Change the date of my journey	I can make changes of my decision	Must	1	
Administrator	Edit the timetable	I can manage the timetable	Must	1	
Administrator	Edit Bus, Route	I can add or remove the bus and update route	Must	1	
User	Verify Ticket	I can be sure of reservation of ticket in proper time	Should	2	
User	Suggest Improvements	I can contribute to the site usability	Should	2	
User	Contact the Administrator	I can directly submit a query	Could	2	

User	Choose the seats which are available for a certain class.	I can choose the seat type by myself.	Must	3	

Sprint Planning :

Sprint Planning is held on the first day of the Sprint.

This key Scrum event is designed to provide the Team and the Product Owner an opportunity to conduct just-in-time planning for items at the top of the Product Backlog that are of high-value for delivery at the end of the Sprint. Sprint Planning is held in two sessions: discussion around what is required, followed by creation of tasks and discussion of how the Product Backlog items will be delivered within the boundaries of the Sprint.

First Scrum Master introduces the agenda. He Clarifies the rationale and the rules of the key meeting and Indicates the time-box for the key meeting. Previous Backlog Items and their Definition of Done in their ranked order and Engages the Team in a discussion on what is being asked of them. In our project A user will be able to use his own username and password to access the system and perform corresponding operations according to his user type. For example, A traveler can reserve bus tickets and an admin can edit the bus name, type or ticket price etc. In the first page, there will be logo, home, login, Register, Verify ticket and about option. There will be Some steps for Booking the Bus ticket. Payment option will also be included.

The team discusses above all product backlog with the product owner and Estimates each of the Product Backlog items in turn using techniques. The team Breaks-down the Product Backlog items into smaller pieces, through collaboration with the Product Owner, to ensure that each item can be committed for completion within a single Sprint.

From the discussion, we get the top priority user stories (prioritized list of features) determining what can go into the next sprint.

Resource Requirement:

Front End:

We will use HTML, CSS, Bootstrap and somewhere Javascript to design our Software.

Back End:

Hypertext Preprocessor (PHP) language will be used for the Back-end of the software.We are going to use PHP for Backend as it's a server scripting language and powerful tool for making dynamic and interactive websites.

Database:

MySQL will be used for Database Systems. Here we will use the XAMPP server software to create a suitable environment for testing our project on the local computer.

IDE:

We will be using Visual Studio Code to write code for our project.

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Sprint Backlog:

The sprint backlog is a list of tasks identified by the Scrum team to be completed during the Scrum sprint. During the sprint planning meeting, the team selects some number of product backlog items, usually in the form of user stories, and identifies the tasks necessary to complete each user story. Most teams also estimate how many hours each task will take someone on the team to complete.

Backlog Item	Tasks	Day 1	Day 2	Day 3	Day 4
As a user or Administrator I can login to the system so that i can explore the system	Code the...				
	Design the...				
	Design the UI				
	Code the other...				
As a administrator I can manage the timetable, edit bus, schedule, type	Design a solution to...				
	Code the...				
	Update security test				
	Design the UI				
As a user I want to verify my reserved ticket	Code The...				
	Design the UI				
	Design a solution to				
As a user I can Choose the seats which are available for a certain class so that I can choose the seat type by myself	Code the...				
	Design the UI				
	Design a solution to				
	Update the security test				

Sprint:

Sprints are the heartbeat of Scrum, where ideas are turned into value.

They are fixed length events of one month or less to create consistency. A new Sprint starts immediately after the conclusion of the previous Sprint. All the work necessary to achieve the Product Goal, including Sprint planning, Daily scrums, Sprint Reviewand Sprint retrospective, happen within Sprints.

During the Sprint:
- No changes are made that would endanger the Sprint Goal;
- Quality does not decrease;
- The Product Backlog is refined as needed; and,
- Scope may be clarified and renegotiated with the Product Owner as more is learned.

HOW LONG SHOULD EACH SPRINT MEETING TAKE?

Meeting	Sprint Length	Meeting Length
Sprint Planning	1 month / 2 weeks	8 hours / 4 hours
Daily Scrums	N/A	15 min
Sprint Review	1 month / 2 weeks	4 hours / 2 hours
Sprint Retrospectives	1 month / 2 weeks	3 hours / 1.5 hours
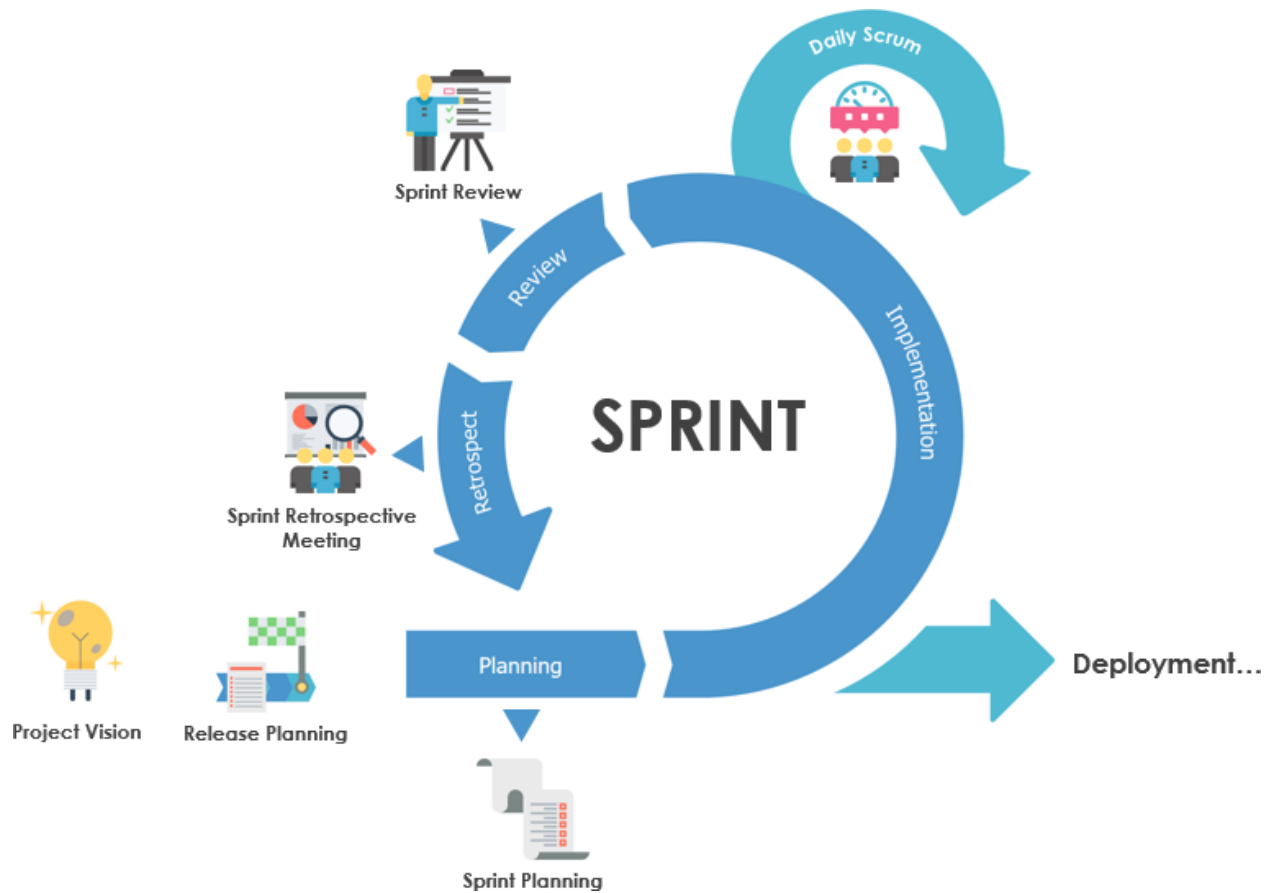
Potentially Shippable Product:

s the value delivered for the customer via the Product Backlog Items completed during a Sprint. Each Increment should interface seamlessly with all prior Increments and stand alone as a distinct addition of value to the Product. While more than one Increment may be created in a Sprint, all work must meet the Definition of Done to be considered complete. Last but not least, each Increment represents a concrete step towards realizing the Product Goal.

In our project, the Product owner decides whether our project is ready to ship or not. He asks us to add additional features like to allow users to give feedback & message options.

Sprint Review:

The purpose of the Sprint Review is to inspect the outcome of the Sprint and determine future adaptations. The Scrum Team presents the results of their work to key stakeholders and progress toward the Product Goal is discussed.

Here the main thing is to review, discover & rearrange information.

The result of the Sprint Review is a revised Product Backlog that defines the probable Product Backlog items for the next Sprint. The Product Backlog may also be adjusted overall to meet new opportunities.

Sprint Retrospective Meeting:

The sprint retrospective is a recurring meeting held at the end of a sprint used to discuss what went well during the previous sprint cycle and what can be improved for the next sprint. The Agile sprint retrospective is an essential part of the Scrum Framework for developing, delivering, and managing complex projects.

A Sprint Retrospective Model includes:
- **What worked well:**

In our project the front page UI was pretty good. The front page is very well decorated and all the options were user friendly.

- **What could be improved:**

We could improve the Login page and verify ticket pages and make them more user friendly. The security issues should be more specific and we should work accordingly.

- **What will we commit to doing in the next sprint?:**

We are committed to doing more effective teamwork by overcoming our problems. All web pages including the front page will be more user friendly and we will focus more on security issues.
Lastly, our team members make actionable commitments.

Now, We will repeat this workflow for each sprint.