

HOMEWORK WEEK 5-6

TASK 1 (Agile Techniques)

Question 1

Complete definitions for Scrum related key terminology provided below.

SCRUM CEREMONIES

Product backlog refinement: is the process of reviewing the product backlog and refining them by adding details.

Sprint planning: is held at the beginning of the sprint. The scrum team focus on what needs to be delivered and how it can be achieved.

Daily scrum: These meetings are held daily, usually in the morning. The objective of these meetings is to see what the team will be working to accomplish that day and what was done the day before. Also, it's for individuals to state any blockers they have that might be stopping them from progressing.

Sprint review: These happen at the end of a sprint. The purpose of them is to review the outcome of the sprint and what to do next. The scrum team present their work to stakeholders and discuss the how to achieve the end product.

Sprint retrospective: These take place after a sprint and it's used to assess what went wrong/right during the sprint. The aim is to improve the performance the next time a sprint happens.

SCRUM ROLES

ScrumMaster: is the lead of the scrum. The scrum master ensures the scrum framework is followed throughout the sprint. Also makes sure, scrum team members are sticking to the tasks assigned.

Product Owner: The product owner is in charge of making sure the product value is maximised. They focus on refining the backlog and prioritising items on the list.

Development Team: The development team are those who bring the product to live. They are responsible for the quality of software they produce.

Question 2

You are leading a development team that was given a task to create a new yoga booking system.

Tasks:

- 1) Front-end: create a yoga webpage.
- 2) Front-end: create a booking system that allows users to insert their desired booking times from the list of classes.
- 3) Back-end: create an API that connects to the SQL database. This is to be used to get data for the booking from the API endpoints.

Task 2 to be done first then task 1 and 3 can be worked on in parallel.

TASK 2 (SQL)

Question 1

Design a cinema booking system.

Think how you would approach the problem and what are potential ways of solving it?

Requirements:

- Design the cinema webpage
- Design the user interface for the cinema viewings
- Design the user interface for the cinema booking system
- Create a database for the cinema viewings and their corresponding viewing times
- Create an API endpoint for the booking database database and the cinema viewings.

Considerations:

- To have all available time slots shown on the website and mark the ones not available as unavailable.
- Have a list of the cinema viewings

- Have a login system for users in case they want to view all their purchases
- Users need a visual image of the seating arrangements.
- Users need to be able to see their bookings

Common or biggest problems:

- The system being too slow. For example, two people or more booking the same ticket at the same time might cause problems if the booking system is too slow. The database back-end interface needs to be fast so the booking webpage can update quickly.

Components or tools would you potentially use:

- Python – for back-end API endpoints
- SQL – storing databases
- HTML/CSS/JS – webpage and booking system design