**HOMEWORK WEEK 5-6**

(handout for students)

**TASK 1 (Agile Techniques)**

**Question 1**

**Complete definitions for Scrum related key terminology provided below**.

SCRUM CEREMONIES

· Product backlog refinement: an ongoing process in which the Product Owner and the Development Team collaborate to ensure that items on the Product Backlog

· Sprint planning: The purpose of sprint planning is to define what can be delivered in the sprint and how that work will be achieved.

· Daily scrum: The **Daily Scrum** is a 15-minute time-boxed event for the Development Team to synchronize activities and create a plan for the next 24 hours.

· Sprint review: **team gathers to review completed work and determine whether additional changes are needed**.

· Sprint retrospective: **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.**

SCRUM ROLES

· ScrumMaster:  **a facilitator for an Agile development team. They are responsible for managing the exchange of information between team members.**

· Product Owner :  **Product Owners manage the product backlog and ensure the company gains maximum value from the product.**

· Development Team:  **responsible for building the actual product increment and meeting the sprint goal**

**Question 2**

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

High level description of the system is as follows:

· It has a very simple interface to accept user input (bookings) and display classes information

· All bookings, appointments, schedules etc should be stored in a SQL database.

· There is a ‘backend’ system that should be written in Python to handle the logic and manage the data flow.

Your team has two weeks to build a simple prototype that will be shown to the client to seek their feedback and discuss further enhancements.

TASK 1

· Break this task into smaller stories (chunks of work) for the team to work on.

· Assume that one person works on one task.

· Mark tasks that can be worked on in parallel and perhaps those that need to be worked on in particular order.

**Story 1:** View the schedule / availability of the courses

**Story 2: Make a booking**

**Story 3: submit contact details**

**Story 4:** Confirmation letter sent to user email

**Story 5**: **Cancel booking**

**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?

You do not need to write actual code, but describe the high-level approach:

· Draw a list of key requirements

* View cinema schedule
* Make booking on time and seat
* Submit user contact details
* Make payment

· What are your main considerations?

API building

· What would be your common or biggest problems?

How to book a seat when two people book seat at the same time

How long should the seat be kept when user not make payment

How to avoid multiple booking

· What components or tools would you potentially use?

React frame work

Flask

Email service

· You are welcome to draw a diagram (a very simple one) for the process flow to explain how it is going to work.

