Question 1

SCRUM CEREMONIES

Product backlog refinement:
This is a meeting that takes place towards the end of the sprint. It involves the scrum team and the product owner and the purpose of this meeting is to go over the items in the product backlog and provide time estimates of when each item in the product backlog can be completed, This refinement is done so that items in the product backlog are ordered and cleaned up so that they can be selected for the sprint backlog in the coming sprint.

Sprint planning:
This is a meeting that takes place before the start of a new sprint. It involves the scrum master, the development team, and the product owner. During this meeting, items are taken from the product backlog in a prioritized manner. Selected items are placed in the sprint backlog and these items in the sprint backlog will be worked on during the sprint. During this meeting, a decision is made on what and what will be done during the sprint, and the stories selected are estimated with points.

Daily Scrum:
This is a scrum ceremony that takes place at the start of each work day. It is a meeting involving the development team and the scrum master. During this meeting, the development team answers three questions:

- What did you do yesterday?
- What will you do today?
- What are the blockers or impediments in your way?

The purpose of this meeting is to stay abreast of what is being implemented in the sprint.

Sprint Review:
This is a meeting that takes place at the end of the sprint. The meeting serves as a period to demo what was achieved during the sprint. The meeting is attended by the scrum master, the product owner, the development team, and stakeholders.

Sprint Retrospective:
This is a meeting that is held at the end of each sprint. The purpose of the meeting is to appraise the just-concluded sprint to know how well it went. During this meeting, the scrum team discuss what went well during the sprint, what went wrong, and what could be improved. The feedback from this meeting is used to improve the product and coming sprints.

SCRUM ROLES

Scrum Master:
This is the person who facilitates the scrum ceremonies. The development team report to the scrum master. The scrum master ensures that the principles of scrum are upheld in the scrum team and he is responsible for making sure that there are no impediments in the way of the development team.

Product Owner:
The product owner is someone who decides the road map of a product. He or she decides what the product should look like and what features will go into the product. The product owner receives feedback from the customer/stakeholders and channels their feedback into the product backlog so that features and improvements to the product can be made based on the items outlined in the product backlog.

Development team:
These are the people who are involved in creating the product. The development team is not exclusive to engineers only. The development team is a cross-functional group of people with the right skills to create the product.

Question 2

YOGA BOOKING SYSTEM
I have written the tasks in the order that they will be implemented.

Task Number	Task	Assignee	Notes
1.	Create “yoga” SQL database	Person 1	
2.	Create “yoga_classes” table to hold information about the yoga class offerings, the time for each class, and the price per class.	Person 2	
3.	Populate the “yoga_classes” table with actual data.	Person 3	
4.	Create a “bookings” table to hold information about classes customers book, the date booked and the	Person 4	

	amount paid.		
5.	Create an API for accepting bookings from customers. API will accept bookings and record the bookings in the bookings table.	Person 5	
6.	Create an API that fetches all the classes in the yoga_classes table	Person 1	
7.	Create a simple frontend so that users can view classes available and book a class.	Person 2	

TASK 2

CINEMA BOOKING SYSTEM

Key Requirements:

- The system should display a list of movies by categories.
- Each movie in each category should have display times (that is the different times in a week when the movie will be showing).
- Each movie should have a price associated with the display time.
- Each movie should have a number of tickets associated with the display time.
- End-users should be able to select a movie of their choice, see if it is an available ticket, and book the movie.

Considerations:

- When creating and populating the movies in the database, I will group them into categories (Example action, family, romance, SciFi, etc).
- There will be a separate table for movie categories
- There will be a separate table for movies, holding information about the movie and the category.
- There will be a separate table for viewings. This table will contain the different times in a week when people can see movies and each time slot will be associated with a movie, a price and a number of tickets.
- There will be a tickets table. This table will hold information about available tickets for movies in the different time slots.
- There will be a bookings table that holds information about the booked movies.

Biggest problem may be associating movies with timeslots and tickets.

Components/tools I will use:

- MySQL
- Python
- Flask