

Question 1:

i)

A customer comes to me and says they need a website for their business as soon as possible. The website must have the following features:

- The address of their shop and contact details.
- A menu that show all services and their prices
- Reservation where users can book appointments
- Notification will be sent to users when they book or cancel their appointments

ii)

Using waterfall:

During the requirement phase, I discuss with the customer about all the features needed until everything is clear. During the design phase, all the specifications from the first phase are analyzed and the system is designed based on the requirements. Then the software is implemented and developed based on the design. During the verification phase, the functionalities of the software are tested before being deployed to the customer.

Using Agile:

I go back and forth to discuss the requirements with the customer. This project is broken into small tasks called user stories and these user stories are translated into specific tasks. During each iteration, the team decides what features are required based on priority during the time frame. These features are then implemented and bugs are fixed if they exist. At the end of each iteration, a demo of the software is presented to the customer. This process is repeated until the entire software is completed.

iii)

For my project. I think waterfall methodology is more appropriate than agile because the project is short and there are no ambiguous requirements. Waterfall requires planning in advance because mistakes are problematic and it is important to get things right on the first try because the customer is in need. On the other hand, agile only deals with things as they appear; planning is not required when working with agile. Agile is good when mistakes are not a big deal.

Question 2:

i)

Functional requirements:

1. The system will display a tennis table in the augmented reality environment.
2. The system will display the scores of the players next to the tennis table.

Nonfunctional requirements:

1. The system will start within 1 minute after the start button is pressed.
2. The players will be able to experience the app as in real life.

ii)

System requirements:

1. The user should be able to change the background in the augmented environment.
2. The user should be able to move the tennis table around.

Software requirements:

1. The software should be able to run on both macOS and windows operating systems.
2. The user may need access to the wifi in order to use the app.

iii) user stories:

1. As the user I want to change the background in the augmented environment so that I can experience the application in different environments.
2. As the user I want to store my scores so that when I resume the application my score won't be lost.
3. As the user I want to change the size of the tennis table so that I can experience the application in many ways.

Question 3:

- i) As a scrum master, I would keep the sprint backlog up to date. I would make sure the team performs scrum well and follows the scrum framework, and lead the sprint retrospective.
- ii) As a product owner, I'd be in charge of the product backlog which is the collection of all user stories. I'd be interacting with the customer and discussing their wants and needs. I'd also rearrange the items on the backlog and make sure to keep the items transparent and clear for the scrum team.
- iii) During the sprint phase, the members of the development team work through the backlog. The development team works towards forecasting what can be developed in that timeframe. The members of the development team explain what has been done in the previous day and what they will do that day during daily standup meetings. They are in charge of implementing and testing the software.

Question 4:

- i) Assume the user will enter valid years (year > 0)

