

BRAC UNIVERSITY
Department of Computer Science and Engineering

Examination: Quiz 1
Semester: Fall 2024

Duration: 25 min
Full Marks: 10

CSE 470: Software Engineering

Name:

ID:

Section:

You are a project manager at **TechWave Solutions**. Your team is approached by **Emma**, the founder of a startup called **HealthHub**, which aims to develop an app to help users improve their wellness through personalized advice.

Emma has a visionary idea but is unsure about all the features the app should include and expects the requirements to evolve over time. Your development team is also uncertain about the best technologies and algorithms to use, needing to explore and adapt during development. Emma wants to launch an initial basic version of the app quickly to enter the market early. The project's success depends on enhancing software quality through repetitive refinement and adapting to new insights.

1.	CO1	a. Which software engineering approach would you choose to manage this project and why? [2] b. What are the stages of your chosen software engineering approach? [4] c. Write the pros and cons of your chosen software engineering approach, in the context of the given scenario. [4]	10
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Answer:

a. The Agile methodology, specifically the Scrum framework, is the most suitable for this project.

b. The stages of Agile-Scrum are as follows:

- **Product Backlog Creation:** Emma collaborates with the team to create a prioritized list of features, ideas, and improvements for the app, forming the Product Backlog.
- **Sprint Planning:** At the start of each sprint (typically 2–4 weeks), the team selects high-priority items from the Product Backlog to focus on, forming the Sprint Backlog.
- **Sprint Execution:** During the sprint, the team develops and tests the chosen features, iteratively improving the app.
- **Daily Scrum Meetings:** Short, daily stand-up meetings are held to ensure alignment, address blockers, and adapt to new insights.
- **Sprint Review:** At the end of the sprint, the team demonstrates the completed work to Emma for feedback, discussing progress and gathering input.
- **Sprint Retrospective:** The team reflects on the sprint process to identify what worked well, what didn't, and how to improve in future sprints.

c. Pros:

- Agile-Scrum adapts to evolving requirements, making it ideal for Emma's uncertain and visionary idea.
- A basic version of the app can be launched early, helping HealthHub enter the market quickly.
- Regular reviews ensure Emma's vision is incorporated into the app, improving its alignment with user needs.
- The team can experiment with technologies and algorithms, iterating to find the best solutions.
- Continuous improvement during each sprint enhances the app's quality over time.

Cons:

- Daily Scrum meetings and iterative planning require commitment from both Emma and the development team.
- Agile's flexible nature may lead to scope creep, potentially causing delays or budget overruns.
- Success relies on a highly collaborative and self-organized team, which may be challenging if members lack experience with Scrum.
- Agile focuses on short-term goals, which may lead to difficulty in predicting long-term project timelines and costs.