

Q1.

## **Maha-Kumbh Mobile App Development**

A development team of 10-15 members is responsible for delivering a mobile app for the Maha-Kumbh festival in 3 months. The team includes: Lead, Scrum Master, Developers (Frontend & Backend), QA Testers and UI/UX Designers

Step-by-Step Planning :

1. User Story Selection: As a pilgrim, user wants to register on the app using his phone number so that she/he can receive personalized notifications regarding timing update, emergency messages, crowd status, lost & found, direction maps.

2. Discussion: The team discusses aspects such as UI design, backend APIs, database integration, and SMS service. Developers express concerns about third-party SMS integration complexity. QA highlights test cases for multiple user scenarios.

3. Card Selection & Revealing:

- Each member picks a card representing their estimate:
- Developer A: 8
- Developer B: 9
- UI/UX Designer: 5
- QA Tester: 7
- Backend Dev: 14
- The estimates range between 7 and 14.

4. Discussion & Re-Voting:

The UI/UX Designer explains that creating a simple registration page is easy, leading to their estimate of 5.

The Backend Developer justifies 14 due to API security concerns.

After discussion, the team votes again and agrees on 9 story points.

5. Final Estimation & Backlog Update:

The story is assigned 9 story points.

The process continues for other stories.

Q2.

Measuring Software Development Waste in Open-Source Software Projects using PRR:

PRR=rejected PRs over total merged PRs.

Open source link: <https://github.com/facebook/react-native>

$PRR = 28 / 20886 = 0.00134$

PRR in percentage = 0.13%

This indicates good management of the repository that is taken.