National University of Computer & Emerging Sciences, Karachi

Spring -2023
CS3009-Software Engineering
Assignment 01

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Question 01:

A) In our project we are creating a doctor patient application called **Hello Doctor** using Flutter. It will help patients to book their concern Dr through an application.
B) Goals and Objectives:
   ● Booking for Doctor will be easier
   ● Searching for Doctor will be efficient
   ● Will create an ease for patients to look their concern Doctors
C) Scope: This project will be a benefit for both doctors as well as for the patients. Doctors can easily check their booked appointment and timing so they can easily manage their schedule. On the other hand patients can book their appoitments through Applicationm, for this they don't need to go to a Doctor's clinik or Hospital. It will reduce time wastage as well as increase productivity.
D) Following is the breakdown structure of our project:
   ● Project Management
      ○ Project planning
      ○ Project execution
      ○ Project control
      ○ Project closure

   ● Research and Analysis
      ○ Identity target users
      ○ Analysis potential competition
      ○ Developing users and actors
      ○ Defining users requirement

   ● Design
      ○ Application architecture
      ○ Developing Application's UI and UX
      ○ Maintaining all documentation

   ● Development of Application
      ○ Developing all the UI for the application
      ○ Creating easy booking and notification reminder

   ● Deployment and Maintainance

- Deployment on Playstore and AppStore
- Testing before deployment
- Future planning and it's execution

Question 02:

A) Project Mangmenent
   a) Define Project scope and Objectives
   b) Identitfy stackholders
   c) Develop plan and schedule
   d) Assign project resources
   e) Monitor project's proposal and performance
   f) Manage bug and issues

B) User Interface (UI)
   a) Design User Interface and program flow
   b) Develop prototypes
   c) Get feedback from users and stackholders
   d) Finalize User Interface

C) Module Development
   a) Create login and signup system
   b) User Authentication and Authorization
   c) Design Attendance for system
   d) Developing journey tracking

D) Development for Module
   a) Develop passenger selection system
   b) Desigining ride completion systems and its history
   c) Managing delays
   d) Maintaining cancelling system

E) Quality Assurance and Testing
   a) Unit testing for each module
   b) Performing systems and acceptance testing
   c) Ensure compliance with quality standards

F) Deployment and Maintenance
   a) Deploying software on PlayStore or AppStore
   b) Provide user support and get relevant feedback
   c) Monitoring application and it's working
   d) Manage bugs and solving issues
   e) Release new updates according to market trends

Question 03

Qm3

a) Weighted estimate for each estimator

$$\frac{P + O + 4B}{6}$$

Ali = $\dfrac{87 + 62 + 4(70)}{6}$ = 71.5

Zain = $\dfrac{91 + 72 + 4(80)}{6}$ = 80.5

Shah = $\dfrac{88 + 50 + 4(70)}{6}$ = 69.67

Hassan = $\dfrac{97 + 88 + 4(95)}{6}$ = 94.17

b) Average joint estimate

$$\frac{71.5 + 80.5 + 69.67 + 94.17}{4}$$

= 78.96

c.)   95% Confidence level

$$E \pm 1.96 \times SE$$

$$SE = \frac{|\bar{O} - \bar{P}|}{6}$$

$|\bar{O}|$	$|\bar{P}|$
$= \dfrac{62 + 72 + 50 + 88}{4}$	$\dfrac{87 + 91 + 85 + 97}{4}$
$= 68$	$= 90.75$

$$SE = \frac{|68 - 90.75|}{6} = 3.792$$

Average of all estimated (joint)

$$= 78.96$$

$$E \pm 1.96 (3.792)$$

$$78.96 \pm 1.96 (3.792)$$

$$71.52 \quad - \quad 86.39$$