SOFTWARE ENGINEERING.

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Question #01
a) Define your project.
The idea behind project provide a easiest way to get person register and login as patient and can easily book appointments and cancel them and buy medicines decreasing counter chaos just have to go pharmacy and show token Number their order will be given to them. Doctor can easily register through admin and can login easily update their their data and can check appointments.
Pharmacist can easily login and update stocks easily

b) Define goals & objective of project
In todays world people have started to buy rely on application. They need everything to be done in few steps and people avoid crowded places and long lines just to see if doctor available or not. through this people can easily book appointments and buy medicines avoiding counter chaos.
This application is free and with easiest UI and interface possible so people with least knowledge of technology can also explore it.

c) Scope of your work.
This will be used by five types of uses?
1) Doctors.   5) Random user.
2) Admins
3) Patients
4) Pharmacist

There will preset admin who will be allowed to sign in with email & password stored in database. Admin can register and remove doctors. and can list all doctors. User can register & logged in as patient. Patient can calculate their BMI and book & cancel appointment. Random user can only buy medicine.

d) Create work breakdown page structure.

Hospital Management System:
1. Admin
    1.1 login Page
    1.2 Register Doctor Page.
    1.3 Remove Doctor Page
    1.4 List Doctor Details Page

2. Doctors.
    2.1 Update Information Page
    2.2 View Appointments Page
    2.3 Cancel Appointments Page.
        2.3.1 Appointment Schedule Page.

3. Patients.
    3.1 Book Appointment Page
    3.2 Cancel Appointment Page
    3.3 View Appointment Page
    3.4 BMI Calculator Page
    3.5 Diet Suggestion Page

1. Pharmacist
    4.1 Login Page
    4.2 Update Stock Page
        4.2.1 Medicine List Page

5. Database
    5.1 Postgresql

Question #02.

Ease Travell App.
1. Frontend Development
    1.1 Login Page
    1.2 Home Screen page
    1.3 Passenger selection page
    1.4 Vehicle Selection Page.
    1.5 Journey Start Page
    1.6 Attendance Page
    1.7 Ride Completion Page.
    1.1 Ride History Page

2. Backend Development
    2.1 User Authentication and Authorization.
    2.2 Vehicle Management
    2.3 Passenger Management
    2.4 Journey Management
    2.5 Attendance Management
    2.6 Notification Management
    2.7 Record Management.

3. Design

3.1 Interface Design

3.2 Database Design.

3.4 Architecture Design.

Question # 03.

a) Weighted estimate for each estimator.

Ali :

$$E = \frac{O + P + 4B}{6} = \frac{87 + 62 + 4(70)}{6} = 71.5$$

Zain :

$$E = \frac{O + P + 4B}{6} = \frac{91 + 72 + 4(80)}{6} = 80.5$$

Shan :

$$E = \frac{O + P + 4B}{6} = \frac{88 + 50 + 4(70)}{6} = 69.66$$

Hassan :

$$E = \frac{O + P + 4B}{6} = \frac{97 + 88 + 4(95)}{6} = 94.16$$

b) Average estimate

$$AJE = \frac{71.5 + 80.5 + 69.66 + 94.16}{4}$$

$$AJE = 78.95.$$

c) 95% Confidence Interval ?

$$AJE \pm 1.96 * SE.$$

Avg. of optimistic effort $= \dfrac{62 + 72 + 50 + 88}{4} = 68$

Avg. of pessimistic effort $= \dfrac{87 + 91 + 88 + 97}{4} = 90.75$

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

$AJE \pm 1.96 \times (3.792)$.

$78.95 \pm 1.96 \times (3.792)$.

Interval:

$71.52 \quad - \quad 86.38$.