Software Quality Engineering

Assignment # 1,2 & 3

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Github link: https://github.com/minahilx/SQE

Section # 1

Oct 12, 2020

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Table of Contents

CASE STUDY

Hospital Management System

Taking care of our Health is the most prior thing in our lives and there is always in times of needs when our health is at risk and due to some reason we could not reach to clinics immediately and sometimes due to our hectic schedule we could not just go the clinic and waiting long queue just to take an appointment for the check up so we need some automated system which should be reliable, fast and accurate which should be there for us in times of needs

Hospital Management System is aimed to maintain the day-to-day state of admission/discharge of patients, a list of doctor's reports generation, etc.

This system will be designed to improve clinical workflow, and perform advanced appointment scheduling. This application will connect clinics and patient online through web based application. Now days no one has time to visit clinic and wait for appointment. This application will help for getting online appointment. Patient can get appointment through SMS or Internet.

Patient will request to make an appointment; receptionist will manage the appointment details. Doctors can make their schedule according to patient's appointments, which should be at least 3 and at most 10 in a day**.** Once patient's appointment gets confirmed then patient can see online how many people are waiting in queue for appointment and Receptionist saves appointment details. Doctor will upload all the patient medical history on portal. This information will be visible to the patient and the visiting Doctors only to maintain the privacy with help of their own personal login system which they have to provide their

name which should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character, password which should contain 6 characters at least and at most 10 character's and contact number which contains less than or equal to 15 digit and greater than or equal to 7 digit. As patient and clinic will be connected online, if a patient gets transferred from one clinic to another clinic, visited clinics doctor can see medical history of that patient and personal information of patient using the portal. It will be a waiting room solution. Patient can pay the doctor's bill through online payment system, which will be starting, from PRs.300 to PRs. 3000 according to patient treatment. Once the payment has been made, a medical receipt is provided to the patient, which includes what services provided and their respective costs that have been paid for.

Importance of web-based application is increasing day by day, it is important to manage all the healthcare data online. Now everyone has Internet connection and it is easy to use web application. This application will reduce the work of patient as well as doctor. Doctor does not need to take patient's initial description such as weight, patient's blood group repeatedly, because all this information will be entered at the time of registration of patient on website. Doctor will automatically see patient's information. There is no more hardware required for patient and doctor. Efficient appointment schedules will reduce patient waiting time while keeping doctor's idle time as low as possible without adding extra resources. Efficient and effective management of healthcare is imperative due to the efficient appointment scheduling.

FUNCTIONS:

1. Manage_Appointment (int appointment)
2. PayBill(Double amount)
3. Sign-up(String name, String password, String contact_no)

BLACK BOX TESTING

1. Boundary Value Analysis Testing:

Function 1:*Manage_Appointment (int noOfappointment)*

- **Constarint:**

  Appointment should be at least 3 and at most 10

- **Boundary**:
  noOfappointment = 3 and 10

- **Test cases**: 4(n) + 1 => 4(1) +1 = 5

- **Input values :**

  min = 3
  min+1= 4
  normal = 7
  max-1 = 9
  max = 10

Case	noOfappointment	Expected output
1	3	Make Schedule
2	4	Make Schedule
3	7	Make Schedule
4	9	Make Schedule
5	10	Make Schedule

✓ => Valid input

Function 2:_PayBill(Double amount)

- **Constraint:**
  Bill should be in range of PRs.300 to PRs. 3000

- **Boundary**:
  amount = 300 and 3000

- **Test cases**: 4(n) + 1 => 4(1) +1 = 5

- **Input values :**

  min = 300
  min+1= 301
  normal = 1800
  max-1 = 2999
  max = 3000

Case	amount	Expected output
1	300	Generate Medical Receipt
2	301	Generate Medical Receipt
3	1800	Generate Medical Receipt
4	2999	Generate Medical Receipt
5	3000	Generate Medical Receipt

✓ => Valid input

Function 3: Sign-up (String name, String password, String contact_no)

- **Total Test cases**: 4n+1 => 4(3)+1 = 13

- **Constraint:**

  Name should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character.
  Password should contain 6 characters at least and at most 10 characters.
  Contact_no should be less than or equal to 15 digit and greater than or equal to 7 digit.

- **Boundaries**:
  Name = 6 and 20
  Password = 6 and 10
  Contact_no = 7 and 15

- **Input values:**

  For name

min = Newton
min+1= Thommas
normal = Mark Zukerburg
max-1 = Mahenoor Haider Ali
max = Aleaxander Hamillton

For Password

min = 123abc
min+1= 567mnop
normal = gho34566
max-1 = code22246
max = pinx123456

For Contact_no

min = 1234567
min+1= 12345678
normal = 12345678910
max-1 = 12345678911234
max = 123456789112345

Case	name	password	contact_no	Expected output
1	Mark Zukerburg	gho34566	1234567	Login
2	Mark Zukerburg	gho34566	12345678	Login
3	Mark Zukerburg	gho34566	12345678910	Login
4	Mark Zukerburg	gho34566	12345678911234	Login
5	Mark Zukerburg	gho34566	123456789112345	Login
6	Newton	gho34566	12345678910	Login
7	Thommas	gho34566	12345678910	Login

8	Mahenoor Haider Ali	gho34566	12345678910	Login
9	Aleaxander Hamillton	gho34566	12345678910	Login
10	Mark Zukerburg	123abc	12345678910	Login
11	Mark Zukerburg	567mnop	12345678910	Login
12	Mark Zukerburg	code22246	12345678910	Login
13	Mark Zukerburg	pinx123456	12345678910	Login

2. Robust Boundary Value Analysis Testing:

➢ Function 1: Manage_Appointment (int noOfappointment)

- **Constarint:**

  Appointment should be at least 3 and at most 10

- **Boundary**:
  noOfappointment = 3 and 10

- **Test cases**: 6(n) + 1 => 6(1) +1 = 7

- **Input values :**

  Min-1= 2
  Min = 3
  Min+1= 4
  Normal = 7
  Max-1 = 9
  Max = 10
  Max+1= 11

Case	noOfappointment	Expected output
1	2	Invalid
2	3	Make Schedule
3	4	Make Schedule
4	7	Make Schedule
5	9	Make Schedule
6	10	Make Schedule
7	11	Invalid

✓ => Valid input
✗ => Invalid input

➢ Function 2: PayBill(Double amount)

- **Constraint:**

  Bill should be in range of PRs.300 to PRs. 3000

- **Boundary**:
  amount = 300 and 3000

- **Test cases**: 6(n) + 1 => 6(1) +1 = 7

- **Input values :**

  Min-1= 299
  Min = 300
  Min+1= 301
  Normal = 1800
  Max-1 = 2999
  Max = 3000
  Max+1= 3001

Case	amount	Expected output
1	299	Invalid Data
2	300	Generate Medical Receipt
3	301	Generate Medical Receipt
4	1800	Generate Medical Receipt
5	2999	Generate Medical Receipt
6	3000	Generate Medical Receipt
7	3001	Invalid Data

✓ => Valid input
✗ => Invalid input

- **Function3 : Sign-up (String name, String password, String contact_no)**

- **Total Test cases**: 6n+1 => 6(3)+1 = 19

- **Constraint:**

  Name should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character.

Password should contain 6 characters at least and at most 10 characters.
Contact_no should be less than or equal to 15 digit and greater than or equal to 7 digit.

- **Boundaries**:
  Name = 6 and 20
  Password = 6 and 10
  Contact_no = 7 and 15

- **Input values:**

  For name

  Min-1= Jonas
  Min = Newton
  Min+1= Thommas
  Normal = Mark Zukerburg
  Max-1 = Mahenoor Haider Ali
  Max = Aleaxander Hamillton
  Max+1= Hubert Blaine Grayson

  For Password

  min-1= 123ab
  min = 123abc
  min+1= 567mnop
  normal = gho34566
  max-1 = code22246
  max = pinx123456
  max+1= putx4445556

  For Contact_no

  min-1= 123456
  min = 1234567
  min+1= 12345678
  normal = 12345678910
  max-1 = 12345678911234
  max = 123456789112345
  max+1=224466889977551

Case	name	password	Contact_no	Expexted output
1	Mark Zukerburg	gho34566	123456	Invalid Data
2	Mark Zukerburg	gho34566	1234567	Login
3	Mark Zukerburg	gho34566	12345678	Login
4	Mark Zukerburg	gho34566	12345678910	Login
5	Mark Zukerburg	gho34566	12345678911234	Login
6	Mark Zukerburg	gho34566	123456789112345	Login
7	Mark Zukerburg	gho34566	224466889977551	Invalid Data
8	Mark Zukerburg	123ab	12345678910	Invalid Data
9	Mark Zukerburg	123abc	12345678910	Login
10	Mark Zukerburg	567mnop	12345678910	Login
11	Mark Zukerburg	code22246	12345678910	Login
12	Mark Zukerburg	pinx123456	12345678910	Login
13	Mark Zukerburg	putx4445556	12345678910	Invalid Data
14	Jonas	gho34566	12345678910	Invalid Data
15	Newton	gho34566	12345678910	Login
16	Thommas	gho34566	12345678910	Login
17	Mahenoor Haider Ali	gho34566	12345678910	Login
18	Aleaxander Hamillton	gho34566	12345678910	Login
19	Hubert Blaine Grayson	gho34566	12345678910	Invalid Data

3. Worst Case Boundary value Analysis Testing:

- **Function 1:Manage_Appointment (int noOfappointment)**

- **Constarint:**

  Appointment should be at least 3 and at most 10

- **Boundary**:
  noOfappointment = 3 and 10

- **Test cases**: $5^{\wedge n}$ => $5^{\wedge 1}$ => 5

- **Input values :**

  min = 3
  min+1= 4
  normal = 7
  max-1 = 9
  max = 10

Case	noOfappointment	Expected output
1	3	Make Schedule
2	4	Make Schedule
3	7	Make Schedule
4	9	Make Schedule
5	10	Make Schedule

✓ => Valid input

- **Function 2**:**PayBill(Double amount)**

- **Constraint:**

Bill should be in range of PRs.300 to PRs. 3000

- **Boundary**:
  Amount = 300 and 3000

- **Test cases**: $5^{\wedge n}$ => $5^{\wedge 1}$ => 5

- **Input values:**

  min = 300
  min+1= 301
  normal = 1800
  max-1 = 2999
  max = 3000

Case	amount	Expected output
1	300	Generate Medical Receipt
2	301	Generate Medical Receipt
3	1800	Generate Medical Receipt
4	2999	Generate Medical Receipt
5	3000	Generate Medical Receipt

✓ => Valid input

- **Function3: Sign-up (String name, String password, String contact_no)**

- **Test cases**: $5^{\wedge n}$ => $5^{\wedge 3}$ => 125

- **Constraint:**

  Name should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character.
  Password should contain 6 characters at least and at most 10 characters.
  Contact_no should be less than or equal to 15 digit and greater than or equal to 7 digit.

- **Boundaries**:
  Name = 6 and 20
  Password = 6 and 10
  Contact_no = 7 and 15

- **Input values =**

  For name

  min = Newton
  min+1= Thommas
  normal = Mark Zukerburg
  max-1 = Mahenoor Haider Ali
  max = Aleaxander Hamillton

  For Password

  min = 123abc
  min+1= 567mnop
  normal = gho34566
  max-1 = code22246
  max = pinx123456

  For Contact_no

  min = 1234567
  min+1= 12345678
  normal = 12345678910
  max-1 = 12345678911234
  max = 123456789112345

Case	name	password	contact_no	Expected output
1.	Newton	123abc	1234567	Login
2.	Newton	123abc	12345678	Login
3.	Newton	123abc	12345678910	Login
4.	Newton	123abc	12345678911234	Login
5.	Newton	123abc	123456789112345	Login
6.	Newton	567mnop	1234567	Login
7.	Newton	567mnop	12345678	Login
8.	Newton	567mnop	12345678910	Login
9.	Newton	567mnop	12345678911234	Login
10.	Newton	567mnop	123456789112345	Login
11.	Newton	gho34566	1234567	Login
12.	Newton	gho34566	12345678	Login
13.	Newton	gho34566	12345678910	Login
14.	Newton	gho34566	12345678911234	Login
15.	Newton	gho34566	123456789112345	Login
16.	Newton	code22246	1234567	Login
17.	Newton	code22246	12345678	Login
18.	Newton	code22246	12345678910	Login
19.	Newton	code22246	12345678911234	Login
20.	Newton	code22246	123456789112345	Login
21.	Newton	pinx123456	1234567	Login
22.	Newton	pinx123456	12345678	Login
23.	Newton	pinx123456	12345678910	Login
24.	Newton	pinx123456	12345678911234	Login
25.	Newton	pinx123456	123456789112345	Login
26.	Thommas	123abc	1234567	Login
27.	Thommas	123abc	12345678	Login
28.	Thommas	123abc	12345678910	Login
29.	Thommas	123abc	12345678911234	Login
30.	Thommas	123abc	123456789112345	Login
31.	Thommas	567mnop	1234567	Login
32.	Thommas	567mnop	12345678	Login
33.	Thommas	567mnop	12345678910	Login
34.	Thommas	567mnop	12345678911234	Login
35.	Thommas	567mnop	123456789112345	Login
36.	Thommas	gho34566	1234567	Login
37.	Thommas	gho34566	12345678	Login
38.	Thommas	gho34566	12345678910	Login
39.	Thommas	gho34566	12345678911234	Login
40.	Thommas	gho34566	123456789112345	Login
41.	Thommas	code22246	1234567	Login
42.	Thommas	code22246	12345678	Login

43.	Thommas	code22246	12345678910	Login
44.	Thommas	code22246	12345678911234	Login
45.	Thommas	code22246	123456789112345	Login
46.	Thommas	pinx123456	1234567	Login
47.	Thommas	pinx123456	12345678	Login
48.	Thommas	pinx123456	12345678910	Login
49.	Thommas	pinx123456	12345678911234	Login
50.	Thommas	pinx123456	123456789112345	Login
51.	Mark Zukerburg	123abc	1234567	Login
52.	Mark Zukerburg	123abc	12345678	Login
53.	Mark Zukerburg	123abc	12345678910	Login
54.	Mark Zukerburg	123abc	12345678911234	Login
55.	Mark Zukerburg	123abc	123456789112345	Login
56.	Mark Zukerburg	567mnop	1234567	Login
57.	Mark Zukerburg	567mnop	12345678	Login
58.	Mark Zukerburg	567mnop	12345678910	Login
59.	Mark Zukerburg	567mnop	12345678911234	Login
60.	Mark Zukerburg	567mnop	123456789112345	Login
61.	Mark Zukerburg	gho34566	1234567	Login
62.	Mark Zukerburg	gho34566	12345678	Login
63.	Mark Zukerburg	gho34566	12345678910	Login
64.	Mark Zukerburg	gho34566	12345678911234	Login
65.	Mark Zukerburg	gho34566	123456789112345	Login
66.	Mark Zukerburg	code22246	1234567	Login
67.	Mark Zukerburg	code22246	12345678	Login
68.	Mark Zukerburg	code22246	12345678910	Login
69.	Mark	code22246	12345678911234	Login

	Zukerburg			
70.	Mark Zukerburg	code22246	123456789112345	Login
71.	Mark Zukerburg	pinx123456	1234567	Login
72.	Mark Zukerburg	pinx123456	12345678	Login
73.	Mark Zukerburg	pinx123456	12345678910	Login
74.	Mark Zukerburg	pinx123456	12345678911234	Login
75.	Mark Zukerburg	pinx123456	123456789112345	Login
76.	Mahenoor Haider Ali	123abc	1234567	Login
77.	Mahenoor Haider Ali	123abc	12345678	Login
78.	Mahenoor Haider Ali	123abc	12345678910	Login
79.	Mahenoor Haider Ali	123abc	12345678911234	Login
80.	Mahenoor Haider Ali	123abc	123456789112345	Login
81.	Mahenoor Haider Ali	567mnop	1234567	Login
82.	Mahenoor Haider Ali	567mnop	12345678	Login
83.	Mahenoor Haider Ali	567mnop	12345678910	Login
84.	Mahenoor Haider Ali	567mnop	12345678911234	Login
85.	Mahenoor Haider Ali	567mnop	123456789112345	Login
86.	Mahenoor Haider Ali	gho34566	1234567	Login
87.	Mahenoor Haider Ali	gho34566	12345678	Login
88.	Mahenoor Haider Ali	gho34566	12345678910	Login
89.	Mahenoor Haider Ali	gho34566	12345678911234	Login
90.	Mahenoor Haider Ali	gho34566	123456789112345	Login
91.	Mahenoor Haider Ali	code22246	1234567	Login
92.	Mahenoor	code22246	12345678	Login

	Haider Ali			
93.	Mahenoor Haider Ali	code22246	12345678910	Login
94.	Mahenoor Haider Ali	code22246	12345678911234	Login
95.	Mahenoor Haider Ali	code22246	123456789112345	Login
96.	Mahenoor Haider Ali	pinx123456	1234567	Login
97.	Mahenoor Haider Ali	pinx123456	12345678	Login
98.	Mahenoor Haider Ali	pinx123456	12345678910	Login
99.	Mahenoor Haider Ali	pinx123456	12345678911234	Login
100.	Mahenoor Haider Ali	pinx123456	123456789112345	Login
101.	Aleaxander Hamillton	123abc	1234567	Login
102.	Aleaxander Hamillton	123abc	12345678	Login
103.	Aleaxander Hamillton	123abc	12345678910	Login
104.	Aleaxander Hamillton	123abc	12345678911234	Login
105.	Aleaxander Hamillton	123abc	123456789112345	Login
106.	Aleaxander Hamillton	567mnop	1234567	Login
107.	Aleaxander Hamillton	567mnop	12345678	Login
108.	Aleaxander Hamillton	567mnop	12345678910	Login
109.	Aleaxander Hamillton	567mnop	12345678911234	Login
110.	Aleaxander Hamillton	567mnop	123456789112345	Login
111.	Aleaxander Hamillton	gho34566	1234567	Login
	Aleaxander Hamillton	gho34566	12345678	Login
112.	Aleaxander Hamillton	gho34566	12345678910	Login
113.	Aleaxander Hamillton	gho34566	12345678911234	Login
114.	Aleaxander	gho34566	123456789112345	Login

	Hamillton			
115.	Aleaxander Hamillton	code22246	1234567	Login
116.	Aleaxander Hamillton	code22246	12345678	Login
117.	Aleaxander Hamillton	code22246	12345678910	Login
118.	Aleaxander Hamillton	code22246	12345678911234	Login
119.	Aleaxander Hamillton	code22246	123456789112345	Login
120.	Aleaxander Hamillton	pinx123456	1234567	Login
	Aleaxander Hamillton	pinx123456	12345678	Login
121.	Aleaxander Hamillton	pinx123456	12345678910	Login
122.	Aleaxander Hamillton	pinx123456	12345678911234	Login
123.	Aleaxander Hamillton	pinx123456	123456789112345	Login
124.	Aleaxander Hamillton	123abc	1234567	Login
125.	Aleaxander Hamillton	123abc	12345678	Login

4. Robust Worst Case Testing

- **Function 1:Manage_Appointment (int noOfappointment)**

- **Constarint:**

  Appointment should be at least 3 and at most 10

- **Boundary**:
  noOfappointmen => *3* and 10

- **Test cases**: $7^{\wedge n}$ => $7^{\wedge 1}$ => 7

- **Input value:**

  Min-1= 2
  Min = 3
  Min+1= 4
  Normal = 7
  Max-1 = 9
  Max = 10
  Max+1= 11

Case	noOfappointment	Expected output
1	2	Invalid
2	3	Make Schedule
3	4	Make Schedule
4	7	Make Schedule
5	9	Make Schedule
6	10	Make Schedule
7	11	Invalid

✓ => Valid input
× => Invalid input

- **Function 2:PayBill(Double amount)**

- **Constraint:**

Bill should be in range of PRs.300 to PRs. 3000

- **Boundary**:
  Amount => 300 and 3000

- **Test cases**: $7^{\wedge n}$ => $7^{\wedge 1}$ => 7

- **Input values:**

  Min-1= 299
  Min = 300
  Min+1= 301
  Normal = 1800
  Max-1 = 2999
  Max = 3000
  Max+1= 3001

Case	amount	Expected output
1	299	Invalid Data
2	300	Generate Medical Receipt
3	301	Generate Medical Receipt
4	1800	Generate Medical Receipt
5	2999	Generate Medical Receipt
6	3000	Generate Medical Receipt
7	3001	Invalid Data

✓ => Valid input
✗ => Invalid input

- **Function 3:Sign-up (String name, String password, String contact_no)**

- **Test cases**: 7^{n} => 7^{3} => 343

- **Constraint:**

  Name should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character.
  Password should contain 6 characters at least and at most 10 characters.
  Contact_no should be less than or equal to 15 digit and greater than or equal to 7 digit.

  Boundaries:
  name = 6 and 20
  password = 6 and 10
  contact_no = 7 and 15

- **Input values:**

  For name

  Min-1= Jonas
  Min = Newton
  Min+1= Thommas
  Normal = Mark Zukerburg
  Max-1 = Mahenoor Haider Ali
  Max = Aleaxander Hamillton
  Max+1= Hubert Blaine Grayson

  For Password

  min-1= 123ab
  min = 123abc
  min+1= 567mnop
  normal = gho34566
  max-1 = code22246
  max = pinx123456
  max+1= putx4445556

  For Contact_no

  min-1= 123456
  min = 1234567
  min+1= 12345678
  normal = 12345678910
  max-1 = 12345678911234

max = 123456789112345
max+1=224466889977551

Case	Name	Password	Contact_no	Expected Output
1.	Jonas	123ab	123456	Invalid Data
2.	Jonas	123ab	1234567	Invalid Data
3.	Jonas	123ab	12345678	Invalid Data
4.	Jonas	123ab	12345678910	Invalid Data
5.	Jonas	123ab	12345678911234	Invalid Data
6.	Jonas	123ab	123456789112345	Invalid Data
7.	Jonas	123ab	224466889977551	Invalid Data
8.	Jonas	123abc	123456	Invalid Data
9.	Jonas	123abc	1234567	Invalid Data
10.	Jonas	123abc	12345678	Invalid Data
11.	Jonas	123abc	12345678910	Invalid Data
12.	Jonas	123abc	12345678911234	Invalid Data
13.	Jonas	123abc	123456789112345	Invalid Data
14.	Jonas	123abc	224466889977551	Invalid Data
15.	Jonas	567mnop	123456	Invalid Data
16.	Jonas	567mnop	1234567	Invalid

				Data
17.	Jonas	567mnop	12345678	Invalid Data
18.	Jonas	567mnop	12345678910	Invalid Data
19.	Jonas	567mnop	12345678911234	Invalid Data
20.	Jonas	567mnop	123456789112345	Invalid Data
21.	Jonas	567mnop	224466889977551	Invalid Data
22.	Jonas	gho34566	123456	Invalid Data
23.	Jonas	gho34566	1234567	Invalid Data
24.	Jonas	gho34566	12345678	Invalid Data
25.	Jonas	gho34566	12345678910	Invalid Data
26.	Jonas	gho34566	12345678911234	Invalid Data
27.	Jonas	gho34566	123456789112345	Invalid Data
28.	Jonas	gho34566	224466889977551	Invalid Data
29.	Jonas	code22246	123456	Invalid Data
30.	Jonas	code22246	1234567	Invalid Data
31.	Jonas	code22246	12345678	Invalid Data
32.	Jonas	code22246	12345678910	Invalid Data
33.	Jonas	code22246	12345678911234	Invalid Data
34.	Jonas	code22246	123456789112345	Invalid Data
35.	Jonas	code22246	224466889977551	Invalid

				Data
36.	Jonas	pinx123456	123456	Invalid Data
37.	Jonas	pinx123456	1234567	Invalid Data
38.	Jonas	pinx123456	12345678	Invalid Data
39.	Jonas	pinx123456	12345678910	Invalid Data
40.	Jonas	pinx123456	12345678911234	Invalid Data
41.	Jonas	pinx123456	123456789112345	Invalid Data
42.	Jonas	pinx123456	224466889977551	Invalid Data
43.	Jonas	putx4445556	123456	Invalid Data
44.	Jonas	putx4445556	1234567	Invalid Data
45.	Jonas	putx4445556	12345678	Invalid Data
46.	Jonas	putx4445556	12345678910	Invalid Data
47.	Jonas	putx4445556	12345678911234	Invalid Data
48.	Jonas	putx4445556	123456789112345	Invalid Data
49.	Jonas	putx4445556	224466889977551	Invalid Data
50.	Newton	123ab	123456	Invalid Data
51.	Newton	123ab	1234567	Invalid Data
52.	Newton	123ab	12345678	Invalid Data
53.	Newton	123ab	12345678910	Invalid Data
54.	Newton	123ab	12345678911234	Invalid

				Data
55.	Newton	123ab	123456789112345	Invalid Data
56.	Newton	123ab	224466889977551	Invalid Data
57.	Newton	123abc	123456	Invalid Data
58.	Newton	123abc	1234567	Login
59.	Newton	123abc	12345678	Login
60.	Newton	123abc	12345678910	Login
61.	Newton	123abc	12345678911234	Login
62.	Newton	123abc	123456789112345	Login
63.	Newton	123abc	224466889977551	Login
64.	Newton	567mnop	123456	Invalid Data
65.	Newton	567mnop	1234567	Login
66.	Newton	567mnop	12345678	Login
67.	Newton	567mnop	12345678910	Login
68.	Newton	567mnop	12345678911234	Login
69.	Newton	567mnop	123456789112345	Login
70.	Newton	567mnop	224466889977551	Login
71.	Newton	gho34566	123456	Invalid Data
72.	Newton	gho34566	1234567	Login
73.	Newton	gho34566	12345678	Login
74.	Newton	gho34566	12345678910	Login
75.	Newton	gho34566	12345678911234	Login
76.	Newton	gho34566	123456789112345	Login
77.	Newton	gho34566	224466889977551	Login
78.	Newton	code22246	123456	Invalid Data
79.	Newton	code22246	1234567	Login
80.	Newton	code22246	12345678	Login
81.	Newton	code22246	12345678910	Login
82.	Newton	code22246	12345678911234	Login
83.	Newton	code22246	123456789112345	Login

84.	Newton	code22246	224466889977551	Login
85.	Newton	pinx123456	123456	Invalid Data
86.	Newton	pinx123456	1234567	Login
87.	Newton	pinx123456	12345678	Login
88.	Newton	pinx123456	12345678910	Login
89.	Newton	pinx123456	12345678911234	Login
90.	Newton	pinx123456	123456789112345	Login
91.	Newton	pinx123456	224466889977551	Login
92.	Newton	putx4445556	123456	Invalid Data
93.	Newton	putx4445556	1234567	Invalid Data
94.	Newton	putx4445556	12345678	Invalid Data
95.	Newton	putx4445556	12345678910	Invalid Data
96.	Newton	putx4445556	12345678911234	Invalid Data
97.	Newton	putx4445556	123456789112345	Invalid Data
98.	Newton	putx4445556	224466889977551	Invalid Data
99.	Thommas	123ab	123456	Invalid Data
100.	Thommas	123ab	1234567	Invalid Data
101.	Thommas	123ab	12345678	Invalid Data
102.	Thommas	123ab	12345678910	Invalid Data
103.	Thommas	123ab	12345678911234	Invalid Data
104.	Thommas	123ab	123456789112345	Invalid Data
105.	Thommas	123ab	224466889977551	Invalid Data
106.	Thommas	123abc	123456	Invalid

				Data
107.	Thommas	123abc	1234567	Login
108.	Thommas	123abc	12345678	Login
109.	Thommas	123abc	12345678910	Login
110.	Thommas	123abc	12345678911234	Login
111.	Thommas	123abc	123456789112345	Login
112.	Thommas	123abc	224466889977551	Login
113.	Thommas	567mnop	123456	Invalid Data
114.	Thommas	567mnop	1234567	Login
115.	Thommas	567mnop	12345678	Login
116.	Thommas	567mnop	12345678910	Login
117.	Thommas	567mnop	12345678911234	Login
118.	Thommas	567mnop	123456789112345	Login
119.	Thommas	567mnop	224466889977551	Login
120.	Thommas	gho34566	123456	Invalid Data
121.	Thommas	gho34566	1234567	Login
122.	Thommas	gho34566	12345678	Login
123.	Thommas	gho34566	12345678910	Login
124.	Thommas	gho34566	12345678911234	Login
125.	Thommas	gho34566	123456789112345	Login
126.	Thommas	gho34566	224466889977551	Login
127.	Thommas	code22246	123456	Invalid Data
128.	Thommas	code22246	1234567	Login
129.	Thommas	code22246	12345678	Login
130.	Thommas	code22246	12345678910	Login
131.	Thommas	code22246	12345678911234	Login
132.	Thommas	code22246	123456789112345	Login
133.	Thommas	code22246	224466889977551	Login
134.	Thommas	pinx123456	123456	Invalid Data
135.	Thommas	pinx123456	1234567	Login
136.	Thommas	pinx123456	12345678	Login
137.	Thommas	pinx123456	12345678910	Login
138.	Thommas	pinx123456	12345678911234	Login
139.	Thommas	pinx123456	123456789112345	Login

140.	Thommas	pinx123456	224466889977551	Login
141.	Thommas	putx4445556	123456	Invalid Data
142.	Thommas	putx4445556	1234567	Invalid Data
143.	Thommas	putx4445556	12345678	Invalid Data
144.	Thommas	putx4445556	12345678910	Invalid Data
145.	Thommas	putx4445556	12345678911234	Invalid Data
146.	Thommas	putx4445556	123456789112345	Invalid Data
147.	Thommas	putx4445556	224466889977551	Invalid Data
148.	Mark Zukerburg	123ab	123456	Invalid Data
149.	Mark Zukerburg	123ab	1234567	Invalid Data
150.	Mark Zukerburg	123ab	12345678	Invalid Data
151.	Mark Zukerburg	123ab	12345678910	Invalid Data
152.	Mark Zukerburg	123ab	12345678911234	Invalid Data
153.	Mark Zukerburg	123ab	123456789112345	Invalid Data
154.	Mark Zukerburg	123ab	224466889977551	Invalid Data
155.	Mark Zukerburg	123abc	123456	Invalid Data
156.	Mark Zukerburg	123abc	1234567	Login
157.	Mark Zukerburg	123abc	12345678	Login
158.	Mark Zukerburg	123abc	12345678910	Login
159.	Mark	123abc	12345678911234	Login

	Zukerburg			
160.	Mark Zukerburg	123abc	123456789112345	Login
161.	Mark Zukerburg	123abc	224466889977551	Login
162.	Mark Zukerburg	567mnop	123456	Invalid Data
163.	Mark Zukerburg	567mnop	1234567	Login
164.	Mark Zukerburg	567mnop	12345678	Login
165.	Mark Zukerburg	567mnop	12345678910	Login
166.	Mark Zukerburg	567mnop	12345678911234	Login
167.	Mark Zukerburg	567mnop	123456789112345	Login
168.	Mark Zukerburg	567mnop	224466889977551	Login
169.	Mark Zukerburg	gho34566	123456	Invalid Data
170.	Mark Zukerburg	gho34566	1234567	Login
171.	Mark Zukerburg	gho34566	12345678	Login
172.	Mark Zukerburg	gho34566	12345678910	Login
173.	Mark Zukerburg	gho34566	12345678911234	Login
174.	Mark Zukerburg	gho34566	123456789112345	Login
175.	Mark Zukerburg	gho34566	224466889977551	Login
176.	Mark Zukerburg	code22246	123456	Invalid Data
177.	Mark Zukerburg	code22246	1234567	Login
178.	Mark Zukerburg	code22246	12345678	Login

179.	Mark Zukerburg	code22246	12345678910	Login
180.	Mark Zukerburg	code22246	12345678911234	Login
181.	Mark Zukerburg	code22246	123456789112345	Login
182.	Mark Zukerburg	code22246	224466889977551	Login
183.	Mark Zukerburg	pinx123456	123456	Invalid Data
184.	Mark Zukerburg	pinx123456	1234567	Login
185.	Mark Zukerburg	pinx123456	12345678	Login
186.	Mark Zukerburg	pinx123456	12345678910	Login
187.	Mark Zukerburg	pinx123456	12345678911234	Login
188.	Mark Zukerburg	pinx123456	123456789112345	Login
189.	Mark Zukerburg	pinx123456	224466889977551	Login
190.	Mark Zukerburg	putx4445556	123456	Invalid Data
191.	Mark Zukerburg	putx4445556	1234567	Invalid Data
192.	Mark Zukerburg	putx4445556	12345678	Invalid Data
193.	Mark Zukerburg	putx4445556	12345678910	Invalid Data
194.	Mark Zukerburg	putx4445556	12345678911234	Invalid Data
195.	Mark Zukerburg	putx4445556	123456789112345	Invalid Data
196.	Mark Zukerburg	putx4445556	224466889977551	Invalid Data
197.	Mahenoor Haider Ali	123ab	123456	Invalid Data
198.	Mahenoor	123ab	1234567	Invalid

	Haider Ali			Data
199.	Mahenoor Haider Ali	123ab	12345678	Invalid Data
200.	Mahenoor Haider Ali	123ab	12345678910	Invalid Data
201.	Mahenoor Haider Ali	123ab	12345678911234	Invalid Data
202.	Mahenoor Haider Ali	123ab	123456789112345	Invalid Data
203.	Mahenoor Haider Ali	123ab	224466889977551	Invalid Data
204.	Mahenoor Haider Ali	123abc	123456	Invalid Data
205.	Mahenoor Haider Ali	123abc	1234567	Login
206.	Mahenoor Haider Ali	123abc	12345678	Login
207.	Mahenoor Haider Ali	123abc	12345678910	Login
208.	Mahenoor Haider Ali	123abc	12345678911234	Login
209.	Mahenoor Haider Ali	123abc	123456789112345	Login
210.	Mahenoor Haider Ali	123abc	224466889977551	Login
211.	Mahenoor Haider Ali	567mnop	123456	Invalid Data
212.	Mahenoor Haider Ali	567mnop	1234567	Login
213.	Mahenoor Haider Ali	567mnop	12345678	Login
214.	Mahenoor Haider Ali	567mnop	12345678910	Login
215.	Mahenoor Haider Ali	567mnop	12345678911234	Login
216.	Mahenoor Haider Ali	567mnop	123456789112345	Login
217.	Mahenoor Haider Ali	567mnop	224466889977551	Login

218.	Mahenoor Haider Ali	gho34566	123456	Invalid Data
219.	Mahenoor Haider Ali	gho34566	1234567	Login
220.	Mahenoor Haider Ali	gho34566	12345678	Login
221.	Mahenoor Haider Ali	gho34566	12345678910	Login
222.	Mahenoor Haider Ali	gho34566	12345678911234	Login
223.	Mahenoor Haider Ali	gho34566	123456789112345	Login
224.	Mahenoor Haider Ali	gho34566	224466889977551	Login
225.	Mahenoor Haider Ali	code22246	123456	Invalid Data
226.	Mahenoor Haider Ali	code22246	1234567	Login
227.	Mahenoor Haider Ali	code22246	12345678	Login
228.	Mahenoor Haider Ali	code22246	12345678910	Login
229.	Mahenoor Haider Ali	code22246	12345678911234	Login
230.	Mahenoor Haider Ali	code22246	123456789112345	Login
231.	Mahenoor Haider Ali	code22246	224466889977551	Login
232.	Mahenoor Haider Ali	pinx123456	123456	Invalid Data
233.	Mahenoor Haider Ali	pinx123456	1234567	Login
234.	Mahenoor Haider Ali	pinx123456	12345678	Login
235.	Mahenoor Haider Ali	pinx123456	12345678910	Login
236.	Mahenoor Haider Ali	pinx123456	12345678911234	Login
237.	Mahenoor	pinx123456	123456789112345	Login

	Haider Ali			
238.	Mahenoor Haider Ali	pinx123456	224466889977551	Login
239.	Mahenoor Haider Ali	putx4445556	123456	Invalid Data
240.	Mahenoor Haider Ali	putx4445556	1234567	Invalid Data
241.	Mahenoor Haider Ali	putx4445556	12345678	Invalid Data
242.	Mahenoor Haider Ali	putx4445556	12345678910	Invalid Data
243.	Mahenoor Haider Ali	putx4445556	12345678911234	Invalid Data
244.	Mahenoor Haider Ali	putx4445556	123456789112345	Invalid Data
245.	Mahenoor Haider Ali	putx4445556	224466889977551	Invalid Data
246.	Aleaxander Hamillton	123ab	123456	Invalid Data
247.	Aleaxander Hamillton	123ab	1234567	Invalid Data
248.	Aleaxander Hamillton	123ab	12345678	Invalid Data
249.	Aleaxander Hamillton	123ab	12345678910	Invalid Data
250.	Aleaxander Hamillton	123ab	12345678911234	Invalid Data
251.	Aleaxander Hamillton	123ab	123456789112345	Invalid Data
252.	Aleaxander Hamillton	123ab	224466889977551	Invalid Data
253.	Aleaxander Hamillton	123abc	123456	Invalid Data
254.	Aleaxander Hamillton	123abc	1234567	Login
255.	Aleaxander Hamillton	123abc	12345678	Login
256.	Aleaxander Hamillton	123abc	12345678910	Login

257.	Aleaxander Hamillton	123abc	12345678911234	Login
258.	Aleaxander Hamillton	123abc	123456789112345	Login
259.	Aleaxander Hamillton	123abc	224466889977551	Login
260.	Aleaxander Hamillton	567mnop	123456	Invalid Data
261.	Aleaxander Hamillton	567mnop	1234567	Login
262.	Aleaxander Hamillton	567mnop	12345678	Login
263.	Aleaxander Hamillton	567mnop	12345678910	Login
264.	Aleaxander Hamillton	567mnop	12345678911234	Login
265.	Aleaxander Hamillton	567mnop	123456789112345	Login
266.	Aleaxander Hamillton	567mnop	224466889977551	Login
267.	Aleaxander Hamillton	gho34566	123456	Invalid Data
268.	Aleaxander Hamillton	gho34566	1234567	Login
269.	Aleaxander Hamillton	gho34566	12345678	Login
270.	Aleaxander Hamillton	gho34566	12345678910	Login
271.	Aleaxander Hamillton	gho34566	12345678911234	Login
272.	Aleaxander Hamillton	gho34566	123456789112345	Login
273.	Aleaxander Hamillton	gho34566	224466889977551	Login
274.	Aleaxander Hamillton	code22246	123456	Invalid Data
275.	Aleaxander Hamillton	code22246	1234567	Login
276.	Aleaxander	code22246	12345678	Login

	Hamillton			
277.	Aleaxander Hamillton	code22246	12345678910	Login
278.	Aleaxander Hamillton	code22246	12345678911234	Login
279.	Aleaxander Hamillton	code22246	123456789112345	Login
280.	Aleaxander Hamillton	code22246	224466889977551	Login
281.	Aleaxander Hamillton	pinx123456	123456	Invalid Data
282.	Aleaxander Hamillton	pinx123456	1234567	Login
283.	Aleaxander Hamillton	pinx123456	12345678	Login
284.	Aleaxander Hamillton	pinx123456	12345678910	Login
285.	Aleaxander Hamillton	pinx123456	12345678911234	Login
286.	Aleaxander Hamillton	pinx123456	123456789112345	Login
287.	Aleaxander Hamillton	pinx123456	224466889977551	Login
288.	Aleaxander Hamillton	putx4445556	123456	Invalid Data
289.	Aleaxander Hamillton	putx4445556	1234567	Invalid Data
290.	Aleaxander Hamillton	putx4445556	12345678	Invalid Data
291.	Aleaxander Hamillton	putx4445556	12345678910	Invalid Data
292.	Aleaxander Hamillton	putx4445556	12345678911234	Invalid Data
293.	Aleaxander Hamillton	putx4445556	123456789112345	Invalid Data
294.	Aleaxander Hamillton	putx4445556	224466889977551	Invalid Data
295.	Hubert Blaine	123ab	123456	Invalid Data

	Grayson			
296.	Hubert Blaine Grayson	123ab	1234567	Invalid Data
297.	Hubert Blaine Grayson	123ab	12345678	Invalid Data
298.	Hubert Blaine Grayson	123ab	12345678910	Invalid Data
299.	Hubert Blaine Grayson	123ab	12345678911234	Invalid Data
300.	Hubert Blaine Grayson	123ab	123456789112345	Invalid Data
301.	Hubert Blaine Grayson	123ab	224466889977551	Invalid Data
302.	Hubert Blaine Grayson	123abc	123456	Invalid Data
303.	Hubert Blaine Grayson	123abc	1234567	Login
304.	Hubert Blaine Grayson	123abc	12345678	Login
305.	Hubert Blaine Grayson	123abc	12345678910	Login
306.	Hubert Blaine Grayson	123abc	12345678911234	Login
307.	Hubert Blaine Grayson	123abc	123456789112345	Login
308.	Hubert Blaine	123abc	224466889977551	Login

	Grayson			
309.	Hubert Blaine Grayson	567mnop	123456	Invalid Data
310.	Hubert Blaine Grayson	567mnop	1234567	Login
311.	Hubert Blaine Grayson	567mnop	12345678	Login
312.	Hubert Blaine Grayson	567mnop	12345678910	Login
313.	Hubert Blaine Grayson	567mnop	12345678911234	Login
314.	Hubert Blaine Grayson	567mnop	123456789112345	Login
315.	Hubert Blaine Grayson	567mnop	224466889977551	Login
316.	Hubert Blaine Grayson	gho34566	123456	Invalid Data
317.	Hubert Blaine Grayson	gho34566	1234567	Login
318.	Hubert Blaine Grayson	gho34566	12345678	Login
319.	Hubert Blaine Grayson	gho34566	12345678910	Login
320.	Hubert Blaine Grayson	gho34566	12345678911234	Login
321.	Hubert Blaine	gho34566	123456789112345	Login

	Grayson			
322.	Hubert Blaine Grayson	gho34566	224466889977551	Login
323.	Hubert Blaine Grayson	code22246	123456	Invalid Data
324.	Hubert Blaine Grayson	code22246	1234567	Login
325.	Hubert Blaine Grayson	code22246	12345678	Login
326.	Hubert Blaine Grayson	code22246	12345678910	Login
327.	Hubert Blaine Grayson	code22246	12345678911234	Login
328.	Hubert Blaine Grayson	code22246	123456789112345	Login
329.	Hubert Blaine Grayson	code22246	224466889977551	Login
330.	Hubert Blaine Grayson	pinx123456	123456	Invalid Data
331.	Hubert Blaine Grayson	pinx123456	1234567	Login
332.	Hubert Blaine Grayson	pinx123456	12345678	Login
333.	Hubert Blaine Grayson	pinx123456	12345678910	Login
334.	Hubert Blaine	pinx123456	12345678911234	Login

	Grayson			
335.	Hubert Blaine Grayson	pinx123456	123456789112345	Login
336.	Hubert Blaine Grayson	pinx123456	224466889977551	Login
337.	Hubert Blaine Grayson	putx4445556	123456	Invalid Data
338.	Hubert Blaine Grayson	putx4445556	1234567	Invalid Data
339.	Hubert Blaine Grayson	putx4445556	12345678	Invalid Data
340.	Hubert Blaine Grayson	putx4445556	12345678910	Invalid Data
341.	Hubert Blaine Grayson	putx4445556	12345678911234	Invalid Data
342.	Hubert Blaine Grayson	putx4445556	123456789112345	Invalid Data
343.	Hubert Blaine Grayson	putx4445556	224466889977551	Invalid Data

✓ => Valid input
✗ => Invalid input

5. Strong Robust Equivalence Class Partitioning:

- **Function 1:Manage_Appointment (int noOfappointment)**

- **Constraint:**

  Appointments has be at least 3 and at most 10

- **Test cases:**

  Normal value: 6
  Upper robust value: 11
  Lower robust value: 2

Case	noOfappointment	Expected output
1	6	Make Schedule
2	11	Invalid
3	2	Invalid

✓ => Valid input
✗ => Invalid input

- **Function 2: *PayBill(Double amount)***

- **Constraint:**

  Bill should be greater than or equal to PRs.300 and less than or equal to PRs. 3000

- **Test cases:**

  Normal value: 2000
  Upper robust value: 3001
  Lower robust value: 299

Case	amount	Expected output
1	2000	Make Medical Receipt
2	3001	Invalid data
3	299	Invalid data

✓ => Valid input
× => Invalid input

- **Function 3: Sign-up (String name, String password, String contact_no)**

- **Constraint:**

  Name should be less than or equal to 20 alphabet character and should be greater than or equal to 6 character.
  Password should contain 6 characters at least and at most 10 characters.
  Contact_no should be less than or equal to 15 digit and greater than or equal to 7 digit.

- **Test cases:**

For Name:

Normal value: Thommas
Upper robust value: Hubert Blaine Grayson (spaces are also considered)
Lower robust value: Jonas

For Password:

Normal value: gho34566
Upper robust value: putx4445556
Lower robust value: 123ab

For Contact_no:

Normal value: 12345678911
Upper robust value: 2244668899775512
Lower robust value: 123456

Case	Name	Password	Contact_no	Expected output
1	Hubert Blaine Grayson	putx4445556	2244668899775512	Invalid Data
2	Hubert Blaine Grayson	putx4445556	12345678911	Invalid Data
3	Hubert Blaine Grayson	gho34566	2244668899775512	Invalid Data
4	Thommas	putx4445556	2244668899775512	Invalid Data
5	Hubert Blaine Grayson	gho34566	12345678911	Invalid Data
6	Thommas	putx4445556	12345678911	Invalid Data
7	Thommas	gho34566	2244668899775512	Invalid Data

8	Jonas	123ab	123456	Invalid Data
9	Jonas	123ab	12345678911	Invalid Data
10	Jonas	gho34566	123456	Invalid Data
11	Thommas	123ab	123456	Invalid Data
12	Thommas	gho34566	123456	Invalid Data
13	Jonas	gho34566	12345678911	Invalid Data
14	Thommas	123ab	12345678911	Invalid Data
15	Thommas	gho34566	12345678911	Login

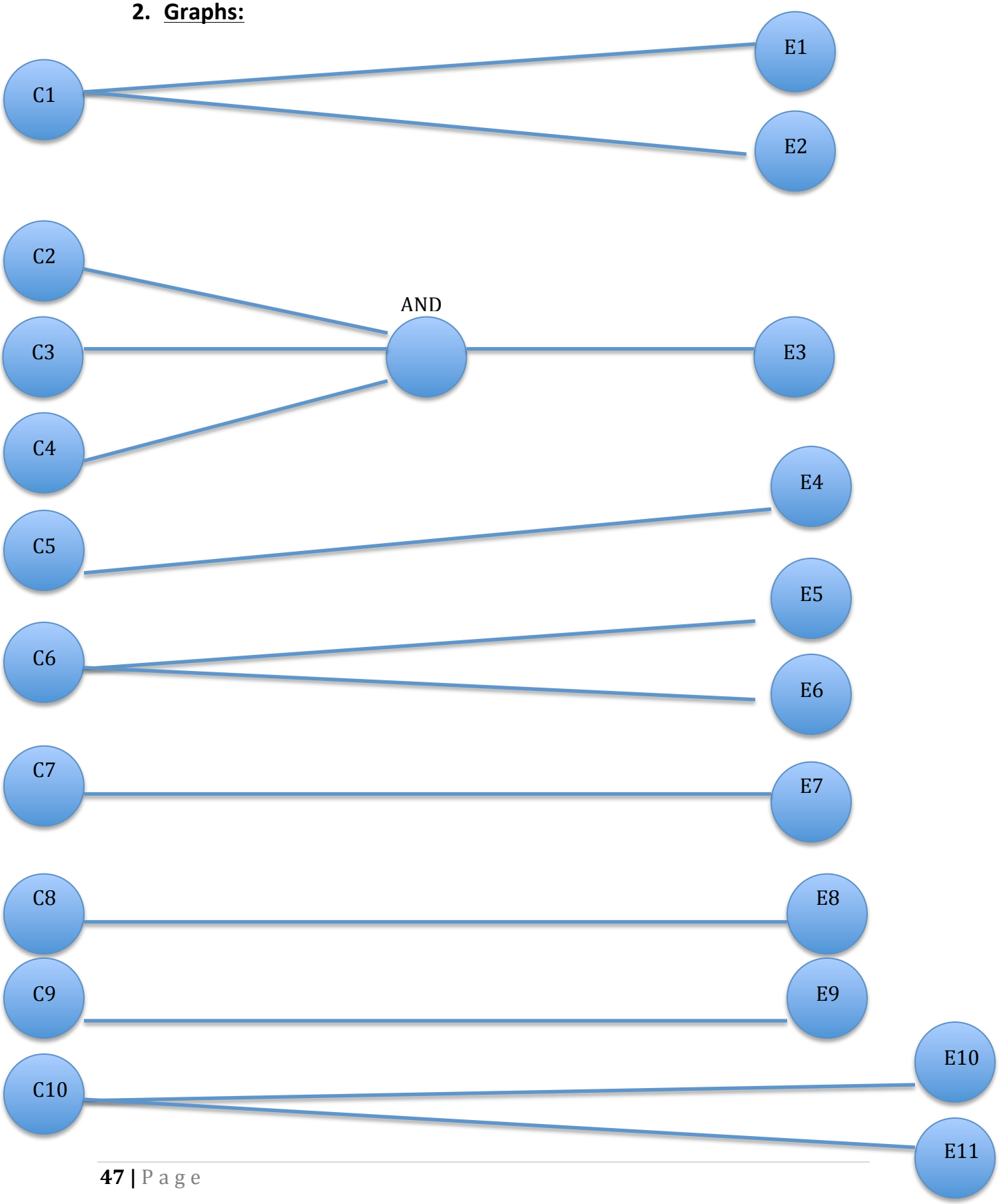
6. Cause Effect Graphing

1. Identify Causes and effects

Causes	Effects
C1: Doctors uploads patient medical history on portal	**E1:** Patient medical history will be visible to the patient **E2:** Patient medical history will be visible to the doctor
C2: User enters name in string, which is less than or equal to 20 alphabet characters and greater than or equal to 6 characters. **C3:** User enters password in string, which is at least 6 characters and at most 10 characters. **C4:** User enters contact no in digits, which is at least 7 digits and at most 15 digits.	**E3:** Registered
C5: User enters password in string, which is at least 6 characters and at most 10 characters.	**E4:** Logins

C6: Patient gets transferred from one clinic to another	**E5:** Visited clinic doctor can view medical history of that patient **E6:** Visited clinic doctor can view personal information of that patient
C7: Patient pays bill within range of PR. 300 to PR. 3000 according to patient's treatment	**E7:** Provide a medical receipt to patient
C8: Patient requests for making an appointment	**E8:** Receptionist manages appointment details.
C9: If Appointments made are at least 3 and at most 10 in a day.	**E9:** Doctors can make their schedule according to patients appointments
C10: Once patients appointment gets confirmed	**E10:** Patient can see online how many people are waiting in queue for appointment. **E11:** Receptionist saves appointment details.

2. Graphs:



3. Decision Table:

		T1	T2	T3	T4	T5	T6	T7	T8
cause	C1	1	0	0	0	0	0	0	0
cause	C2	0	1	0	0	0	0	0	0
cause	C3	0	1	0	0	0	0	0	0
cause	C4	0	1	0	0	0	0	0	0
cause	C5	0	0	1	0	0	0	0	0
cause	C6	0	0	0	1	0	0	0	0
cause	C7	0	0	0	0	1	0	0	0
cause	C8	0	0	0	0	0	1	0	0
cause	C9	0	0	0	0	0	0	1	0
cause	C10	0	0	0	0	0	0	0	1
Effect	E1	1	-	-	-	-	-	-	-
Effect	E2	1	-	-	-	-	-	-	-
Effect	E3	-	1	-	-	-	-	-	-
Effect	E4	-	-	1	-	-	-	-	-
Effect	E5	-	-	-	1	-	-	-	-
Effect	E6	-	-	-	1	-	-	-	-
Effect	E7	-	-	-	-	1	-	-	-
Effect	E8	-	-	-	-	-	1	-	-
Effect	E9	-	-	-	-	-	-	1	-
Effect	E10	-	-	-	-	-	-	-	1
Effect	E11	-	-	-	-	-	-	-	1

4. Identifying Test cases:

Test cases	Input (Cause)	Expected Output (Effect)
1	• name >=6 **&&** name <=20 • password>=6**&&**password<=10 • contact_no>=7**&&**contact_no<=15	Registered
2	• password>=6**&&**password<=10	Login
3	• bill>=300 **&&** bill<=3000	Generate medical receipt
4	• appointments>=3**&&**appointments<=10	Make schedule

5. Test cases:

Applying Weak Robust Equivalence Class.

<table>
<tr><th>Test case #</th><th>Inputs (causes)</th><th>Expected Output (effects)</th></tr>
<tr><td>T1</td><td>
<table>
<tr><th>Name</th><th>Password</th><th>Contact_no</th></tr>
<tr><td>Jonas</td><td>123ab</td><td>123456</td></tr>
<tr><td>Thommas</td><td>gho34566</td><td>12345678911</td></tr>
<tr><td>Keannaemilyelizebeth</td><td>putx4445556</td><td>2244668899775512</td></tr>
</table>
</td><td>
<table>
<tr><td>Unregistered</td></tr>
<tr><td>Registered</td></tr>
<tr><td>Unregistered</td></tr>
</table>
</td></tr>
<tr><td>T2</td><td>
<table>
<tr><th>Password</th></tr>
<tr><td>123ab</td></tr>
<tr><td>gho34566</td></tr>
<tr><td>putx4445556</td></tr>
</table>
</td><td>
<table>
<tr><td>Invalid data</td></tr>
<tr><td>Login</td></tr>
<tr><td>Invalid data</td></tr>
</table>
</td></tr>
<tr><td>T3</td><td>
<table>
<tr><th>Bill</th></tr>
<tr><td>299</td></tr>
<tr><td>2000</td></tr>
<tr><td>3001</td></tr>
</table>
</td><td>
<table>
<tr><td>Invalid data</td></tr>
<tr><td>Generate medical receipt</td></tr>
<tr><td>Invalid data</td></tr>
</table>
</td></tr>
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Reasoning to choose the Equivalence Class:

The Reason to choose the Equivalence Class is that it reduces the number of test cases so; the effort and the time are also reduced without the compromise on the overall testing.