SOFTWARE TESTING

THE ROLE OF A TESTER IS TO BREAK THE SOFTWARE

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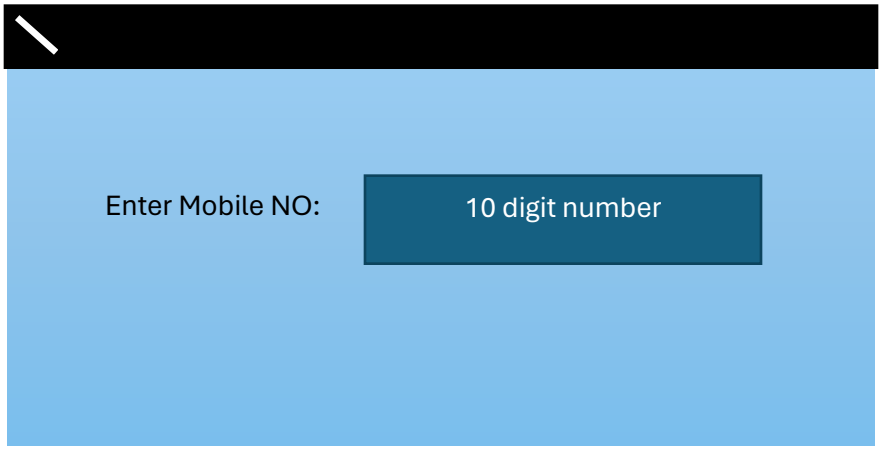
Boundary Value Analysis

Question No: 01

Select BVA technique and make test cases after classifying them to valid and invalid categories.

Answer:



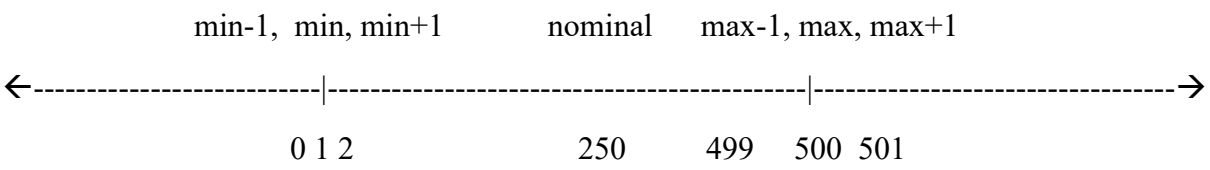
Invalid (min -1)	Valid (min, min+1, nominal, max-1, max)	Invalid
987654321	9876543210	98765432100

Test Case ID	Input Value	Boundary	Expected Output
MN_001	987654321	10	Invalid, number should be of 10 digits
MN_002	9876543210	10	Valid, Mobile phone accepted
MN_003	98765432100	10	Invalid, number should be of 10 digits

Question No: 02

Address text box which allows maximum 500 characters. So, writing test cases for each character once will be very difficult so that will choose boundary value analysis.

Invalid (min -1)	Valid (min, min+1, nominal, max-1, max)	Invalid
0 characters	1 to 500 characters	501 characters



Test Case ID	Input Value	Boundary	Expected Output
AD_001	“(empty)	1	Invalid, enter address should have at least one character
AD _002	“A”	1	Valid, address accepted
AD _003	“AB”	1	Valid, address accepted
AD _004	“A” x 250	500	Valid, address accepted
AD _005	“A” x 499	500	Valid, address accepted
AD _006	“A” x 500	500	Valid, address accepted
AD _007	“A” x 501	500	Invalid, enter address should not have more than 500 characters

Equivalence Partitioning

Question No: 01

Purchased Amount (in Rs)	Discount (in %)
>=999	5
>=1999	10
>=3999	15
>=5999	25
>=7999	35
>=9999	50

Do the Equivalence Partitioning Test for this:

Answer:

Invalid	Valid					
0%	Partition 1	Partition 2	Partition 3	Partition 4	Partition 5	Partition 6
	5%	10%	15%	25%	35%	50%

Test Case ID	Ranges	Input Value	Expected Output
D_001	Amount <999	Amount=550	Discount= 0%
D_002	999>= amount <1999	Amount=1001	Discount= 5%
D_003	1999>= amount <3999	Amount=2002	Discount= 10%
D_004	3999>= amount <5999	Amount=4500	Discount= 15%
D_005	5999>= amount <7999	Amount=6500	Discount= 25%
D_006	7999>= amount <9999	Amount=8500	Discount= 35%
D_007	Value>=9999	Amount=10,000	Discount= 50%

Cause Effect Graph

Question No: 01

A tourist of age greater than 21 years and having a clean driving record is supplied with a rental car. A premium amount is also charged if the tourist is on business, otherwise it is not charged. If the tourist is less than 21-year-old, or does not have a clean driving record, the system will display the following message: "Car cannot be supplied."

Draw the cause-effect graph and generate test cases.

Answer:

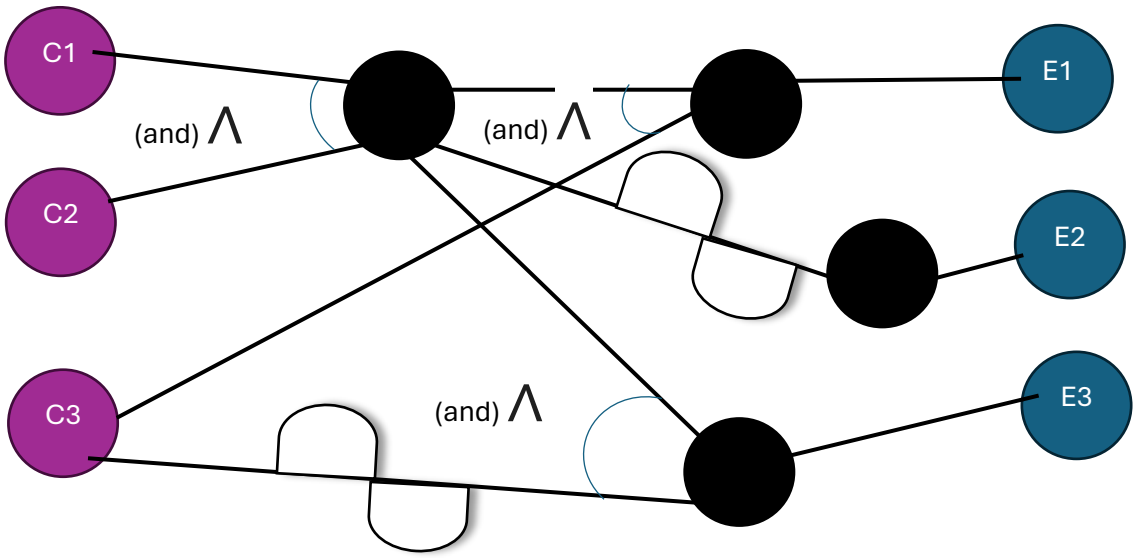
STEP 01:

(Identify the Causes and Effects)

- Causes
    1. C1: age is greater than 21.
    2. C2: clean Driving record
    3. C3: Tourist is on Business
- Effects
    1. E1: Tourist is supplied with rental car with premium amount.
    2. E2: Car is NOT supplied.
    3. E3: Tourist is supplied with rental car without premium amount.

STEP 02:

(Draw the Cause Effect Graph)



STEP 03

(Decision Table)

Conditions	Case 1	Case 2	Case 3	Case 4
C1: age>21?	F	T	T	T
C2: clean driving record?	-	F	T	T
C3: Tourist is on Business?	-	-	F	T
Effects				
E1: Car supplied with premium amount				✓
E2: Car supplied without premium amount			✓	
E3: Car NOT supplied	✓	✓		

STEP 04:

(Write Test Cases)

Test Case ID	Age	Clean Driving Record	On Business Trip	Expected Ouptut
T_001	20	Yes	Yes	Car NOT supplied
T_002	21	No	Yes	Car NOT supplied
T_003	25	Yes	No	Car supplied without premium charges
T_004	26	Yes	Yes	Car supplied with premium charges

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Question No: 02

In a given network, the sendfile command is used to send a file to a user on a different file server. The sendfile command takes three arguments: the first argument should be an existing file in the sender's home directory, the second argument should be the name of the receiver's file server, and the third argument should be the receiver's user_id. If all the arguments are correct, then the file is successfully sent; otherwise the sender obtains an error message.

Answer:

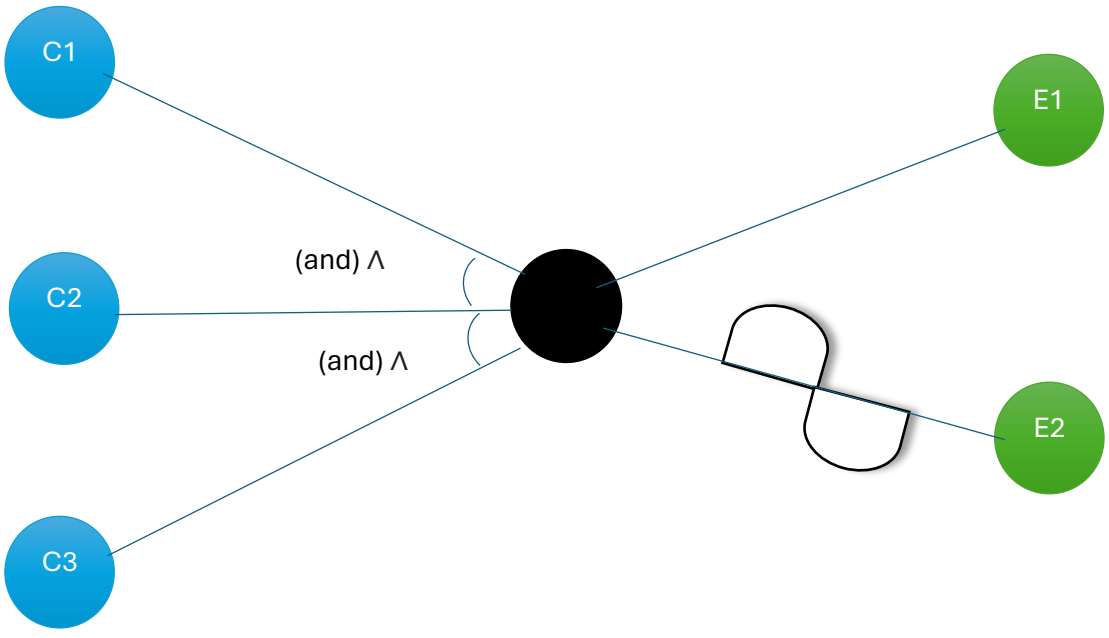
STEP 01:

(Identify the Causes and Effects)

- Causes
  1. C1: file exists in senders home directory is entered.
  2. C2: Name of receiver file server entered.
  3. C3: Receivers user_id entered.
- Effects
  1. E1: File is Successfully sent.
  2. E2: Error! File not sent.

STEP 02:

(Draw the Cause Effect Graph)



STEP 03

(Decision Table)

Conditions	Case 1	Case 2	Case 2	Case 3	Case4
C1: file exists in sender home directory.	T	F	T	T	F
C2: Name of the receiver server is entered.	F	T	T	T	F
C3: Name of the user_id is entered.	T	T	F	T	F
Effect					
E1: File sent successfully.				✓	
E2: Error! File not sent.	✓	✓	✓		✓

STEP 04:

(Write Test Cases)

Teset Case ID	Files exist in directory entered?	Receiver server entered?	User id entered?	Expected Output
F_001	"Img.png"	Comsis	Basit	File Sent Successfully.

F_002	“” (no file)	Comsis	Basit	Error! File not Sent.
F_003	“Img.png”	“” (not enter)	Basit	Error! File not Sent.
F_004	“Img.png”	Comsis	“” (no id)	Error! File not Sent.
F_005	“” (no file)	“” (not enter)	“” (no id)	Error! File not Sent.

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The End….! 😀