3.5 Exercises for Lab

Scenario 1: Select **equivalence partitioning**-based inputs and make test cases after classifying them as invalid and valid compartments.

Equivalence Partitioning for the Scenario:

Valid Partition:

Inputs in this partition are valid mobile numbers containing exactly 10 digits.

Invalid Partition:

inputs in this partition are invalid because they don't meet the criteria of exactly 10 digits.

- Less than 10 digits
- More than 10 digits

Invalid Partition (Non-Numeric):

This partition includes inputs that are not purely numeric.

- Alphanumeric input: abcdefghij
- Special characters: !@#$%^&*()

Input	Invalid	Valid	Invalid
1234567890		1234567890	
+1234567890		+1234567890	
0123456789		0123456789	
123456789	123456789		
12345678901	12345678901		
abcdefghij			abcdefghij
!@#$%^&*()			!@#$%^&*()
[empty]			[empty]

Scenario 2: Select **the BVA** technique and make test cases after classifying them to valid and invalid categories.

Valid	**invalid**	**valid**
Smallest 10-digit	9-digit number	Largest 10-digit
Largest 10-digit	11-digit number	

Scenario 3 & 4

Correct answers

Scenario 3:

- An integer field shall contain values between and including 1 to 15. By applying EP which of the following is a valid collection of equivalence classes for the given scenario.
  - Less than 1, 1 through 15, more than 15
  - Negative numbers, 1 through 15, above 15
  - Less than 1, 1 through 14, more than 15
  - Less than 0, 1 through 14, 15 and more 3

Scenario 4:

- In a system designed to work out the tax to be paid:

An employee has £4000 of salary tax free. The next £1500 is taxed at 10% The next £28000 is taxed at 22% Any further amount is taxed at 40% Which of these groups of numbers would fall into the same equivalence class?

  - £4800; £14000; £28000
  - £5200; £5500; £28000
  - £28001; £32000; £35000
  - £5800; £28000; £32000

Explanation:

Scenario-3

The correct collection of equivalence classes is:

- Less than 1, 1 through 15, more than 15

This collection ensures that we cover values less than 1, values between 1 and 15 inclusively, and values greater than 15.

Scenario-4

the given amounts into equivalence classes:

1. £4800 falls into the range £4001 to £5500, £14000 falls into £5501 to £33500, £28000 falls into £5501 to £33500.
2. £5200 falls into the range £4001 to £5500, £5500 falls into £4001 to £5500, £28000 falls into £5501 to £33500.
3. £28001 falls into the range £33501 and above, £32000 falls into £5501 to £33500, £35000 falls into £33501 and above.
4. £5800 falls into the range £4001 to £5500, £28000 falls into £5501 to £33500, £32000 falls into £5501 to £33500.

So, the correct group of numbers that fall into the same equivalence class is:

- £5200; £5500; £28000