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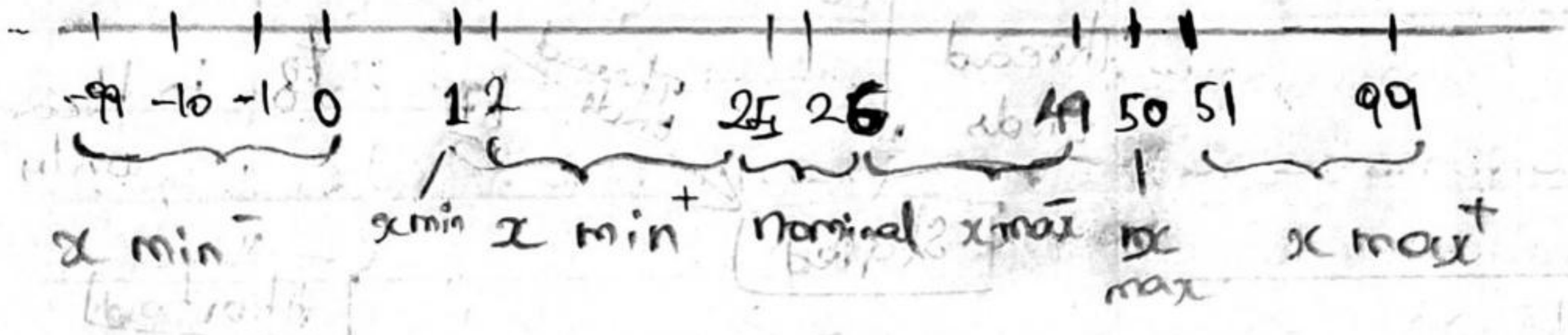
Course: Software Quality Assurance / Testing:
Course code: CSC1014

PROBLEM SOLVING - 1

Number of characters in the string is a partition.
eg. between 1 and 50 characters is the valid Partition with valid boundaries of 1 & 50.
the invalid boundaries could be 0 characters (Null, just hit the Return key)

Boundary Value Analysis :-



nominal → 25, 26

x - min⁺ → 2 - 25

x - max⁺ → 26 - 49

x - min⁻ → 0 - -99

x - max⁺ → 51 - 99

x - min → 1

x - max → 50

Robustness

→ 4n + 1

→ 4(50) + 1 ⇒ 2001

Worst case

→ 5(n)²

→ 5(50)² ⇒ 12,500

Boundary-Value analysis:-

- Boundary-Value analysis is a software testing technique in which tests are designed to include representatives of boundary values in a range.

- BVA is another black box test design technique & it is used to find errors at boundaries of input domain rather than finding those errors in the centa of i/p.

Robustness
(20 accepted 5 not accepted)

Test Case Scenario	Test Case Input	Test Case output
1	51 (x_{max}, x_{max^+})	System not accept
2	61 (x_{max}, x_{max^+})	system not accept
3	71 (x_{max}, x_{max^+})	system not accept
4	81 (x_{max}) x_{max^+})	system not accept
5	91 (x_{max}, x_{max^+})	system not accept
6	-52 (x_{min^-}, x_{min})	System not accept
7	-62 (x_{min^-}, x_{min})	System not accept
8	-73 (x_{min^-}, x_{min})	System not accept
9	-83 (x_{min^-}, x_{min})	system not accept
10	-93 (x_{min^-}, x_{min})	Systen not accept
11	25 (x_{min}, nom)	System accept
12	26 (x_{nom}, x_{max})	System accept
13	5 (x_{min^+}, nom)	System accept
14	12 (x_{min^+}, nom)	System accept
15	19 (x_{min^+}, nom), nom)	System accept.

Testcase Scenario	Test case input	Test case output
16	-42 (x min-, x min)	System not accepted
17	56 (x max, x max+)	System not accepted
18	72 (x max, x max+)	System not accepted
19	80 (x max, x max+)	System not accepted
20	91 (x max, x max+)	System not accepted
21	63 (x max) (x max+)	System not accepted
22	-1 (x min, x min-)	System not accept
23	74 (x max, x max+)	System not accept
24	58 (x max, x max+)	System not accept
25	-9 (x min, x min-)	System not accept

worst case
(20 accepted, 5 not accepted)

Testcase Scenario	Test case input	Test case output
1	12 (x min+, nom)	System accepted
2	25 (x min', nom)	System accepted
3	26 (nom, x max)	System accepted
4	42 (nom, x max-)	System accepted
5	36 (x max-, nom)	System accepted
6	23 (x min+, nom)	System accepted
7	14 (x min+, nom)	System accepted
8	14 (x min+, nom)	System accepted
9	50 (x max x nom)	System accepted
10	1 (x min, nom)	System accepted
4	41 (x max-, x max)	system accepted
12	32 (x max-, x max)	System accepted
13	21 (x min+, nom)	System accepted
14	16 (x min+, nom)	System accepted
15	19 (x min+, nom)	System accepted
16	22 (x min+, nom)	System accepted
17	33 (x max-, nom max)	System accepted

Test case Scenario	Test case input	Test case Output
18	-42 (x min-, x min)	System not accepted
19	56 (x max, x max+)	System not accepted
20	72 (x max, x max+)	System not accepted
21	80 (x max, x max+)	System not accepted
22	91 (x max, x max+)	System not accepted
23	63 (x max, x max+)	System not accept
24	-1 (x min, x min-)	System not accept
25	74 (x max, x max+)	System not accept