

(1)

Name: Sakshi Jadhav

Class: BEITB

Rollno: 49

Subject: STQA

Sign: Sadhu

Q2B) Input variables are A, B, C in range [1, 50]

∴ No of input variables = 3 i.e. $n = 3$ Step 1: Number of total BVC test cases = $4n + 1$

$$= 4(3) + 1$$

 $= 13 \text{ test cases.}$ Step 2: Boundary values

Prepare min max value table with the given information.

	A	B	C
Min value	1	1	1
min ⁺ value	2	2	2
Max value	50	50	50
max ⁻ value	49	49	49
Nominal value	25	25	25

(2)

Name: Sakshi Tadhar

Class: BEITB

Roll no: 49

Subject: STQA

Sign: SadharStep 3: Prepare a BVC test table:

Testcase ID	Input			Expected output
	A	B	C	
1	1	49	25	49 (CB)
2	2	25	25	25 (CB and C)
3	25	49	30	49 (CB)
4	3	1	50	50 (C)
5	18	43	24	43 (CB)
6	41	38	20	41 (CA)
7	19	24	23	24 (CB)
8	36	23	1	36 (CA)
9	25	16	35	35 (C)
10	32	2	2	32 (CA)
11	9	48	3	48 (CB)
12	50	3	25	50 (A)
13	4	39	8	39 (CB)

3

Name: Sakshi Jadhav

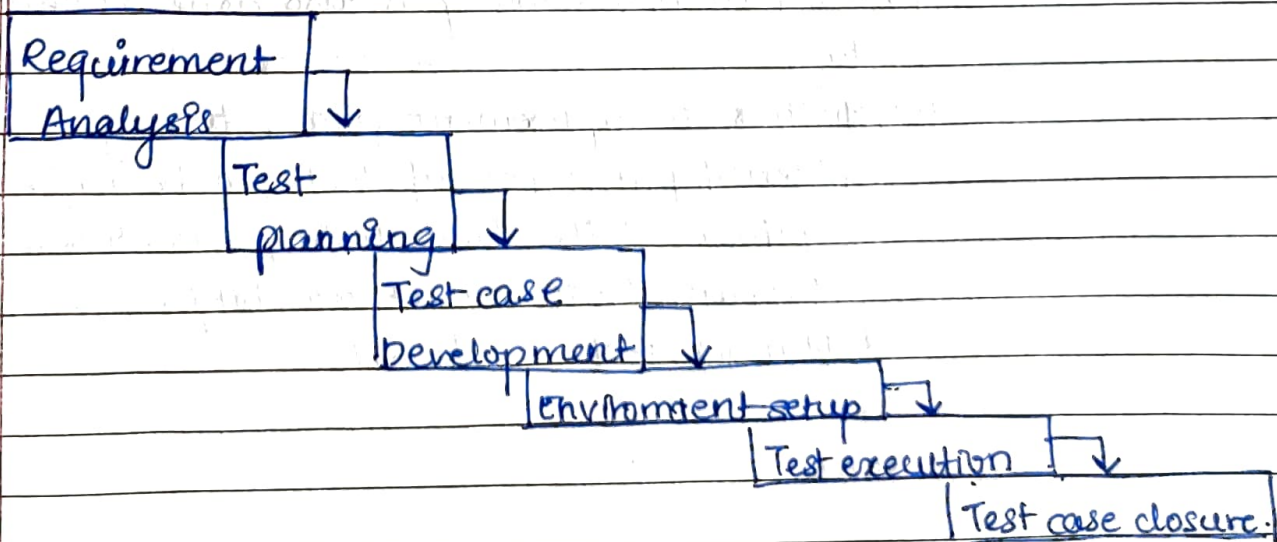
Class: BEITB

Roll number: 49

Subject: STQA

Sign: Sakshi

- Q3A) 1) Software testing lifecycle (STLC) is a sequence of activities conducted during the testing process to ensure software quality goals are met.
- 2) STLC involves both verification and validation activities.
- 3) It consists of a series of activities carried out methodologically to help certify our software product.
- 4) There are six major phases in every software testing life cycle:
- i) Requirement analysis
 - ii) Test planning
 - iii) Test case development
 - iv) Test environment setup
 - v) Test execution
 - vi) Test cycle closure.



(4)

Name: Sakshi Jadhav

Class: BEITB

Roll number: 49

Subject:

Sign: Sadhu

- 5) Each of the stages has a definite entry and exit criteria, activities and deliverables associated.
- 6) Entry criteria: it gives the prerequisite items that must be completed before the testing can begin
- 7) Exit criteria: it defines the items that must be completed before testing can be concluded.

① Requirement Analysis (Requirement phase testing)

- i) In this the test team studies the requirements from a testing point of view to identify testable requirements and the QA team may interact with various stakeholders to understand requirements in detail.
- ii) Requirements could be either functional or non functional.
- iii) Automation feasibility is also done at this stage.
- iv) Activities in requirement phase testing.
 - a) Identify types of tests to be performed
 - b) Gather details about testing priorities & focus.
 - c) Prepare Requirement traceability matrix (RTM)
 - d) Identify test env details.

5

Name: Sakshi Jadhav.

Class: BEITB.

Roll no: 49

Branch: IT Sub:

Sign: Sakshi Jadhav

② Test planning phase:

- i) In this a senior QA manager determines the test plan strategy along with efforts and cost estimates for the project.
- ii) Moreover the resources, test env, test limitations and testing schedule are also determined.
- iii) The test plan gets prepared and finalized at the same phase.

③ Test case development phase:

- i) This involves the creation, verification and rework of test cases and test scripts after the test plan is ready.
- ii) Initially the test data is identified then created and reviewed and then reworked based on the preconditions.
- iii) Then the QA team starts the development process of test cases for individual units.

④ Test environment setup:

- i) This decides the software and the hardware conditions under which a work product is tested.
- ii) It is one of the critical aspects of the testing process and can be done parallel with the test case development phase.

(6)

Name: Sakshi Jadhav

Class: BEITB

Roll no: 49

Subject:

Sign: Sadhar

- ii) Test team may not be involved in this activity if the development team provides the test env.
- iv) The test team is required to do a readiness check of the given environment.

(5) Test execution phase:

- i) This phase is carried out by the testers in which testing of the software build is done based on test plans and test cases prepared.
- ii) The process consists of test script execution, test script maintenance & bug reporting.
- iii) If bugs are reported then it is reverted back to development team for correction & retesting will be performed.

(6) Test cycle closure:

- i) This phase is completion of test execution which involves several activities like test completion reporting, collection of test completion matrices & test results.
- ii) Testing team members meet, discuss & analyze testing artifacts to identify strategies that have to be implemented in future taking lessons from current test cycle.
- iii) The idea is to remove process bottlenecks for future test cycles.