

38 Lecture - CS504

Important Subjective

1. Question: What is Equivalence Partitioning, and how does it help in software testing?

Answer: Equivalence Partitioning is a testing technique that divides input data into groups, called equivalence classes, to reduce the number of test cases while ensuring adequate coverage. It helps identify representative values that behave similarly and ensures that testing covers different scenarios within each class.

2. Question: Describe the process of creating equivalence classes for a text input field that accepts a maximum of 50 characters.

Answer: Equivalence classes for the text input field could be "empty input," "input with 1 to 50 characters," and "input exceeding 50 characters." Each class represents a specific behavior, and test cases are designed to validate these behaviors.

3. Question: How can boundary values be incorporated into equivalence classes during testing?

Answer: Boundary values should be included in different equivalence classes. For instance, if a numeric input field accepts values between 1 and 100, the classes would be "less than 1," "between 1 and 100," and "greater than 100," with boundary values being part of the respective classes.

4. Question: What are some advantages of using Equivalence Partitioning in testing?

Answer: Advantages include reduced test case creation effort, improved test coverage, early defect identification, and efficient utilization of resources.

5. Question: How do you handle complex input fields with multiple constraints using Equivalence Partitioning?

Answer: For complex input fields, divide the constraints into separate equivalence classes. Each class should represent a unique combination of constraints to cover all possible scenarios.

6. Question: Can Equivalence Partitioning be applied to non-numeric data, such as user roles in a system?

Answer: Yes, Equivalence Partitioning can be applied to non-numeric data. For example, for user roles, equivalence classes could be "admin," "manager," "employee," and "guest."

7. Question: What are some limitations of Equivalence Partitioning as a testing technique?

Answer: Equivalence Partitioning may not detect certain defects if the selected values within each class are not comprehensive enough. It may also overlook rare scenarios or combinations of inputs.

8. Question: Explain how Equivalence Partitioning helps achieve better test coverage compared to testing every individual value.

Answer: Equivalence Partitioning groups similar inputs, so testing representative values from each class ensures that we cover all possible behaviors, reducing the number of test cases without sacrificing coverage.

9. Question: How can you combine Equivalence Partitioning with Boundary Value Analysis for comprehensive testing?

Answer: Combining the two techniques ensures that both typical and extreme input values are tested. Equivalence Partitioning identifies representative values, while Boundary Value Analysis examines values at the edges of the classes.

10. Question: In what situations is Equivalence Partitioning not the most suitable testing approach?

Answer: Equivalence Partitioning may not be suitable when inputs have a small range of possible values or when testing a specific set of inputs is crucial for compliance or security reasons. In such cases, other testing techniques like boundary value testing or exhaustive testing might be more appropriate.