**1. Equivalence Partitioning**

**Scenario**: A software application allows users to input their age for age verification. The valid input age should be between **18 and 60 years**, inclusive. Any value outside this range should be considered invalid.

**Question**:

* Define the equivalence classes for valid and invalid inputs for the given age range.
* List at least 3 valid test cases and 3 invalid test cases based on equivalence partitioning.

**2. Boundary Value Analysis**

**Scenario**: A form accepts the user’s height in centimeters. The valid height input should be between **100 cm and 200 cm**, inclusive.

**Question**:

* Apply Boundary Value Analysis (BVA) to identify the test cases for the height input.
* List the test cases for both the valid and invalid boundaries (for example, test values just inside and just outside the valid range).

**3. Equivalence Partitioning and Boundary Value Analysis Combined**

**Scenario**: A system accepts input for a user’s password. The password must be at least **8 characters long**, and no longer than **16 characters**.

**Question**:

* Use **Equivalence Partitioning** to identify valid and invalid classes for password length.
* Use **Boundary Value Analysis** to identify test cases for the password length (consider the exact boundary values and values just outside the valid range).

**4. Equivalence Partitioning**

**Scenario**: A bank’s ATM system accepts withdrawal amounts in multiples of 10 dollars. The valid withdrawal amounts are between **10** and **500** dollars, inclusive.

**Question**:

* Define the equivalence classes for valid and invalid withdrawal amounts.
* List at least 3 valid test cases and 3 invalid test cases based on equivalence partitioning.

**5. Boundary Value Analysis**

**Scenario**: A loan application system accepts loan amounts between **1,000** and **100,000** dollars. The input is an integer.

**Question**:

* Identify the boundary values and develop test cases for Boundary Value Analysis for loan amounts (considering both valid and invalid boundary values).
* Specify which test cases are expected to be valid and which are invalid.

**6. Equivalence Partitioning and Boundary Value Analysis Combined**

**Scenario**: A website allows users to enter a quantity for an item in an online store. The valid quantity must be a number between **1** and **50** items.

**Question**:

* Apply **Equivalence Partitioning** to define valid and invalid classes for the quantity input.
* Apply **Boundary Value Analysis** to identify critical boundary values for testing.

**7. Equivalence Partitioning**

**Scenario**: A date picker in a form allows users to enter a date. The valid date range for submission is from **January 1, 2000** to **December 31, 2025**.

**Question**:

* Define valid and invalid equivalence classes based on the date input range.
* Provide at least 2 valid test cases and 2 invalid test cases using equivalence partitioning.

**8. Boundary Value Analysis**

**Scenario**: An input field accepts integer values from **1** to **1000**. The values outside of this range should be considered invalid.

**Question**:

* Develop test cases using Boundary Value Analysis (BVA) to test the valid and invalid boundaries.
* Test both the lower and upper boundary values, as well as values just outside this range.

**9. Equivalence Partitioning**

**Scenario**: An online store system accepts payment methods such as **Credit Card**, **PayPal**, and **Gift Card**. Any other payment method should be rejected.

**Question**:

* Define valid and invalid equivalence classes for the payment method input.
* List valid test cases and invalid test cases based on equivalence partitioning.

**10. Boundary Value Analysis**

**Scenario**: An age verification system accepts ages between **0** and **150**. The system accepts the value **0** (for newborns) and **150** (for the oldest acceptable age).

**Question**:

* Identify the boundary values and create test cases for the age input using Boundary Value Analysis.