UNIT 2:

1.Consider a Program for determining the Previous Date.
Input: Day, Month, Year with valid ranges as-
1 ≤ Month≤12
1 ≤ Day ≤31
1900 ≤ Year ≤ 2000

Design Boundary Value Test Cases.

SOLUTION:
 Taking the year as a Single Fault Assumption i.e. year will be having values varying from 1900 to 2000 and others will have nominal values.

Test Cases	Month	Day	Year	Output
1	6	15	1900	14 June 1900
2	6	15	1901	14 June 1901
3	6	15	1960	14 June 1960
4	6	15	1999	14 June 1999
5	6	15	2000	14 June 2000

Taking Day as Single Fault Assumption i.e. Day will be having values varying from 1 to 31 and others will have nominal values.

Test Case	Month	Day	Year	Output
6	6	1	1960	31 May 1960
7	6	2	1960	1 June 1960
8	6	30	1960	29 June 1960
9	6	31	1960	Invalid day

Taking Month as Single Fault Assumption i.e. Month will be having values varying from 1 to 12 and others will have nominal values.

Test Case	Month	Day	Year	Output
10	1	15	1960	14 Jan 1960
11	2	15	1960	14 Feb 1960
12	11	15	1960	14 Nov 1960
13	12	15	1960	14 Dec 1960

For the n variable to be checked Maximum of 4n + 1 test case will be required. Therefore, for n = 3, the maximum test cases are-
4 × 3 + 1 =13

2.You are tasked with testing an online booking system that allows users to book seats for a movie. The system accepts the following types of inputs for booking:

1. **Number of Seats**: An integer value representing the number of seats the user wants to book.
2. **Seat Category**: A string representing the category of seats (e.g., "Standard," "Premium," "VIP").

The booking system has the following rules:

- **The number of seats must be between 1 and 10 (inclusive).**
- **The seat category must be one of the following: "Standard," "Premium," or "VIP."**

SOLUTION:

Define Equivalence Classes

1. **Number of Seats**:
   - **Valid Equivalence Classes**:
     - **Class 1**: 1 to 10 seats (e.g., 1, 5, 10)
   - **Invalid Equivalence Classes**:
     - **Class 2**: Less than 1 seat (e.g., 0, -1)
     - **Class 3**: More than 10 seats (e.g., 11, 20)
2. **Seat Category**:
   - **Valid Equivalence Classes**:
     - **Class 1**: "Standard"
     - **Class 2**: "Premium"

- - **Class 3**: "VIP"
  - **Invalid Equivalence Classes**:
    - **Class 4**: Any other category (e.g., "Economy," "Business")