**list of appointments or date ranges**:

S1, E1 = (01-09-2017, 05-10-2017)

S2, E2 = (04-10-2017, 08-10-2017)

S3, E3 = (12-12-2017,18-12-2017)

Instructions:

● Write all the manual test scenarios:

○ Please use Equivalence partitioning and categorize scenarios wherever possible

○ Include happy path and negative scenario

○ Prioritize the scenarios to indicate critical vs important vs good to have tests

● Come up with a Program/ Pseudo code/Logic for the same

● Do not assume or try to use any existing libraries

**Test Secnario**

**The conditions are**

C1: 1 ≤ month ≤ 12  
C2: 1 ≤ day ≤ 31  
C3: 2018 ≤ year ≤ 2020 **(Set Lower limit and Upper limit)**

**Thus based on valid values (Happy Path), the equivalence classes are:**

M1= {month: 1 ≤ month ≤ 12}  
D1 = {day: 1 ≤ day ≤ 31}  
Y1= {year: 2000 ≤ year ≤ 2020}

StartDate ≤ EndDate

StartDate ≥ CurrentDate

Different Format

* dd-mm-yyyy
* dd-mm-yy
* yyyy-mm-dd
* dd/mm/yyyy
* yyyy/mm/dd

**And the invalid equivalence classes (Negative Path) are:**  
M2 = {month : month < 1}  
M3 = {month : month > 12}  
D2 = {day : day < 1}  
D3 = {day : day > 31}  
Y2 = {year: year =< 2000}  
Y3 = {year : year ≥ 2020}

StartDate > EndDate

Different format

* 200603001
* 10032006:
* yy::mm::dd
* dd//mm//yyyy

**With all the above in mind, we describe the following equivalence classes**

M1 = {month : month has 30 days}  
M2 = {month : month has 31 days}  
M3 = {month : month is February}  
D1 = {day : 1 ≤ day ≤ 28}  
D2 = {day : day = 29} (leap year)  
D3 = {day : day = 30}  
D4 = {day : day = 31}  
Y1 = {year :year = 2018} lower limit  
Y2 = {year : year is a leap year}  
Y3 = {year : year =2020} upper limit

F1 = {format : dd-mm-yyyy)

Three month classes, four day and three year classes results in 3 \* 4 \* 3 = 36 strong normal equivalence class test cases. Furthermore, adding two invalid classes for each variable will result in 150 strong robust equivalence class test cases.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Case ID** | **Day (dd)** | **Month (mm)** | **Year (yyyy)** | **Format (dd-mm-yyyy)** |
| SN1 | 14 | 6 | 2000 | 14-Jun-2000 |
| SN2 | 14 | 6 | 2012 | 14-Jun-2012 |
| SN3 | 14 | 6 | 2020 | 14-Jun-2020 |
| SN4 | 29 | 6 | 2000 | 29-Jun-2000 |
| SN5 | 29 | 6 | 2012 | 29-Jun-2012 |
| SN6 | 29 | 6 | 2020 | 29-Jun-2020 |
| SN7 | 30 | 6 | 2000 | 30-Jun-2000 |
| SN8 | 30 | 6 | 2012 | 30-Jun-2012 |
| SN9 | 30 | 6 | 2020 | 30-Jun-2020 |
| SN10 | 31 | 6 | 2000 | 31-06-2000 |
| SN11 | 31 | 6 | 2012 | 31-06-2012 |
| SN12 | 31 | 6 | 2020 | 31-06-2020 |
| SN13 | 14 | 7 | 2000 | 14-Jul-2000 |
| SN14 | 14 | 7 | 2012 | 14-Jul-2012 |
| SN15 | 14 | 7 | 2020 | 14-Jul-2020 |
| SN16 | 29 | 7 | 2000 | 29-Jul-2000 |
| SN17 | 29 | 7 | 2012 | 29-Jul-2012 |
| SN18 | 29 | 7 | 2020 | 29-Jul-2020 |
| SN19 | 30 | 7 | 2000 | 30-Jul-2000 |
| SN20 | 30 | 7 | 2012 | 30-Jul-2012 |
| SN21 | 30 | 7 | 2020 | 30-Jul-2020 |
| SN22 | 31 | 7 | 2000 | 31-Jul-2000 |
| SN23 | 31 | 7 | 2012 | 31-Jul-2012 |
| SN24 | 31 | 7 | 2020 | 31-Jul-2020 |
| SN25 | 14 | 2 | 2000 | 14-Feb-2000 |
| SN26 | 14 | 2 | 2012 | 14-Feb-2012 |
| SN27 | 14 | 2 | 2020 | 14-Feb-2020 |
| SN28 | 29 | 2 | 2000 | 29-Feb-2000 |
| SN29 | 29 | 2 | 2012 | 29-Feb-2012 |
| SN30 | 29 | 2 | 2020 | 29-Feb-2020 |
| SN31 | 30 | 2 | 2000 | 30-02-2000 |
| SN32 | 30 | 2 | 2012 | 30-02-2012 |
| SN33 | 30 | 2 | 2020 | 30-02-2020 |
| SN34 | 31 | 6 | 2000 | 31-06-2000 |
| SN35 | 31 | 6 | 2012 | 31-06-2012 |
| SN36 | 31 | 6 | 2020 | 31-06-2020 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Critical** |  |  |  |  |  |  |
| **T1** | | T2 | | T3 | |  |
| **S1** | **E1** | **S2** | **E2** | **S3** | **E3** | **Expected** |
| 14-Feb-2000 | 14-Jun-2000 | 29-Jun-2000 | 29-Jul-2000 | 30-Jul-2000 | 14-Feb-2012 | No Overlap |
| 29-Jun-2000 | 29-Jul-2000 | 30-Jul-2000 | 14-Feb-2012 | 14-Jun-2012 | 29-Jun-2012 | T1 & T2 Overlap |
| 30-Jun-2000 | 14-Feb-2012 | 29-Feb-2012 | 30-Jun-2012 | 30-Jun-2012 | 30-Jul-2012 | T2 & T3 Overlap |
| 29-Feb-2012 | 30-Jun-2012 | 14-Jun-2000 | 30-Jul-2000 | 29-Jun-2012 | 31-Jul-2020 | T1 & T3 Overlap |
| 31-Jul-2000 | 29-Feb-2012 | 14-Feb-2012 | 31-Jul-2012 | 30-Jul-2012 | 14-Jun-2020 | T1 & T2 & T3 Overlap |
|  |  |  |  |  |  |  |
| **Important** |  |  |  |  |  |  |
| **T1** | | T2 | | T3 | |  |
| **S1** | **E1** | **S2** | **E2** | **S3** | **E3** | **Expected** |
| 30-Jul-2000 | 31-Jul-2000 | 31-Jul-2000 | 14-Feb-2012 | 14-Feb-2012 | 29-Jun-2012 | T1 & T2 & T3 Overlap (End date of each is overlapping on start date) |
| 14-Feb-2012 | 14-Jun-2012 | 14-Feb-2012 | 29-Jun-2012 | 30-Jun-2012 | 30-Jul-2000 | T1 & T2 Overlap (Start date is overlapping) |
| 29-Feb-2012 | 14-Jul-2012 | 29-Jun-2020 | 14-Jul-2020 | 29-Jun-2020 | 20-Jul-2020 | T2 & T3 Overlap (Start date is overlapping) |
| 29-Feb-2000 | 29-Jun-2000 | 29-Jun-2012 | 31-Jul-2020 | 29-Feb-2000 | 14-Jul-2000 | T1 & T3 Overlap (Start date is overlapping) |
| 31-Jul-2000 | 14-Feb-2012 | 31-Jul-2000 | 29-Feb-2012 | 31-Jul-2000 | 30-Jun-2012 | T1 & T2 & T3 Overlap (Start date is overlapping) |
| 29-Feb-2012 | 29-Feb-2012 | 29-Feb-2012 | 29-Feb-2012 | 29-Feb-2012 | 29-Feb-2012 | T1 & T2 & T3 Overlap (Start date & End date are same is overlapping) |
|  |  |  |  |  |  |  |
| **Good to have** |  |  |  |  |  |  |
| **T1** | | T2 | | T3 | |  |
| **S1** | **E1** | **S2** | **E2** | **S3** | **E3** | **Expected** |
| 30-Jul-2000 | 31-Jul-2000 | 31-Jul-2000 | 14-Feb-2012 | 14-Feb-2012 |  | (Invalid Input) |
| 29-Feb-2012 |  | 14-Feb-2012 |  | 30-Jun-2012 |  | (Invalid Input) |
|  | 14-Jul-2012 |  | 14-Jul-2020 |  | 20-Jul-2020 | (Invalid Input) |
| 30-02-2000 | 29-Jun-2000 | 29-Jun-2012 | 31-Jul-2020 | 29-Feb-2000 | 14-Jul-2000 | (Impossible) T1 Start day is not correct |
| 31-Jul-2000 | 14-Feb-2012 | 31/13/2000 | 29-Feb-2012 | 31-Jul-2000 | 30-Jun-2012 | (Impossible) T2 start month is not correct |
| 30-02-2012 | 14-Jun-2012 | 14-Feb-2012 | 29-Jun-2012 | 30-Jun-2012 | 31-06-0000 | (Impossible) T3 end year is not correct |