IT314 - Software Engineering
Group 26
LAB 9

Q1.

Link to code for testing:
https://colab.research.google.com/drive/1TGScWjEVu2wh6vhLOEVpDqUUaoyEiE-Y?usp=sharing

Equivalence classes:

1: month < 1 (invalid class)

2: month > 12 (invalid class)

3: Month with 30 Days(April, Jun, Sept, Nov)

4: Month with 31 Days(Jan, Mar, May, Jul, Aug, Oct, Dec)

5: Month with 28/29 Days(Feb)

6: 1 <= day <= 28 (valid class)

7: day < 1 (invalid class)

8: day > 31 (invalid class)

9: day = 29

10: day = 30

11: day = 31

12: Leap Year

13: Non-Leap year

14: year < 1900 (invalid class)

15: year > 2015 (invalid class)

Test case table:

Equivalence Class	Day	Month	Year	Expected output
1	Any	0	Any	Invalid
2	Any	20	Any	Invalid
3	31	11	2008	Invalid
3	15	11	2008	14-11-2008
4	40	05	1950	Invalid
4	31	05	1950	30-05-1950
5	30	02	Any	Invalid
5	28	02	2000	27-02-2000
6	22	10	2000	21-10-2000
7	0	Any	Any	Invalid
8	35	Any	Any	Invalid
9	29	02	2008	28-02-2008
9	29	02	1995	Invalid
10	30	01	1945	29-01-1945
10	30	02	Any	Invalid
11	31	08	2014	30-08-2014
11	31	02	Any	Invalid
12	7	08	1992	6-08-1992
12	30	02	2000	Invalid
13	25	03	2010	24-03-2010
13	29	02	2006	Invalid
14	Any	Any	1850	Invalid
15	Any	Any	2020	Invalid

Boundary Value analysis:

Test Case ID	Day	Month	Year	Expected output
1	0	Any	Any	Invalid
2	2	12	2001	1-12-2001
3	19	5	2001	18-5-2001
4	31	10	2001	30-10-2001
5	35	Any	Any	Invalid
6	Any	0	Any	Invalid
7	29	3	2005	28-3-2005
8	24	8	2006	23-8-2006
9	7	12	2004	6-12-2004
10	Any	17	Any	Invalid
11	Any	Any	1800	Invalid
12	22	4	1900	21-4-1900
13	23	7	2002	22-7-2002
14	19	6	2015	18-6-2015
15	Any	Any	2019	Invalid

Q2.

Constraints
ID: 00000-99999
Qty: 1-99
Cart Total: less than or equal to $999.99

Equivalence classes:

(1): 00000 <= ID <= 99999 - 5 digit ID (valid class)

(2): ID > 99999 - 6 or more digit ID (invalid class)

(3): ID < 0 - 4 or less digit ID (invalid class)

(4): 1 <= qnt <= 99 (valid class)

(5): qnt = 0

(6): qnt > 99 (invalid class)

(7): qnt < 0 (invalid class)

(8): Cart total (in dollars $) <= 999.99 $ (Valid)

(9): Cart total (in dollars $) > 999.99 $ or cart total<0 (Invalid)

Suppose the total of a cart is $150 and the price of an item with ID 34493 is $250.

Test case table :

Equivalence Class	ID	Quantity	Output
1, 4	34493	70	Valid (CT<=999.99)
1, 4	34493	45	Invalid (CT>999.99)
1, 5	34493	0	0

1, 6	34493	130	Invalid
1, 7	34493	-5	Invalid
2	3449367	Any	Invalid
3	345	Any	Inavlid

Boundary Case Table:

Test Case ID	ID	Quantity	Expected output
1	0000	Any	Invalid
2	00000	(4), (5)	Valid (CT<=999.99)
3	99999	(4), (5)	Valid (CT<=999.99)
4	3449378	Any	Invalid
5	34493	-1	Invalid
6	34493	0	Invalid
7	34493	1	Valid (CT<=999.99)
8	34493	70	Valid (CT<=999.99)
9	34493	130	Invalid