

PROBLEM 1

Test Case Number	INPUT	EXPECTED OUTPUT		
	Balance	Balance	Gift Card	Status
1	-\$500.00	-\$535.00	No	No sales
2	\$0.00	-\$35.00	No	No sales
3	\$0.01	\$0.01	No	ordinary sales
4	\$2,000.00	\$2043.00	No	ordinary sales
5	\$2,000.01	\$2051.00	No	ordinary sales
6	\$7,500.00	\$7691.00	No	ordinary sales
7	\$7,500.01	\$7691.06	No	ordinary sales
8	\$14,999.99	\$15382.00	No	ordinary sales
9	\$15,000.00	\$15442.00	No	ordinary sales
10	\$25,000.00	\$25737.00	No	ordinary sales
11	\$25,000.01	\$25787.00	No	ordinary sales
12	\$29,999.99	\$30944.00	No	ordinary sales
13	\$30,000.00	\$30975.06	Yes	Top Sales
14	\$50,000.00	\$51625.00	Yes	Top sales

PROBLEM 2

Ecp:

12:00:00 AM	5:00:01 AM	9:00:00 AM	3:00:00 PM	6:00:00 PM
5:00:00 AM	8:59:59 AM	2:59:59 PM	5:59:59 PM	11:59:59 PM

Test Case Number	Input		Expected Output Rate (Pass/hour)
	Time	Day Type	
1	12:00:00 AM	WeekDay	500
2	5:00:00 AM	WeekDay	500
3	5:00:01 AM	WeekDay	1165
4	8:59:59 AM	WeekDay	1165
5	9:00:00 AM	WeekDay	500
6	2:59:59 PM	WeekDay	500
7	3:00:00 PM	Week Day	1165
8	5:59:59 PM	Week Day	1165
9	6:00:00 PM	Week Day	500
10	11:59:59 PM	WeekDay	500
11	12:00:00 AM	WeekEnd	400
12	5:00:00 AM	WeekEnd	400
13	5:00:01 AM	WeekEnd	932
14	8:59:59 AM	WeekEnd	932
15	9:00:00 AM	WeekEnd	400
16	2:59:59 PM	WeekEnd	400
17	3:00:00 PM	WeekEnd	932
18	5:59:59 PM	WeekEnd	932
19	6:00:00 PM	WeekEnd	400
20	11:59:59 PM	WeekEnd	400
21	12:00:00 AM	Holiday	1800
22	5:00:00 AM	Holiday	1800
23	5:00:01 AM	Holiday	4194
24	8:59:59 AM	Holiday	4194
25	9:00:00 AM	Holiday	1800
26	2:59:59 PM	Holiday	1800

27

3:00:00 PM

Holiday

4194

28

5:59:59 PM

Holiday

4194

29

6:00:00 PM

Holiday

1800

30

11:59:59 PM

Holiday

1800

PROBLEM 3

Test Case Number	Distance from stop indicator (feet)	INPUT			EXPECTED OUTPUT	Actual Output
		Red	Yellow	Green		
1	0.1	No	No	No	Yes	Yes
2	25.0	No	No	No	Yes	Yes
3	25.1	No	No	Yes	No	No
4	50.0	No	No	Yes	Yes	No
5	50.1	No	Yes	No	No	No
6	75.0	No	Yes	No	No	No
7	75.1	Yes	No	No	No	No
8	100.0	Yes	No	No	No	No
9	100.1	No	No	No	No	No
10	200.0	No	No	No	No	No

PROBLEM-4

Test Case Number	INPUT	EXPECTED OUTPUT		
		Balance	Gift Card	Status
1	\$ 43,583.55	\$ 45,100.01	Yes	Honored
2	\$ 53,268.76	\$ 55,099.99	Yes	Honored
3	\$ 53,268.77	\$ 55,135.00	Yes	Top
4	\$ 70,000.00	\$ 72,410.00	Yes	Top

PROBLEM - 5 (a)

Conditions	Rule 1	Rule 2	Rule 3	Rule 4	Rule 5	Rule 6	Rule 7
\$0.00 <= SalesVolume <= \$0.00	Y						
\$0.01 <= SalesVolume <= \$2000.00		Y					
\$2000.01 <= SalesVolume <= \$7500.00			Y				
\$7500.01 <= SalesVolume <= \$14999.99				Y			
\$15000.00 <= SalesVolume <= \$25000.00					Y		
\$25000.01 <= SalesVolume <= \$49999.99						Y	
\$30000.00 <= SalesVolume <= >							Y

Actions							
Interest Rate	0.1.	2.15.1.	2.35.1.	2.55.1.	2.75.1.	3.15.1.	3.25.1.
Fee	\$35.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Status = DS, NS, TS	NS	OS	OS	OS	OS	OS	TS
Gift Card	No	No	No	No	No	No	Yes

PROBLEM - 5(b)

conditions	Rule1	Rule2	Rule3	Rule4	Rule5	Rule6	Rule7	Rule8	Rule9	Rule10	Rule11	Rule12	Rule13	Rule14	Rule15
12:00:00AM - 5:00:00AM	Y					Y					Y				
5:00:01AM - 8:59:59AM		Y					Y				Y				
9:00:00AM - 2:59:59PM			Y					Y				Y			
3:00:00PM - 5:59:59PM				Y					Y					Y	
6:00:00PM - 11:59:59PM					Y					Y					Y
WEEKDAY	Y	Y	Y	Y	Y										
WEEKEND						Y	Y	Y	Y	Y					
HOLIDAY											Y	Y	Y	Y	Y
ACTIONS															
500	Y		Y		Y										
1165		Y			Y										
1800											Y	Y	Y		
4194												Y	Y	Y	
400							Y		Y	Y					
932								Y		Y					

PROBLEM - 5 (c)

Conditions	Rule1	Rule2	Rule3	Rule4	Rule5
$0 \cdot 1 < \text{distance in feet} \leq 25 \cdot 0$	Y				-
$25 \cdot 1 < \text{distance in feet} \leq 50 \cdot 0$		Y			-
$50 \cdot 1 < \text{distance in feet} \leq 75 \cdot 0$			Y		-
$75 \cdot 1 < \text{distance in feet} \leq 100 \cdot 0$				Y	-
$100 \cdot 1 < \text{distance in feet} \leq \infty$					Y
Actions				X	-
Red Light					
Yellow Light			X		
Green Light		X			
Buzzer	X				

Problem - b

