**LAB ASSESMENT – 1**

**Q1.**

**1) Partition the domain of each parameter into equivalance classes and label the classes and list them.**

Ans.

* **Input classes :**

Risk Probaility

RP1 : 1-5

RP2 : input other than integer

RP3 : out of range

Risk Impact

RI1 : 1-5

RI2 : input other than integer

RI3 : out of range

* **Output classes :**

Risk Exposure

High : RP1 \* RI1 > 9

Moderate : RP1 \* RI1 <10 && >2

Low : RP1 \* RI1 <=2

Invalid

Out of range

**2) Develop a set of test cases for the app…. set of test cases.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test No.** | **Input** | | **Expected output** | **Actual output** |
| **RP** | **RI** |
| **1.** | 3 | 3 | MODERATE | MODERATE |
| **2.** | 3 | A | INVALID | INVALID |
| **3.** | 3 | 10 | OUT OF RANGE | OUT OF RANGE |
| **4.** | A | 3 | INVALID | INVALID |
| **5.** | A | A | INVALID | INVALID |
| **6.** | A | 10 | INVALID | INVALID |
| **7.** | 10 | 1 | OUT OF RANGE | OUT OF RANGE |
| **8.** | 10 | A | OUT OF RANGE | OUT OF RANGE |
| **9.** | 10 | 10 | OUT OF RANGE | OUT OF RANGE |

**3) To better test the classification performed by the app, partition the output domain and develop additional test cases to cover any class not covered by your test cases in (2).**

Ans. As we can see in the below table, that all the input and output classes are covered in the developed test cases. So no need to separate the output domain here.

|  |  |  |  |
| --- | --- | --- | --- |
| **Test No.** | **Input** | | **Expected output** |
| **RP** | **RI** |
| **1.** | RP1 | RP1 | HIGH/MODERATE/LOW |
| **2.** | RP1 | RI2 | INVALID |
| **3.** | RP1 | RI3 | OUT OF RANGE |
| **4.** | RP2 | RI1 | INVALID |
| **5.** | RP2 | RI2 | INVALID |
| **6.** | RP2 | RI3 | INVALID |
| **7.** | RP3 | RP1 | OUT OF RANGE |
| **8.** | RP3 | RI2 | OUT OF RANGE |
| **9.** | RP3 | RI3 | OUT OF RANGE |

**Q2. Develop a complete limited entry decision table for the situation given in the question.**

Ans.

**Conditions :**

Age : >18, 2 > && <=18, 2

Destination : In Germany, Outside Germany

WeekDays : Monday or Friday, Other weekdays except (M&F)

Number of days : < 6 days, >= 6 days

Output :

Discount : 10%, 20%, 25%, 30%, 40%, FREE, NONE

Decision table test cases :

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Rules** | **Age** | **Dest.** | **WeekDays** | **No. of days** | **Output (Discount)** |
| 1. | >18 | In Germany | Monday or friday | < 6 | NONE |
| 2. | >18 | In Germany | Monday or friday | >=6 | 10% |
| 3. | >18 | In Germany | Other weekdays | < 6 | 20% |
| 4. | >18 | In Germany | Other weekdays | >=6 | 30% |
| 5. | >18 | Outside Germany | Monday or friday | < 6 | NONE |
| 6. | >18 | Outside Germany | Monday or friday | >=6 | NONE |
| 7. | >18 | Outside Germany | Other weekdays | < 6 | 25% |
| 8. | >18 | Outside Germany | Other weekdays | >=6 | 25% |
| 9. | 2> && <=18 | In Germany | Monday or friday | < 6 | 40% |
| 10. | 2> && <=18 | In Germany | Monday or friday | >=6 | 40% |
| 11. | 2> && <=18 | In Germany | Other weekdays | < 6 | 40% |
| 12. | 2> && <=18 | In Germany | Other weekdays | >=6 | 40% |
| 13. | 2> && <=18 | Outside Germany | Monday or friday | < 6 | 40% |
| 14. | 2> && <=18 | Outside Germany | Monday or friday | >=6 | 40% |
| 15. | 2> && <=18 | Outside Germany | Other weekdays | < 6 | 40% |
| 16. | 2> && <=18 | Outside Germany | Other weekdays | >=6 | 40% |
| 17. | 2 | In Germany | Monday or friday | >=6 | FREE |
| 18. | 2 | In Germany | Other weekdays | < 6 | FREE |
| 19. | 2 | In Germany | Other weekdays | >=6 | FREE |
| 20. | 2 | Outside Germany | Monday or friday | < 6 | FREE |
| 21. | 2 | Outside Germany | Monday or friday | >=6 | FREE |
| 22. | 2 | Outside Germany | Other weekdays | < 6 | FREE |
| 23. | 2 | Outside Germany | Other weekdays | >=6 | FREE |
| 24. | 2 | In Germany | Monday or friday | >=6 | FREE |