# Evaluation Rubric :

|  |  |  |
| --- | --- | --- |
| **Evaluation parameter** | **Does not meet specifications** | **Meets specifications** |
| **Problem statement** |  |  |
| Problem Statement must be clearly defined |  |  |
| Expected input and output formats must be described |  |  |
| Explain the problem statement with an example(if applicable) |  |  |
| **Expected input & output** |  |  |
| Minimum of 5 test cases (if applicable) |  |  |
| Coverage |  |  |
| Border condition |  |  |
| Unexpected inputs |  |  |
| **Solution** |  |  |
| The correctness of the solution. |  |  |
| Check for all the elements (tokens) of the problem (Assignment, Arithmetic, conditional, relational, input, output etc) |  |  |
| **Trace Table :** |  |  |
| Columns are variables, conditions, print statements |  |  |
| Order |  |  |
| Trace table for each function(If applicable) |  |  |
| labeling the columns |  |  |
| Coverage (conditions, iterations... etc) |  |  |
| **Final Result** |  |  |
| Executable File Submission |  |  |
| **Executable File** |  |  |
| Check with all test cases |  |  |

# 

**Problem Statement**: **(2 Marks)**

Check if the credit card number is valid or not using the below conditions

1. Number should not start with o
2. Credit card number should have 16 digits

**Test cases: (3 Marks)**

|  |  |
| --- | --- |
| **Expected Input** | **Expected Output** |
| 12345 6789 1011 2314 | valid |
| -1234 | invalid |
| 1234 A123 456h 9876 | valid |

**Solution**: **(5 Marks)**

**Step 1:** START

**Step 2: Input credit card number c**

**Step 3: Convert input to String characters. c=TOSTRING(c)**

**Step 4: d=length(c)**

**Step 5: if d> 16 go to step 5.1 else step 5.2**

**Step 5.1: Print ‘Valid’ go to step 6**

**Step 5.2: Print ‘Invalid’ go to step 6**

**Step 6: Stop**

**Pseudocode:**

**START**

**QUERY 'Enter credit card number', c**

**c=TOSTRING(c)**

**D=LENGTH(c)**

**WRITE D**

**IF d>16 THEN**

**WRITE 'invalid'**

**ENDIF**

**WRITE 'valid'**

**END**

**Trace Table** : **(5 Marks)**

**Final Result :** **(2 Marks)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Expected input** | **Expected output** | **Actual output** | **Test result** |
| 12345 6789 1011 2314 | valid | valid | 1 |
| -1234 | invalid | invalid | 0 |
| 1234 A123 456h 9876 | valid | valid | 1 |

