# Evaluation Rubric :

|  |  |  |
| --- | --- | --- |
| **Evaluation parameter** | **Does not meet specifications** | **Meets specifications** |
| **Problem statement** |  | **2** |
| 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** |  | **1** |
| Minimum of 5 test cases (if applicable) |  |  |
| Coverage |  | **√** |
| Border condition |  | **√** |
| Unexpected inputs |  | **√** |
| **Solution** |  | **5** |
| The correctness of the solution. |  | **√** |
| Check for all the elements (tokens) of the problem (Assignment, Arithmetic, conditional, relational, input, output etc) |  | **√** |
| **Trace Table :** |  | **5** |
| Columns are variables, conditions, print statements |  | **√** |
| Order |  | **√** |
| Trace table for each function(If applicable) |  | **√** |
| labeling the columns |  | **√** |
| Coverage (conditions, iterations... etc) |  | **√** |
| **Final Result** |  | **2** |
| Executable File Submission |  | **√** |
| **Executable File** |  | **3** |
| Check with all test cases |  | **√** |

## 

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

Find the non-repeated(unique) numbers from a given set of numbers?

**Test cases: (3 Marks)**

|  |  |
| --- | --- |
| **Expected Input** | **Expected Output** |
| 1 2 2 3 3 | 1 |
| 2 4 4 5 6 | 2 5 6 |
| 7 7 8 8 9 | 9 |

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

**Step 1: Start**

**Step 2: Input number of elements**

**Step 3: Set i=1,x=1 ,d= “ “**

**Step 4: Check if(i<=n) , then go to step 4.1 else go to step 6**

**Step 4.1: “Enter elements in array”, b[i]**

**Step 4.2: Repeat i=i+1 until step 4 is false and go to step 5**

**Step 5: Output entered array elements , b go to step 6**

**Step 6: Set d=0,j=1**

**Step 7: Check if(j<=n ), if true go to step 7.1**

**Step 7.1: Set i=1 , c=0 goto step 8**

**Step 8: Check if(i<=n) if true goto step 8.2**

**Step 8.1: Check if(b[j]=b[i]) THEN c=c+1 Else do**

**Step 8.2: i=i+1 go to step 8**

**Step 9: Check IF c=1 THEN go to Step 9.1 Else go to step 9.2**

**Step 9.1: Output b[j] // Elements which are not repeating**

**newarr[x]=b[j] // new array to store**

**x=x+1 // increment x,d**

**d=d+1**

**Step 9.2: j=j+1 go to step 10**

**Step 10: Check IF d=0 THEN WRITE "NONE" // No non repeating ellements go to step 11**

**Step 11: END**

Pseudocode:

**START**

**QUERY "ENter no.of elements : ", n**

**i=1**

**x=1**

**d=''**

**WHILE i<=n DO**

**QUERY "enter element:", b[i]**

**i=i+1**

**ENDWHILE**

**WRITE b**

**d=0**

**j=1**

**WHILE j<=n DO**

**i=1**

**c=0**

**WHILE i<=n DO**

**IF b[j]=b[i] THEN**

**c=c+1**

**ENDIF**

**i=i+1**

**ENDWHILE**

**IF c=1 THEN**

**WRITE b[j]**

**newarr[x]=b[j]**

**x=x+1**

**d=d+1**

**ENDIF**

**j=j+1**

**ENDWHILE**

**IF d=0 THEN**

**WRITE "NONE"**

**ENDIF**

**END**

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

Test case 1:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a | n | i | i<n | j | j<n | d= (i!=j AND a[i]=a[j]) |
| 1 2 2 3 3 | 5 | 0 | 1 | 0 | 1 | 1 |
|  |  | 1 | 1 | 1 | 1 | 0 |
|  |  | 2 | 1 | 2 | 1 | 0 |
|  |  | 3 | 1 | 3 | 1 | 0 |
|  |  | 4 | 1 | 4 | 1 | 0 |
|  |  | 5 | 0 | 5 | 0 | 0 |

Test case 2:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a | n | i | i<n | j | j<n | d= (i!=j AND a[i]=a[j]) |
| 3 3 1 4 | 4 | 0 | 1 | 0 | 1 | 0 |
|  |  | 1 | 1 | 1 | 1 | 0 |
|  |  | 2 | 1 | 2 | 1 | 1 |
|  |  | 3 | 1 | 3 | 1 | 1 |
|  |  | 4 | 0 | 4 | 0 |  |

Test case 3:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| a | n | i | i<n | j | j<n | d= (i!=j AND a[i]=a[j]) |
| 3 3 0 4 | 4 | 0 | 1 | 0 | 1 | 0 |
|  |  | 1 | 1 | 1 | 1 | 0 |
|  |  | 2 | 1 | 2 | 1 | 1 |
|  |  | 3 | 1 | 3 | 1 | 1 |
|  |  | 4 | 0 | 4 | 0 |  |
|  |  |  |  |  |  |  |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Expected input** | **Expected output** | **Actual output** | **Test result** |
| 1 2 2 3 3 | 1 | 1 | 1 |
| 3 3 1 4 | 1 4 | 1 4 | 1 |
| 3 3 0 4 | 0 4 | 0 4 | 1 |