# 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)**

Find the nth prime number?

**Test cases: (3 Marks)**

|  |  |
| --- | --- |
| **Expected Input** | **Expected Output** |
| n=2 | 2 |
| n=5 | 2 3 5 |
| n=7 | 2 3 5 7 |

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

Start.  
Initialize array a, i, j = 2.  
for(i=1; i<100; i++)  
Set a[i] to i+1;  
for(i=0; i<100; i++) and  
for(j=2; a[i]>j; j++)  
If a[i]%j is equal to 0 then break.  
Else if(a[i]==j || a[i]==1)  
Then print Prime number between particular given range is.  
Stop.

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

Test case 1: n= 5

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| n | i | j | n%j =0 | Resut |  |
| 5 | 1 | 2 | n% 2 | 0 |  |
|  | 2 | 3 | n% 2 ,n% 3 | 0 |  |
|  | 3 | 4 | n% 2 ,n% 3, n% 4 | 1 |  |
|  | 4 | 5 | n% 2 ,n% 3, n% 4,n% 5 | 0 |  |
|  | 5 |  |  |  | Prime' 2 3 5 |

Test case 2: n= 7

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| n | i | j | n%j =0 | Resut |  |
| 7 | 1 | 2 | n% 2 | 0 |  |
|  | 2 | 3 | n% 2 ,n% 3 | 0 |  |
|  | 3 | 4 | n% 2 ,n% 3, n% 4 | 1 |  |
|  | 4 | 5 | n% 2 ,n% 3, n% 4,n% 5 , n% 6 | 0 |  |
|  | 5 | 6 | n% 2 ,n% 3, n% 4,n% 6, n%7 | 1 |  |
|  | 6 | 7 | n% 2 ,n% 3, n% 4,n% 7 | 0 |  |
|  | 7 |  |  |  | Prime' 2 , 3, 5, 7 |

Test case 2: n= 3

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| n | i | j | n%j =0 | Resut |  |
| 3 | 1 | 2 | n% 2 | 0 |  |
|  | 2 | 3 | n% 2 ,n% 3 | 0 |  |
|  | 3 |  |  |  | Prime' 2 , 3 |

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

|  |  |  |  |
| --- | --- | --- | --- |
| **Expected input** | **Expected output** | **Actual output** | **Test result** |
| n=2 | 2 | 2 | 1 |
| n=5 | 2 3 5 | 2 3 5 | 1 |
| n=7 | 2 3 5 7 | 2 3 5 7 | 1 |