**Problem Statement**: Print all prime numbers below n

In this problem we will print all prime numbers below n

For Example, if we take n=10 the prime numbers below 10 means 2,3,5,7 will be the output

|  |  |
| --- | --- |
| **Expected Input** | **Expected Output** |
| 10  35  -33  24  54 | 2 3 5 7  2 3 5 7 11 13 17 19 23 29 31  Invalid Input  2 3 5 7 11 13 17 19 23  2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 |

**Pseudo Code**

1. Input n
2. Set i=2
3. If n>0 otherwise go to step 4
   1. If i<=n then go to next step
   2. Set e=2
   3. If i % e! = 0 then do following
      1. Increment e
   4. If e==i
      1. Output i
   5. increment i
4. Output “Invalid Input”

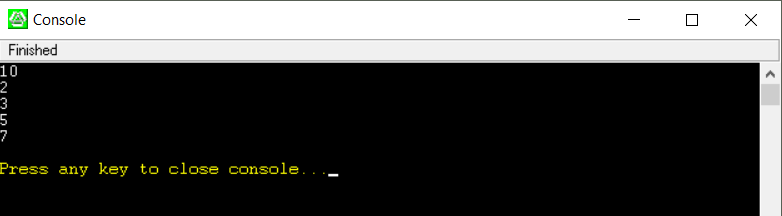
**Trace Table**

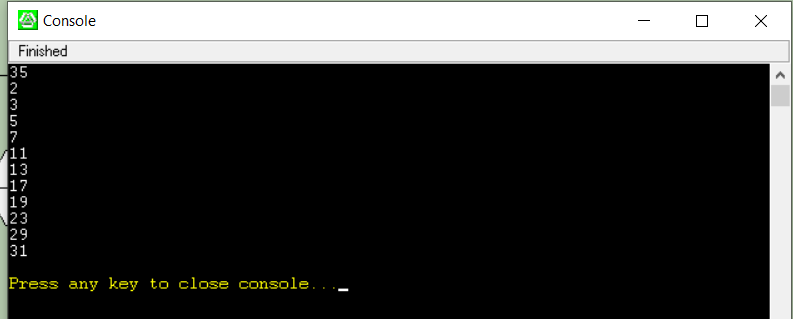
|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n** | **i=2** | **n>0** | **i<=n** | **e=2** | **i%e! = 0** | **e++** | **e==i** | **i** | **i++** | **INVALID INPUT** |
| **10** | **2** | **TRUE** | **TRUE** | **2** | **FALSE** |  | **TRUE** | **2** | **3** |  |
|  | **3** | **TRUE** | **TRUE** | **2** | **TRUE** | **3** | **TRUE** | **3** | **4** |  |
|  | **4** | **TRUE** | **TRUE** | **2** | **TRUE** |  | **FALSE** |  | **5** |  |
|  | **5** | **TRUE** | **TRUE** | **2** | **TRUE** | **5** | **TRUE** | **5** | **6** |  |
|  | **6** | **TRUE** | **TRUE** | **2** | **FALSE** |  | **FALSE** |  | **7** |  |
|  | **7** | **TRUE** | **TRUE** | **2** | **TRUE** | **7** | **TRUE** | **7** | **8** |  |
|  | **8** | **TRUE** | **TRUE** | **2** | **FALSE** |  |  |  |  |  |
|  | **9** | **TRUE** | **TRUE** | **3** | **FALSE** |  |  |  |  |  |
|  | **10** | **TRUE** | **FALSE** |  |  |  |  | **2 3 5 7** |  |  |
| **-33** | **2** | **FALSE** |  |  |  |  |  |  |  | **INVALID INPUT** |

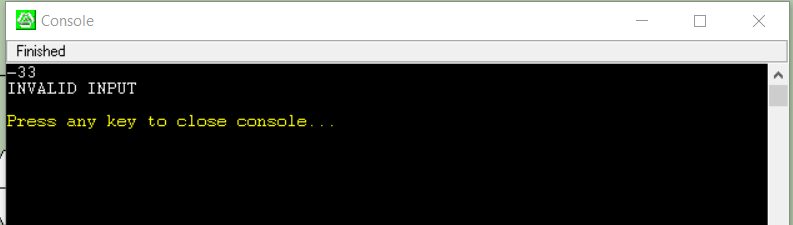
|  |  |  |  |
| --- | --- | --- | --- |
| **Expected Input** | **Expected Output** | **Actual Output** | **Test Result** |
| 10  35  -33  24  54 | 2 3 5 7  2 3 5 7 11 13 17 19 23 29 31  Invalid Input  2 3 5 7 11 13 17 19 23  2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 | 2 3 5 7  2 3 5 7 11 13 17 19 23 29 31  Invalid Input  2 3 5 7 11 13 17 19 23  2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 |  |

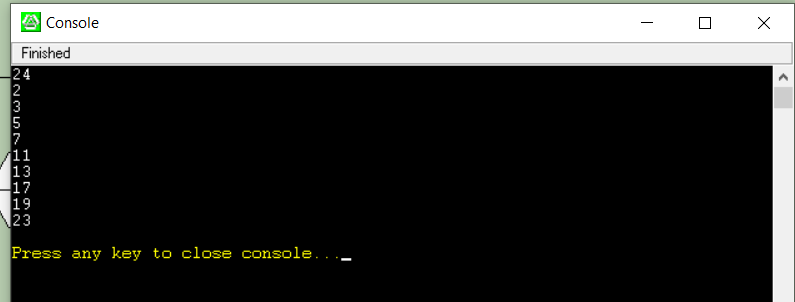
**Final Result:**

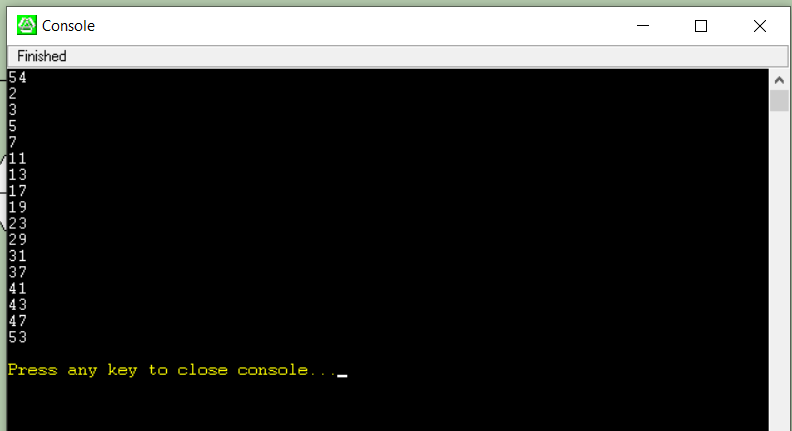
**Excepted inputs and outputs**

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