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Section: 41-J2

Assessment – 02

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Question - 01: Write a C program that prints all prime numbers between 1 and 100. Use a for loop to check each number and print only those that are prime.

Code:

```
#include <stdio.h>

#include <math.h>

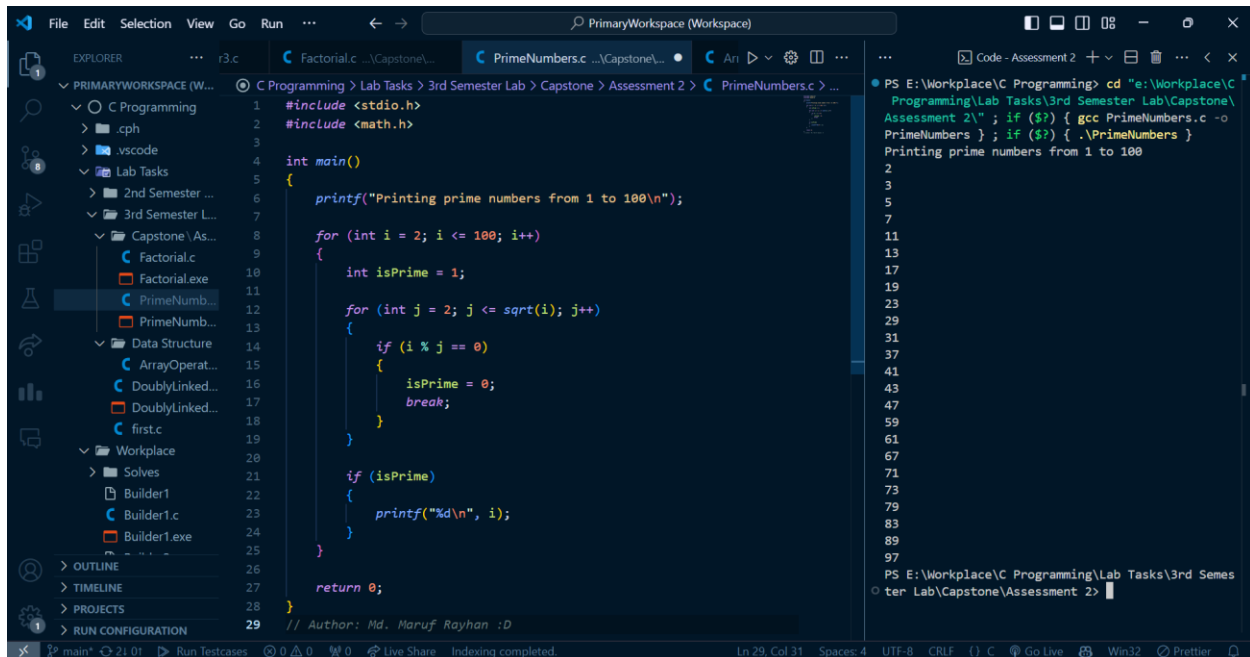
int main()
{
    printf("Printing prime numbers from 1 to 100\n");

    for (int i = 2; i <= 100; i++)
    {
        int isPrime = 1;
        for (int j = 2; j <= sqrt(i); j++)
        {
            if (i % j == 0)
            {
                isPrime = 0;
                break;
            }
        }
        if (isPrime)
        {
            printf("%d\n", i);
        }
    }
    return 0;
```

```
}
```

// Author: Md. Maruf Rayhan :D

Attachments:



```
1 #include <stdio.h>
2 #include <math.h>
3
4 int main()
5 {
6     printf("Printing prime numbers from 1 to 100\n");
7
8     for (int i = 2; i <= 100; i++)
9     {
10         int isPrime = 1;
11
12         for (int j = 2; j <= sqrt(i); j++)
13         {
14             if (i % j == 0)
15             {
16                 isPrime = 0;
17                 break;
18             }
19         }
20
21         if (isPrime)
22         {
23             printf("%d\n", i);
24         }
25     }
26
27     return 0;
28 }
29 // Author: Md. Maruf Rayhan :D
```

```
PS E:\Workplace\C Programming> cd "e:\Workplace\C Programming\Lab Tasks\3rd Semester Lab\Capstone\Assessment 2\"; if ($?) { gcc PrimeNumbers.c -o PrimeNumbers }; if ($?) { .\PrimeNumbers }
Printing prime numbers from 1 to 100
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
59
61
67
71
73
79
83
89
97
PS E:\Workplace\C Programming\Lab Tasks\3rd Semester Lab\Capstone\Assessment 2>
```

Question - 02: Write a C program that calculates the factorial of a given number n using a while loop. The program should prompt the user to enter a positive integer and then display the factorial of that number.

Code:

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int n;
```

```
    printf("Enter the number to find the factorial: ");
```

```

scanf("%d", &n);

int factorial = 1, i = 1;

while (i <= n)
{
    factorial *= i;

    i++;
}

printf("Factorial of %d is %d\n", n, factorial);

return 0;
}

// Author: Md. Maruf Rayhan :D

```

Attachments:

