

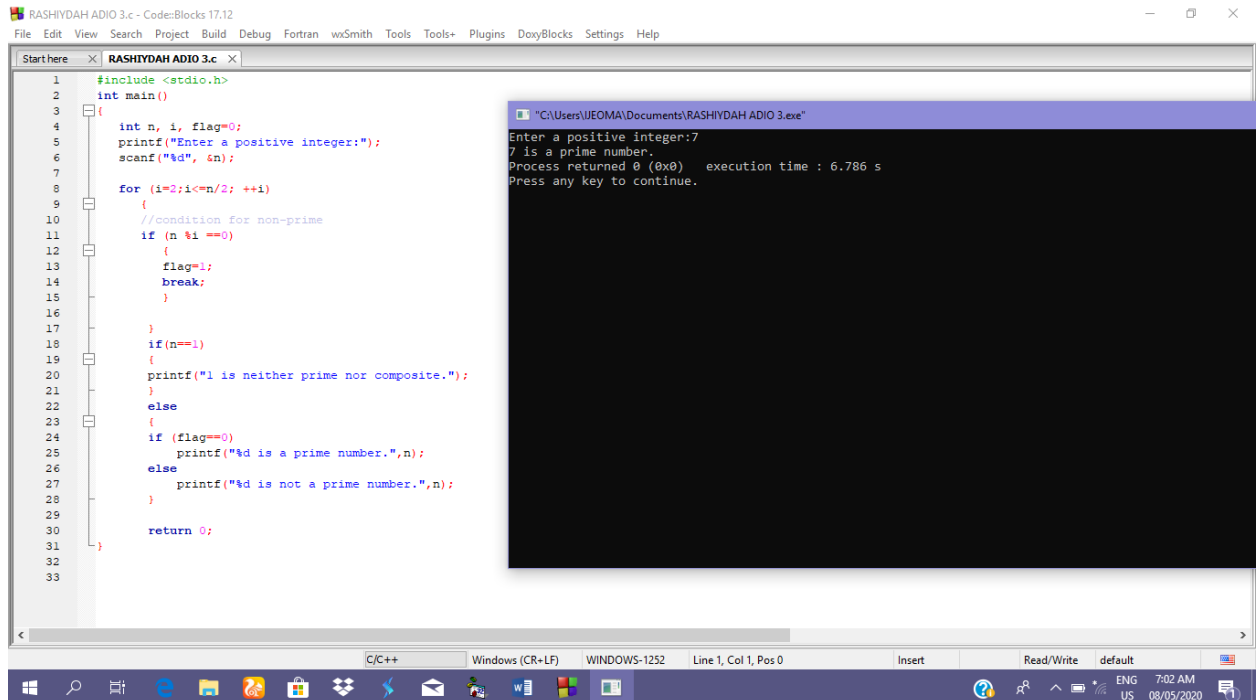
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DEPARTMENT: COMPUTER SCIENCE

MATRIC NO: 18/SCI01/001

COURSE TITLE: CSC 206

1. Write a program that reads an integer and displays a message to indicate whether it's a prime number or not.



The screenshot shows a C++ IDE with a source code editor on the left and a console window on the right. The source code is as follows:

```
1 #include <stdio.h>
2 int main ()
3 {
4     int n, i, flag=0;
5     printf("Enter a positive integer:");
6     scanf("%d", &n);
7
8     for (i=2;i<=n/2; ++i)
9     {
10        //condition for non-prime
11        if (n %i ==0)
12        {
13            flag=1;
14            break;
15        }
16    }
17
18    if(n==1)
19    {
20        printf("1 is neither prime nor composite.");
21    }
22    else
23    {
24        if (flag==0)
25            printf("%d is a prime number.",n);
26        else
27            printf("%d is not a prime number.",n);
28    }
29
30    return 0;
31 }
32
33
```

The console window shows the following output:

```
"C:\Users\JEOOMA\Documents\RASHIYDAH ADIO 3.exe"
Enter a positive integer:7
7 is a prime number.
Process returned 0 (0x0)   execution time : 6.786 s
Press any key to continue.
```

2. Write a c program to find the factorial of a natural number

```

1 #include <stdio.h>
2 int main()
3 {
4     int n, i;
5     unsigned long long fact = 1;
6     printf("Enter an integer:");
7     scanf("%d", &n);
8
9     //shows error if the user enters a negative integer
10    if (n<0)
11        printf("Error detected, factorial of a negative number doesn't exist.");
12    else
13        {
14            for (i=1; i<=n; ++i)
15                {
16                    fact *=i;
17                }
18            printf("Factorial of %d= %llu", n, fact);
19        }
20
21    return 0;
22 }
23

```

Output: Enter an integer:6
Factorial of 6= 720
Process returned 0 (0x0) execution time : 6.234 s
Press any key to continue.

3. Using conditional operator, write a program in c programming language to find if a given character is a vowel or a consonant.

```

1 #include <stdio.h>
2 int main()
3 {
4     char c;
5     int lowercase, uppercase;
6     printf("Enter an alphabet:");
7     scanf("%c", &c);
8
9     //evaluates to 1 if variable c is lowercase
10    lowercase= (c=='a' || c=='e' || c=='i' || c=='o' || c=='u');
11
12    //evaluates to 1 if variable c is uppercase
13    uppercase= (c=='A' || c=='E' || c=='I' || c=='O' || c=='U');
14    if (lowercase||uppercase)
15        printf("%c is a vowel.",c);
16    else
17        printf("%c is a consonant.",c);
18    return 0;
19 }
20

```

Output: Enter an alphabet:g
g is a consonant.
Process returned 0 (0x0) execution time : 8.678 s
Press any key to continue.

4. Write a program that reads an integer and displays its multiplication table. The program should force the user to enter an integer within [1,10].

```

1 #include <stdio.h>
2 int main()
3 {
4     int n,i;
5     printf(" Enter an integer within 1 and 10:");
6     scanf("%d", &n);
7     for (i=1; i<=10; ++i)
8     {
9         printf("%d*%d=%d\n",n, i,n*i);
10    }
11    return 0;
12 }
13

```

"C:\Users\IJEOMA\Documents\RASHIYDAH ADIO 7.exe"
 Enter an integer within 1 and 10:7
 7*1=7
 7*2=14
 7*3=21
 7*4=28
 7*5=35
 7*6=42
 7*7=49
 7*8=56
 7*9=63
 7*10=70
 Process returned 0 (0x0) execution time : 4.795 s
 Press any key to continue.

5. A test consists of 10 multiple choice questions, each of which has three possible answers. The first answer gets three points, the second one point and the third two points. Write a program that uses the switch statement to read the test takers 10 answers and display the final score.

```

1 #include <stdio.h>
2 int main()
3 {
4     int i, ans, points;
5     points=0;
6     for (i = 0; i< 10; i++)
7     {
8         printf("Enter answer [1-3]:");
9         scanf("%d",&ans);
10
11        switch(ans)
12        {
13            case 1:
14                points +=3;
15                break;
16            case 2:
17                points +=1;
18                break;
19            case 3:
20                points +=2;
21                break;
22            default:
23                printf("Error: Wrong Answer...\n");
24                break;
25        }
26    }
27    printf("Candidate gets %d points in total\n", points);
28    return 0;
29 }
30
31

```