

Task 1

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

```
#include <stdlib.h>
```

```
#include <math.h>
```

```
int main()
```

```
{
```

```
float height, weight, bmi;
```

```
printf("Enter height in meter\n");
```

```
scanf("%f", &height);
```

```
printf("Enter weight in kg\n");
```

```
scanf("%f", &weight);
```

```
bmi = weight / (height * height);
```

```
printf("Your Body Mass Index(BMI) is %f\n", bmi);
```

```
if(bmi<16){
```

```
printf("Dangerously underweight");
```

```
return 0;
```

```
}
```

```
else if (bmi<19){
```

```
printf("Underweight");
```

```
return 0;
```

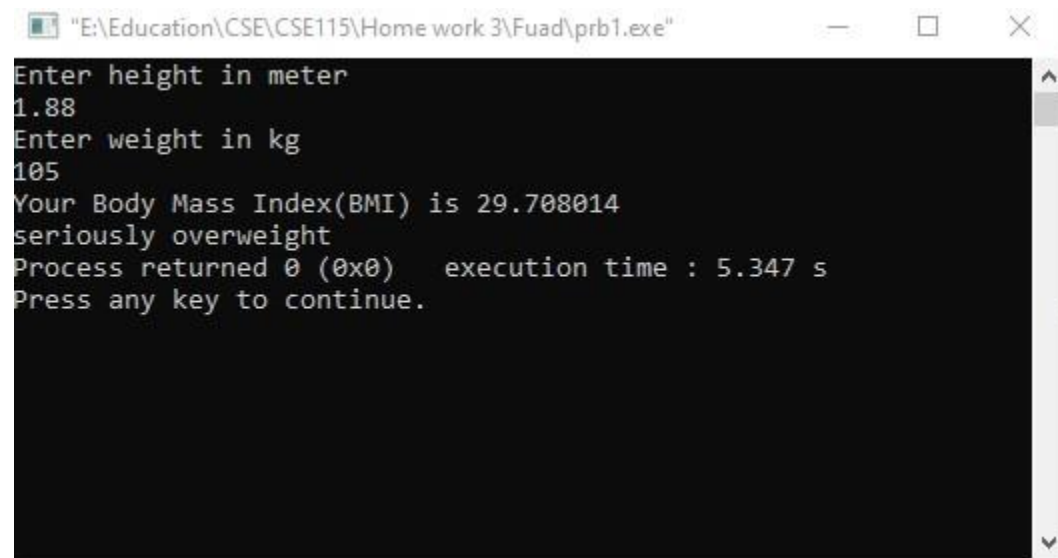
```
}
```

```
else if (bmi<24){  
    printf("Normal weight");  
    return 0;  
}
```

```
else if (bmi<29){  
    printf("over weight");  
    return 0;  
}
```

```
printf("seriously overweight");  
}
```

Output



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb1.exe"  
Enter height in meter  
1.88  
Enter weight in kg  
105  
Your Body Mass Index(BMI) is 29.708014  
seriously overweight  
Process returned 0 (0x0)   execution time : 5.347 s  
Press any key to continue.
```

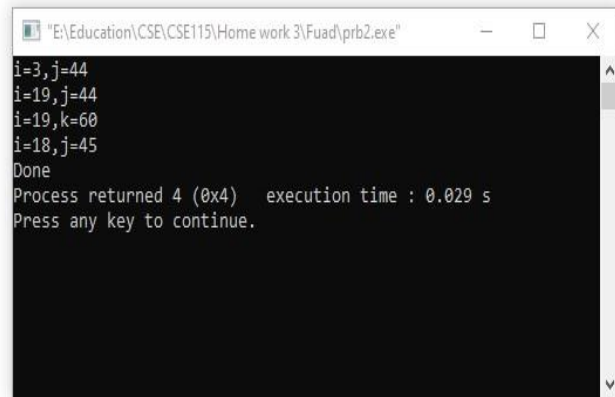
Task 2

```
#include<stdio.h>
void main() {
    int i=14>>2,j=11<<2;

    printf("i=%d,j=%d\n",i,j);
    if(i>2){
        i=i | 16;
        printf("i=%d,j=%d\n",i,j);
    }
    int k=0;
    k=j|16;

    printf("i=%d,k=%d\n",i,k);
    if(j%2){
        j=j&16;
        printf("i=%d,j=%d\n",i,j);
    }
    if(i>j)
        printf("i=%d,j=%d\n",++i,--j);
    else printf("i=%d,j=%d\n",--i,++j);

    printf("Done");
}
```



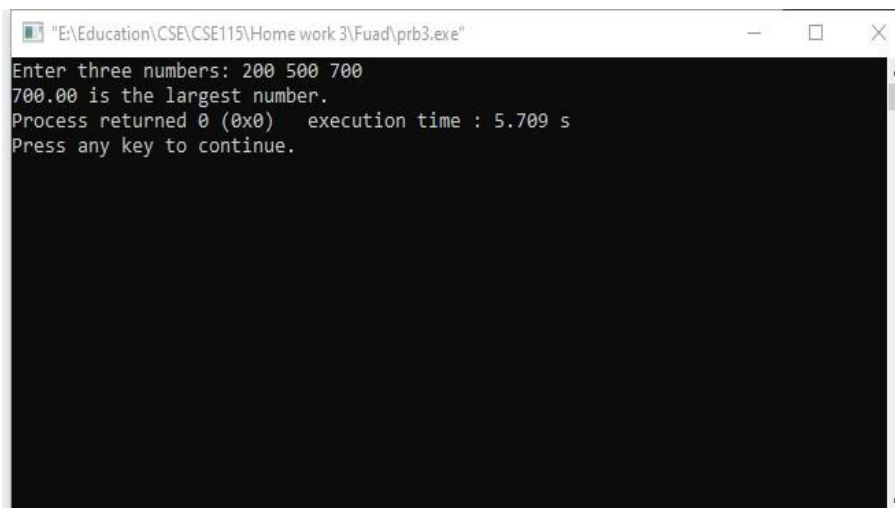
```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb2.exe"
i=3,j=44
i=19,j=44
i=19,k=60
i=18,j=45
Done
Process returned 4 (0x4)   execution time : 0.029 s
Press any key to continue.
```

Task 3

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

```
int main() {  
    double n1, n2, n3;  
    printf("Enter three numbers: ");  
    scanf("%lf %lf %lf", &n1, &n2, &n3);  
    if (n1 >= n2) {  
        if (n1 >= n3)  
            printf("%.2lf is the largest number.", n1);  
        else  
            printf("%.2lf is the largest number.", n3);  
    } else {  
        if (n2 >= n3)  
            printf("%.2lf is the largest number.", n2);  
        else  
            printf("%.2lf is the largest number.", n3);  
    }  
    return 0;  
}
```

Output



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb3.exe"  
Enter three numbers: 200 500 700  
700.00 is the largest number.  
Process returned 0 (0x0) execution time : 5.709 s  
Press any key to continue.
```

Task 4

```
#include<stdio.h>

#include<conio.h>

int main()

{

float noOfCall, tempNoOfCall, charge;

printf("Enter the number of minutes talked in phone: ");

scanf("%f", &noOfCall);

printf("\n");

float bill=0;

if(noOfCall>=95)

{

charge = (5 * 0.3)+(30 * 0.5)+(60 * 0.75 )+((noOfCall-5-30-60) * 1) ;

noOfCall=0;

}

else if(noOfCall>=35)

{

charge = (5 * 0.3)+(30 * 0.5)+((noOfCall-5-30) * 0.75) ;

noOfCall=0;

}

else if(noOfCall>=5)

{

charge = (5 * 0.3)+((noOfCall-5)*0.5);

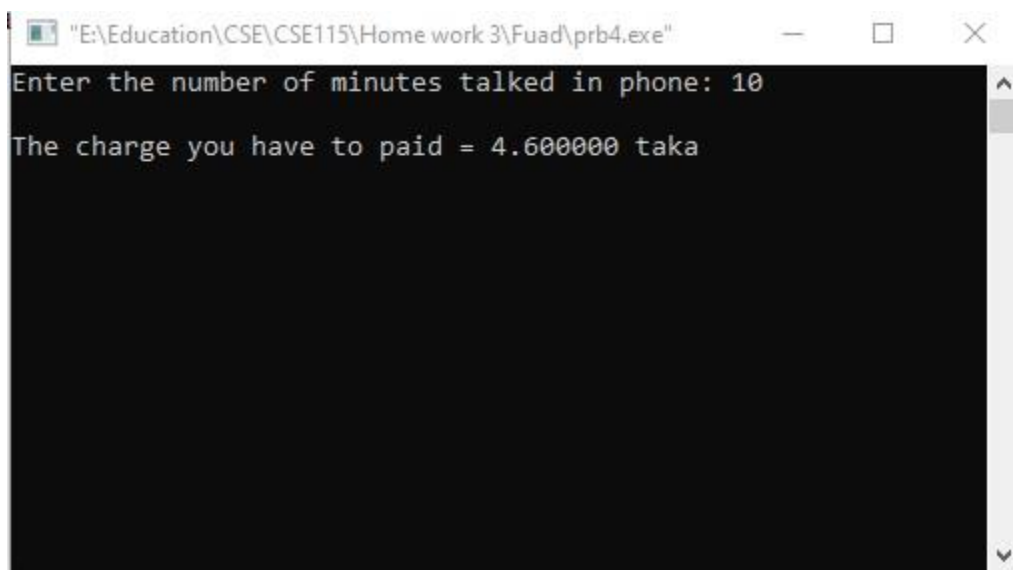
noOfCall=0;

}

else if(noOfCall>=0)
```

```
{  
charge = (noOfCall * 0.3);  
  
noOfCall=0;  
}  
charge = 1.15*charge;  
printf("The charge you have to paid = %f taka", charge);  
  
getch();  
return 0;  
}
```

Output



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb4.exe"  
Enter the number of minutes talked in phone: 10  
The charge you have to paid = 4.600000 taka
```

Task 5

```
#include <stdio.h>

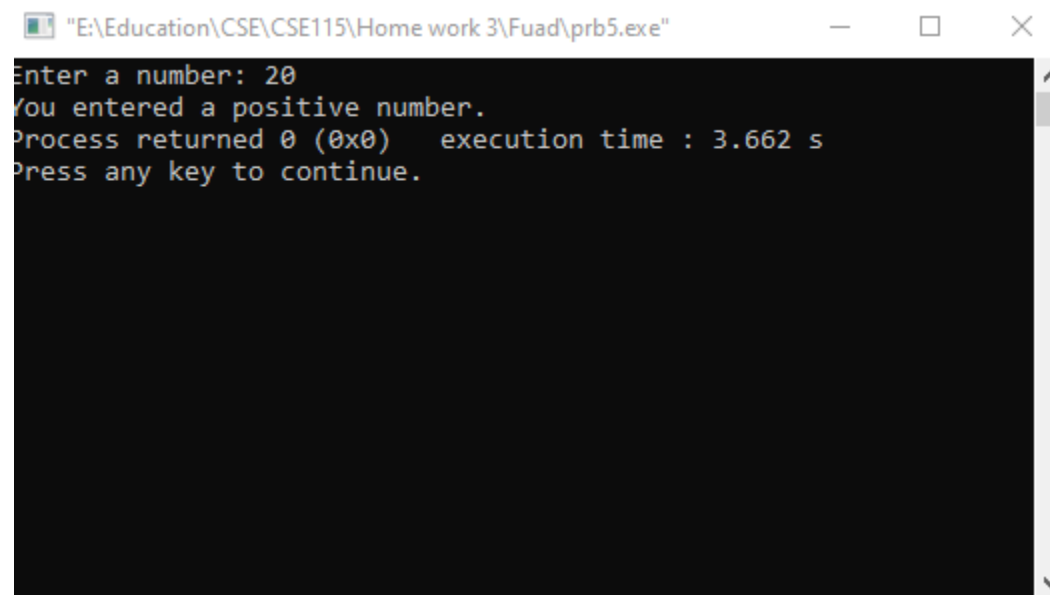
int main() {
    double num;

    printf("Enter a number: ");
    scanf("%lf", &num);

    if (num <= 0.0) {
        if (num == 0.0)
            printf("You entered 0.");
        else
            printf("You entered a negative number.");
    } else
        printf("You entered a positive number.");

    return 0;
}
```

Output



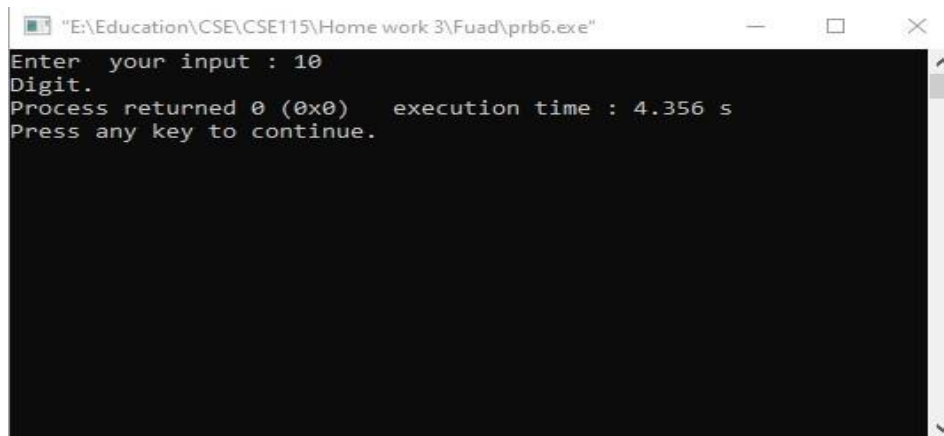
```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb5.exe"
Enter a number: 20
You entered a positive number.
Process returned 0 (0x0)   execution time : 3.662 s
Press any key to continue.
```

Task 6

```
#include<stdio.h>

int main()
{ char n; //declare a variable
  printf("Enter a your input : ");
  scanf("%c",&n);
  if(n>='0' && n<='9') //check for digit
  {
    printf("Digit.");
  }
  else if(n>='A' && n<='Z') //check for uppercase
  {
    printf("Uppercase alphabet .");
  }
  else if(n>='a' && n<='z') //check for lowercase
  {
    printf("Lowercase alphabet.");
  }
  return 0;
}
```

Output



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb6.exe"
Enter your input : 10
Digit.
Process returned 0 (0x0)   execution time : 4.356 s
Press any key to continue.
```


Task 7

Part a:

```
#include <stdio.h>

int main() {

    char op;

    int num1, num2;

    printf("Enter an operator (+, -, *, /): ");

    scanf("%c", &op);

    printf("Enter two operands: ");

    scanf("%d %d", &num1, &num2);


    switch (op) {

        case '+':

            printf("%d + %d = %d", num1, num2, num1 + num2);

            break;

        case '-':

            printf("%d - %d = %d", num1, num2, num1 - num2);

            break;

        case '*':

            printf("%d * %d = %d", num1, num2, num1 * num2);

            break;

        case '/':

            printf("%d / %d = %d", num1, num2, num1 / num2);

            break;

        // operator doesn't match any case constant

        default:

            printf("Error! operator is not correct");

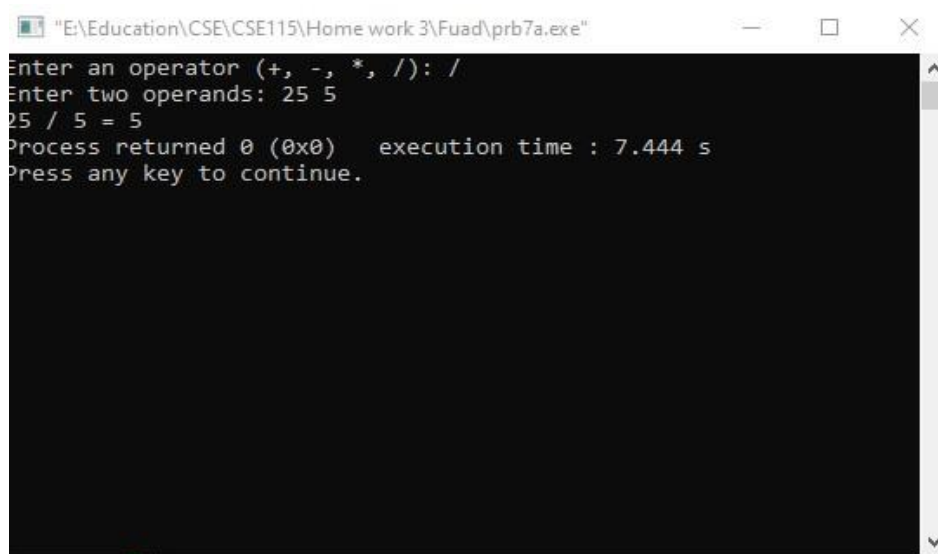
    }

}
```

```
return 0;
```

```
}
```

Output:



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb7a.exe"
Enter an operator (+, -, *, /): /
Enter two operands: 25 5
25 / 5 = 5
Process returned 0 (0x0) execution time : 7.444 s
Press any key to continue.
```

Part B

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

```
void main()
```

```
{
```

```
    int num1, num2, cal; //declaration of integer variables
```

```
    char ope; //declaration of character variables
```

```
    printf("Enter First Number : ");
```

```
    scanf("%d", &num1); //Getting the first value from user
```

```
    printf("Enter Second Number : ");
```

```
    scanf("%d", &num2); //Getting the second value from user
```

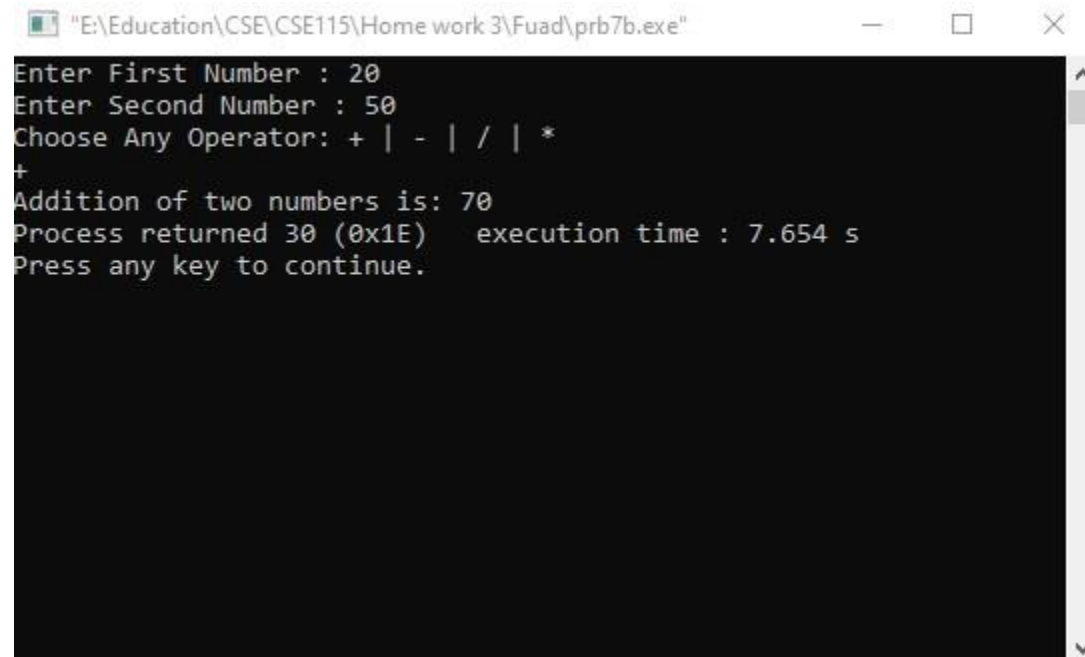
```
    printf("Choose Any Operator: + | - | / | * \n");
```

```
    scanf(" %c", &ope); // getting the operator for operation from user
```

```
// Applying if-else condition to check conditions
```

```
if(ope == '+')
{
cal= num1 + num2;
printf("Addition of two numbers is: %d",cal);
}
else if(ope == '-')
{
cal= num1 - num2;
printf("Subtraction of two numbers is: %d",cal);
}
else if(ope == '/')
{
cal= num1 / num2;
printf("Division of two numbers is: %d",cal);
}
else if(ope == '*' )
{
cal= num1 * num2;
printf("Multiplication of two numbers is: %d",cal);
}
else
{
printf("Invalid Input");
}
}
```

Output:



A screenshot of a Windows command prompt window. The title bar at the top shows the file path "E:\Education\CSE\CSE115\Home work 3\Fuad\prb7b.exe" and standard window controls (minimize, maximize, close). The command prompt itself has a black background with white text. The text displayed is as follows:

```
Enter First Number : 20
Enter Second Number : 50
Choose Any Operator: + | - | / | *
+
Addition of two numbers is: 70
Process returned 30 (0x1E)   execution time : 7.654 s
Press any key to continue.
```

Task 8

```
#include <stdio.h>

int main() {
    char month_number;

    printf("Enter month number (Between 1(JANUARY) and 12(DECEMBER)): ");
    scanf("%c", &month_number);

    switch (month_number)
    {
        case '1':
            printf("Number of days in January = 31");
            break;

        case '2':
            printf("Number of days in February = 28");
            break;

        case '3':
            printf("Number of days in March= 31");
            break;

        case '4':
            printf("Number of days in April = 30");
            break;

        case '5':
            printf("Number of days in May = 31");
            break;
```

case '6':

```
printf("Number of days in June = 30");
```

```
break;
```

case '7':

```
printf("Number of days in July = 31");
```

```
break;
```

case '8':

```
printf("Number of days in August = 31");
```

```
break;
```

case '9':

```
printf("Number of days in September = 30");
```

```
break;
```

case '10':

```
printf("Number of days in October = 31");
```

```
break;
```

case '11':

```
printf("Number of days in November = 30");
```

```
break;
```

case '12':

```
printf("Number of days in December = 31");
```

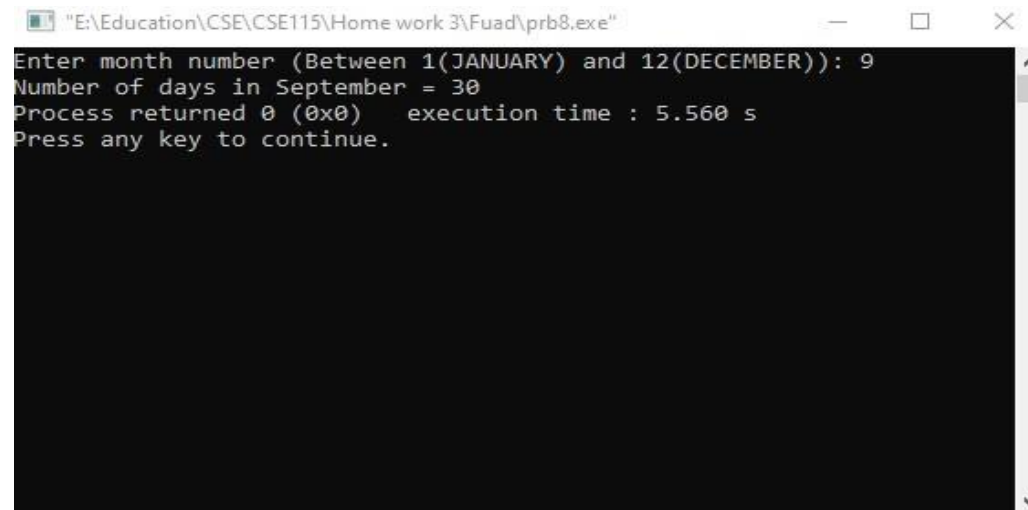
```
break;
```

```
// operator doesn't match any case constant
```

```
default:
```

```
    printf("Error! NO such Month Exists");  
}  
  
return 0;  
}
```

Output:



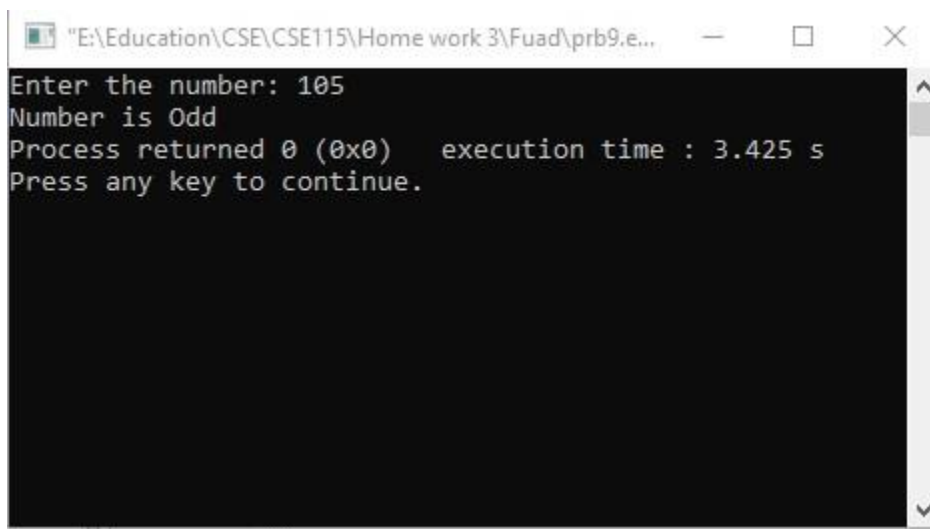
```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb8.exe"  
Enter month number (Between 1(JANUARY) and 12(DECEMBER)): 9  
Number of days in September = 30  
Process returned 0 (0x0)   execution time : 5.560 s  
Press any key to continue.
```

Task 9

```
#include <stdio.h>

int main()
{
    int number;
    printf("Enter the number: ");
    scanf("%d", &number);
    if(number%2==0)
        printf("Number is Even");
    else
        printf("Number is Odd");
    return 0;
}
```

Output



```
"E:\Education\CSE\CSE115\Home work 3\Fuad\prb9.e..."
Enter the number: 105
Number is Odd
Process returned 0 (0x0)   execution time : 3.425 s
Press any key to continue.
```