

Roll Number: EE A2-2016065

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[illegible]

Practical 1

Program to print a content using printf

Program code:

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

```
int main()
```

```
{
```

```
printf("EEA2 , Roll no.= 20016065 ,program to print favourite poem\n"
```

```
"\n"
```

```
"          How Doth The Little Crocodile \n"
```

```
"\n"
```

```
"How doth the little crocodile \n"
```

```
"Improve his shining tail, \n"
```

```
"And pour the waters of nile \n"
```

```
"On every golden scale!\n"
```

```
"\n"
```

```
"How cheerfully he seems to grin, \n"
```

```
"How neatly spreads his claws,\n"
```

```
"And welcomes little fishes in, \n"
```

```
"With gently smiling jaws! \n"
```

```
"\n"
```

```

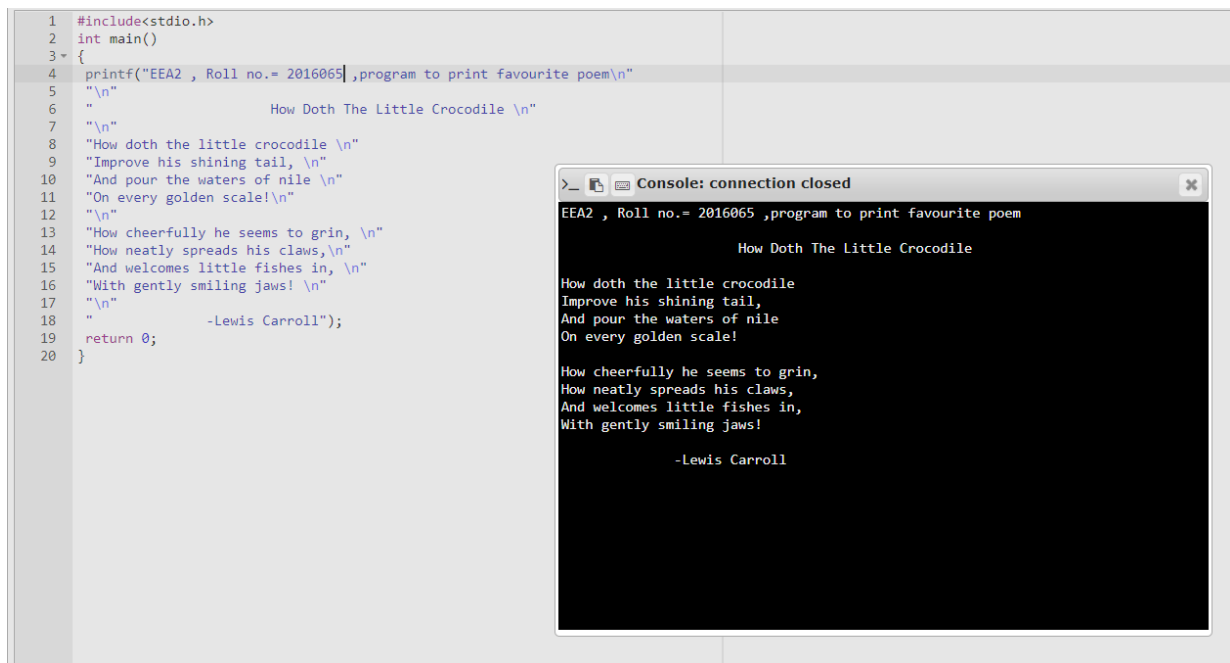
"        -Lewis Carroll");

return 0;

}

```

Output:



The image shows a C program in a text editor and its output in a console window. The program is a simple C program that prints a poem by Lewis Carroll. The console window shows the output of the program, which is the poem 'How Doth The Little Crocodile'.

```

1  #include<stdio.h>
2  int main()
3  {
4      printf("EEA2 , Roll no.= 2016065 ,program to print favourite poem\n")
5      "\n"
6      "        How Doth The Little Crocodile \n"
7      "\n"
8      "How doth the little crocodile \n"
9      "Improve his shining tail, \n"
10     "And pour the waters of nile \n"
11     "On every golden scale!\n"
12     "\n"
13     "How cheerfully he seems to grin, \n"
14     "How neatly spreads his claws,\n"
15     "And welcomes little fishes in, \n"
16     "With gently smiling jaws! \n"
17     "\n"
18     "        -Lewis Carroll");
19     return 0;
20 }

```

```

>_ Console: connection closed
EEA2 , Roll no.= 2016065 ,program to print favourite poem

        How Doth The Little Crocodile

How doth the little crocodile
Improve his shining tail,
And pour the waters of nile
On every golden scale!

How cheerfully he seems to grin,
How neatly spreads his claws,
And welcomes little fishes in,
With gently smiling jaws!

        -Lewis Carroll

```

Practical 2

Program to display month name by using switch statement

PROGRAM CODE:

```

#include<stdio.h>

int main()

{

    int month;

```

```
printf ("EE A2, Roll No.= 2016065,Display month name by using switch  
statement\n");
```

```
printf("Enter the month number\n");
```

```
scanf("%d",&month);
```

```
switch(month)
```

```
{
```

```
case 1:
```

```
    printf ("January");
```

```
    break;
```

```
case 2:
```

```
    printf ("February");
```

```
    break;
```

```
case 3:
```

```
    printf ("March");
```

```
    break;
```

```
case 4:
```

```
    printf ("April");
```

```
    break;
```

```
case 5:
```

```
    printf ("May");
```

```
    break;
```

```
case 6:
```

```
    printf ("June");
```

```
    break;
```

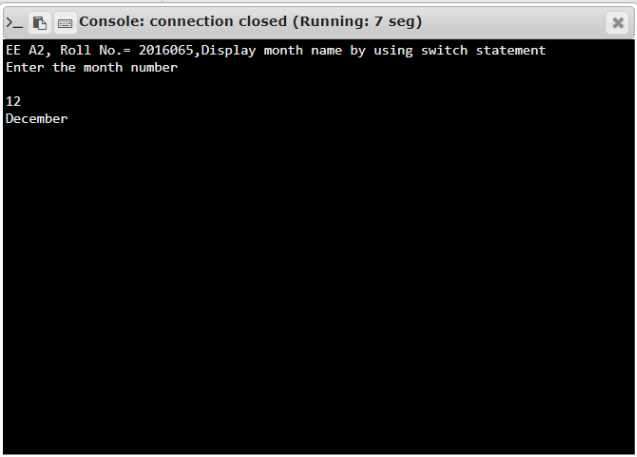
```
case 7:
```

```
    printf ("July");
```

```
        break;
    case 8:
        printf ("August");
        break;
    case 9:
        printf ("September");
        break;
    case 10:
        printf ("October");
        break;
    case 11:
        printf ("November");
        break;
    case 12:
        printf ("December");
        break;
    default:
        printf (" Error! month number is incorrect ");
    }
    return 0;
}
```

OUTPUT:

```
1 #include<stdio.h>
2 int main()
3 {
4     int month;
5     printf ("EE A2, Roll No.= 2016065,Display month name by using switch statement\n");
6     printf("Enter the month number\n");
7     scanf("%d",&month);
8     switch(month)
9     {
10         case 1: printf ("January");
11                 break;
12         case 2: printf ("February");
13                 break;
14         case 3: printf ("March");
15                 break;
16         case 4: printf ("April");
17                 break;
18         case 5: printf ("May");
19                 break;
20         case 6: printf ("June");
21                 break;
22         case 7: printf ("July");
23                 break;
24         case 8: printf ("August");
25                 break;
26         case 9: printf ("September");
27                 break;
28     }
29 }
```



Practical 3

Program to use while loop

//Program to use while Loop

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

```
int main(){
```

```
    printf("EEA2 , Roll no.=2016065, Program to use while loop \n");
```

```
    int a = 10;
```

```
    while( a < 20 ) {
```

```
        printf("value of a: %d\n", a);
```

```
        a++;
```

```
    }
```

```
    return 0;
```

```
}
```

Output:

The screenshot displays a C program in a code editor and its execution output in a console window. The code defines a variable 'a' as 10 and enters a do-while loop that prints the value of 'a' and increments it by 1, continuing until 'a' is no longer less than 20. The console output shows the program's title and the values of 'a' from 10 to 19, each on a new line.

```
1 #include <stdio.h>
2 int main ()
3 {
4     printf("EEA2, Roll no.=2016065 , Program to use do while loop\n");
5     int a = 10;
6     do {
7         printf("value of a: %d\n", a);
8         a = a + 1;
9     }while( a < 20 );
10 }
11 return 0;
12 }
```

Console: connection closed

```
EEA2, Roll no.=2016065 , Program to use do while loop
value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 15
value of a: 16
value of a: 17
value of a: 18
value of a: 19
```

Practical 4

Program to use do-while loop

Program code:

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

```
int main ()
```

```
{
```

```
    printf("EEA2, Roll no.=2016065 , Program to use do while loop\n");
```

```
    int a = 10;
```

```
    do {
```

```
        printf("value of a: %d\n", a);
```

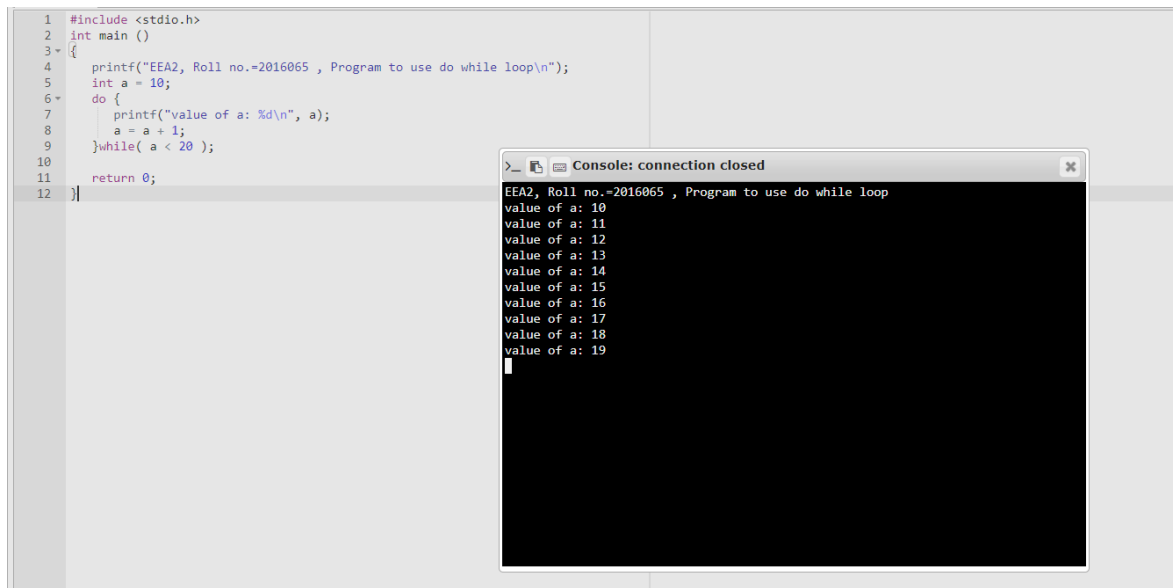
```
        a = a + 1;
```

```
    }while( a < 20 );
```

```
    return 0;
```

```
}
```

Output:



The screenshot shows a C program in a code editor and its execution in a console window. The program uses a do-while loop to print the value of a variable 'a' from 10 to 19. The console window title is 'Console: connection closed'.

```
1 #include <stdio.h>
2 int main ()
3 {
4     printf("EEA2, Roll no.=2016065 , Program to use do while loop\n");
5     int a = 10;
6     do {
7         printf("value of a: %d\n", a);
8         a = a + 1;
9     }while( a < 20 );
10
11     return 0;
12 }
```

```
EEA2, Roll no.=2016065 , Program to use do while loop
value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 15
value of a: 16
value of a: 17
value of a: 18
value of a: 19
```

Practical 5

Program to use for loop

Program code:

```
#include <stdio.h>

int main()
{
    int k,z,p;

    printf("EEA2 , Roll no.=2016065, Program to use for loop \n\n");

    printf("Program to print a table of a given integer\n");

    printf("Enter a number whose table is to be displayed: ");

    scanf("%d", &k);

    for (z = 1; z <= 10; ++z)
    {
        p = k*z;
```



```

printf("%d * %d = %d \n", k, z,p);

}

return 0;

}

```

Output:

```

1 #include <stdio.h>
2 int main()
3 {
4     int k,z,p;
5     printf("EEA2 , Roll no.=2016065, Program to use for loop \n\n");
6     printf("Program to print a table of a given integer\n");
7     printf("Enter a number whose table is to be displayed: ");
8     scanf("%d", &k);
9     for (z = 1; z <= 10; ++z)
10 {
11     p = k*z;
12     printf("%d * %d = %d \n", k, z,p);
13 }
14 }
15 return 0;
16 }

```

```

>_ Console: connection closed (Running: 6 seg)
EEA2 , Roll no.=2016065, Program to use for loop

Program to print a table of a given integer
Enter a number whose table is to be displayed: 32
32 * 1 = 32
32 * 2 = 64
32 * 3 = 96
32 * 4 = 128
32 * 5 = 160
32 * 6 = 192
32 * 7 = 224
32 * 8 = 256
32 * 9 = 288
32 * 10 = 320

```

Practical 6

Program to use nested for loop

Program code:

```

//program to use nested for loop

#include<stdio.h>

int main()

{

printf("EEA2 , Roll no.=2016065 , Program to use nested for loop\n");

printf("To print the a triangle pattern using for loop and nested for loop \n");

int i,j;

```

Output:



Code:-

```
#include<stdio.h>

int main(void){

int a=15,b=20;

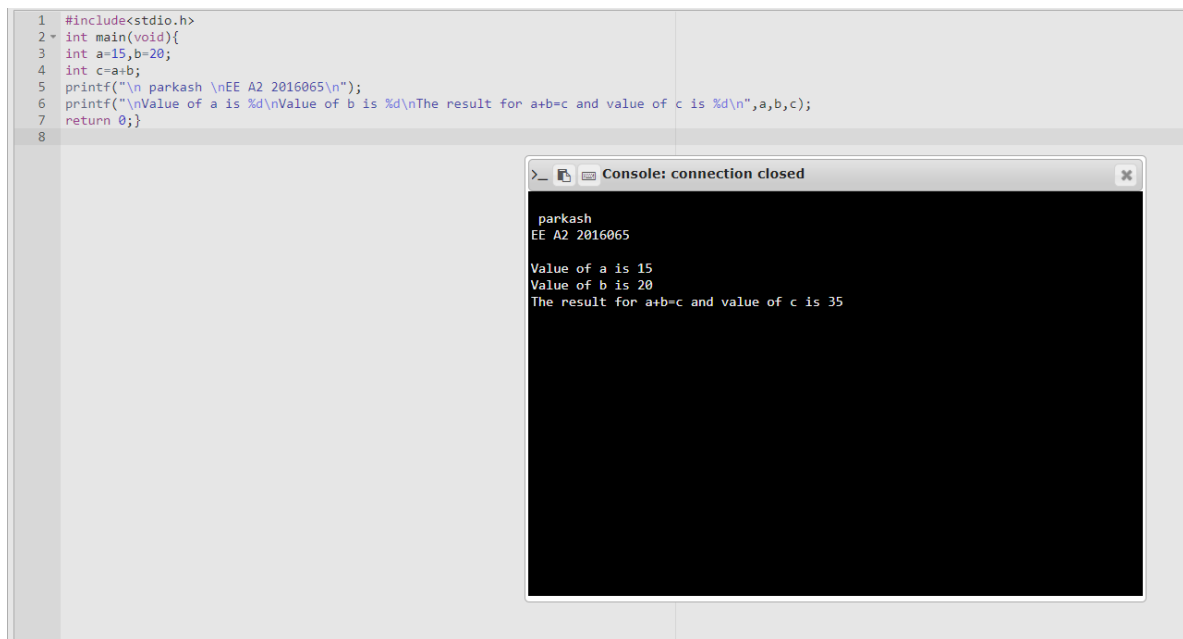
int c=a+b;

printf("\n parkash \nEE A2 2016065\n");

printf("\nValue of a is %d\nValue of b is %d\nThe result for a+b=c and value of c is
%d\n",a,b,c);

return 0;}
```

Output:-



The image shows a code editor with a C program and a separate console window displaying its output. The code defines variables a=15, b=20, and c=a+b, then prints the name 'parkash', ID 'EE A2 2016065', and the values of a, b, and their sum c.

```
1 #include<stdio.h>
2 int main(void){
3     int a=15,b=20;
4     int c=a+b;
5     printf("\n parkash \nEE A2 2016065\n");
6     printf("\nValue of a is %d\nValue of b is %d\nThe result for a+b=c and value of c is %d\n",a,b,c);
7     return 0;
8 }
```

Console: connection closed

```
parkash
EE A2 2016065

Value of a is 15
Value of b is 20
The result for a+b=c and value of c is 35
```

Practical-8

**Aim: Program to use different data Data
Types(Integer,Float,Char)**

Code:-

```
#include<stdio.h>

int main(void){

int a = 10,b = 20,c = 30;

float A = 1.14,B = 2.0001,C = 33.14;

char var1='X',var2='Y',var3='Z';

printf("\nparkash \nEE-A2 2016065\n\n");

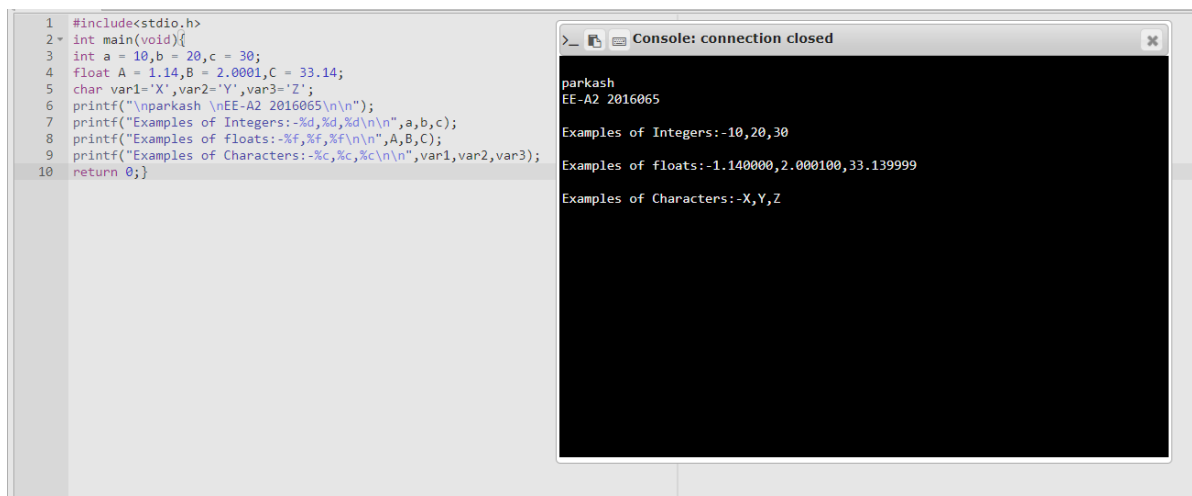
printf("Examples of Integers:-%d,%d,%d\n\n",a,b,c);

printf("Examples of floats:-%f,%f,%f\n\n",A,B,C);

printf("Examples of Characters:-%c,%c,%c\n\n",var1,var2,var3);

return 0;}
```

Output:-



The screenshot displays a C program in a code editor on the left and its execution output in a console window on the right. The code defines variables for integers, floats, and characters, and uses printf to display them in various formats. The console output shows the program's execution, including the name 'parkash', ID 'EE-A2 2016065', and the formatted values of the variables.

```
1 #include<stdio.h>
2 int main(void){
3     int a = 10,b = 20,c = 30;
4     float A = 1.14,B = 2.0001,C = 33.14;
5     char var1='X',var2='Y',var3='Z';
6     printf("\nparkash \nEE-A2 2016065\n\n");
7     printf("Examples of Integers:-%d,%d,%d\n\n",a,b,c);
8     printf("Examples of floats:-%f,%f,%f\n\n",A,B,C);
9     printf("Examples of Characters:-%c,%c,%c\n\n",var1,var2,var3);
10    return 0;}
```

Console: connection closed

```
parkash
EE-A2 2016065

Examples of Integers:-10,20,30

Examples of floats:-1.140000,2.000100,33.139999

Examples of Characters:-X,Y,Z
```

Practical-9

Aim:Program to do Logical and Relational Operators

Code:-

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

```

int main(){

printf("\nparkash \nEE-A2 2016065\n\n");

int a=10,b=10,c=20;

printf("a=%d,b=%d,c=%d\n\n",a,b,c);

printf("|| means OR\n&& means AND\n!means NOT\n");

printf("Use of Logical And Relational Operators:-\n");

printf("a==b || a<b is %d\n",a==b || a<b);

printf("a==b && a<b is %d\n",a==b && a<b);

printf("a==b || !(a<b) is %d\n",a==b || !(a<b));

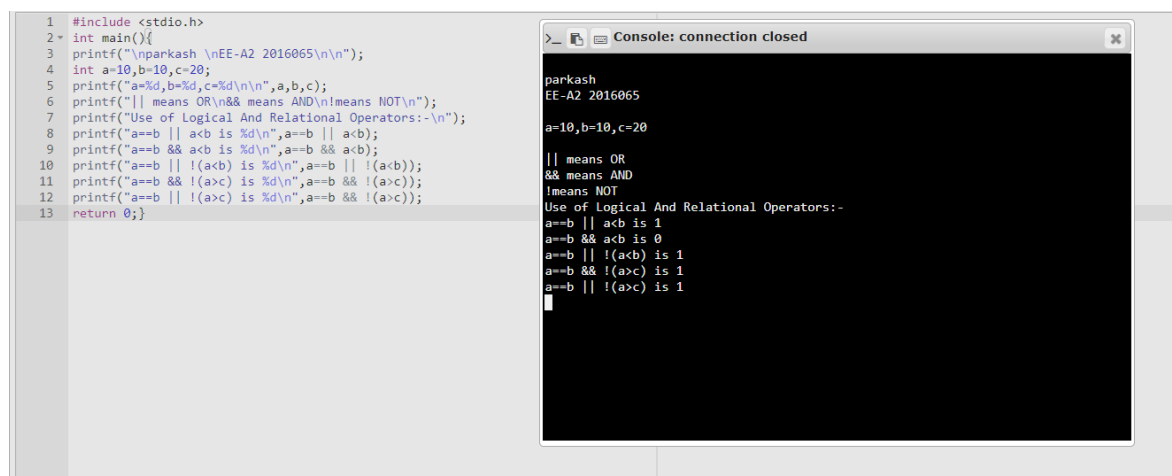
printf("a==b && !(a>c) is %d\n",a==b && !(a>c));

printf("a==b || !(a>c) is %d\n",a==b || !(a>c));

return 0;}

```

Output:-



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 a C++ program that demonstrates logical and relational operators. The console window shows the output of the program, which matches the expected results.

```

1 #include <stdio.h>
2 int main(){
3     printf("\nparkash \nEE-A2 2016065\n\n");
4     int a=10,b=10,c=20;
5     printf("a=%d,b=%d,c=%d\n\n",a,b,c);
6     printf("|| means OR\n&& means AND\n!means NOT\n");
7     printf("Use of Logical And Relational Operators:-\n");
8     printf("a==b || a<b is %d\n",a==b || a<b);
9     printf("a==b && a<b is %d\n",a==b && a<b);
10    printf("a==b || !(a<b) is %d\n",a==b || !(a<b));
11    printf("a==b && !(a>c) is %d\n",a==b && !(a>c));
12    printf("a==b || !(a>c) is %d\n",a==b || !(a>c));
13    return 0;}

```

```

>_ Console: connection closed

parkash
EE-A2 2016065

a=10,b=10,c=20

|| means OR
&& means AND
!means NOT
Use of Logical And Relational Operators:-
a==b || a<b is 1
a==b && a<b is 0
a==b || !(a<b) is 1
a==b && !(a>c) is 1
a==b || !(a>c) is 1

```

Practical-10

Aim: Program to use If-Else Statements

Code:-

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

```

int main(){

printf("\nparkash \nEE-A2 2016065\n\n");

int a=6,b=6;

printf("Value of a is %d\n",a);

printf("Value of b is %d\n",b);

if(a>=b)

{printf("a is either greater or equal to b\n\n");}

else

{printf("b is either greater or equal to a\n\n");}

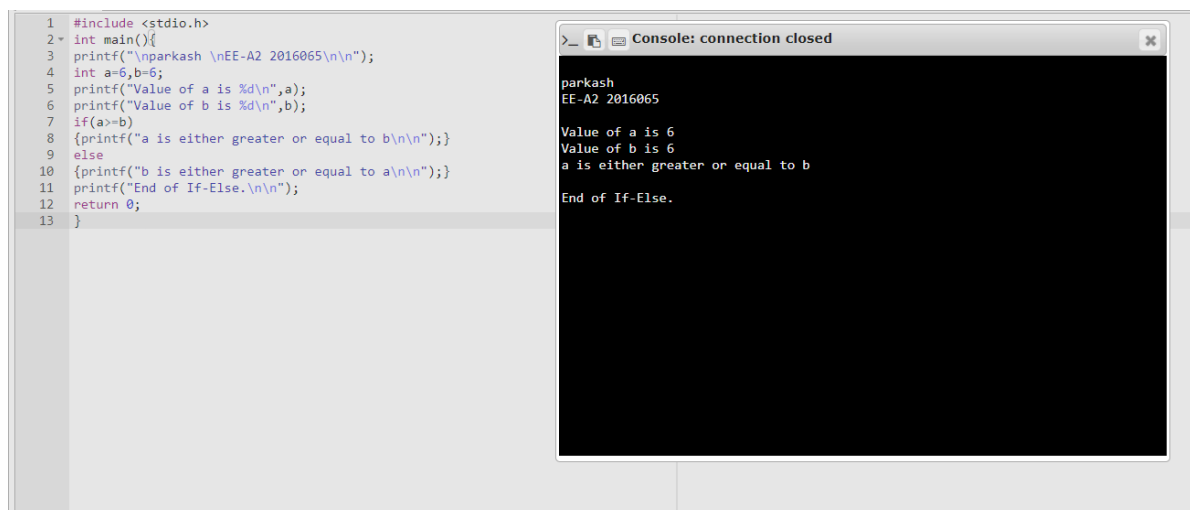
printf("End of If-Else.\n\n");

return 0;

}

```

Output:-



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     printf("\nparkash \nEE-A2 2016065\n\n");
4     int a=6,b=6;
5     printf("Value of a is %d\n",a);
6     printf("Value of b is %d\n",b);
7     if(a>=b)
8     {printf("a is either greater or equal to b\n\n");}
9     else
10    {printf("b is either greater or equal to a\n\n");}
11    printf("End of If-Else.\n\n");
12    return 0;
13 }

```

The console window, titled "Console: connection closed", displays the following output:

```

parkash
EE-A2 2016065

Value of a is 6
Value of b is 6
a is either greater or equal to b

End of If-Else.

```

Practical-11

Aim-To make a Fibonacci series

Code:-

```

#include<stdio.h>

int main()
{
    int i,lt,nxt,t1=0,t2=1;

    printf("Shivam Gupta 2016065\n\n");

    printf("To make a fibonacci series\n\n");


    printf("Enter the number of terms:-",lt);

    scanf("%d",<lt);

    printf("Fibonacci series is\n");

    for(i=1;i<=lt;i++)
    {

        printf("%d\n",t1);

        nxt=t1+t2 ;

        t1=t2;

        t2=nxt;

    }

    return 0;
}

```

Output:-

```

1  #include<stdio.h>
2  int main()
3  {
4      int i,lt,nxt,t1=0,t2=1;
5      printf("Shivam Gupta 2016065\n\n");
6      printf("To make a fibonacci series\n\n");
7
8      printf("Enter the number of terms:-",lt);
9      scanf("%d",<lt);
10     printf("Fibonacci series is\n");
11     for(i=1;i<=lt;i++)
12     {
13         printf("%d\n",t1);
14         nxt=t1+t2 ;
15         t1=t2;
16         t2=nxt;
17     }
18     return 0;
19 }

```

Console: connection closed (Running: 10 seg)

```

Shivam Gupta 2016065

To make a fibonacci series

Enter the number of terms:-25
Fibonacci series is
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
610
987
1597

```

Practical-12

Program to perform increment and decrement operators

Program code:

```
//program to show functioning of increment decrement operators
#include<stdio.h>

int main()

{

int x,p=++x,y,q=--y;

printf("EEA2,Roll no.=2016065, Program to use increment and decrement operators \n\n");

printf("Enter the number whose value is to be incremented : ");

scanf("%d",&x);

p=++x;

printf("After incrementing by 1 = %d\n",p);

printf("Enter the number whose value is to be decremented : ");

scanf("%d",&y);

q=--y;

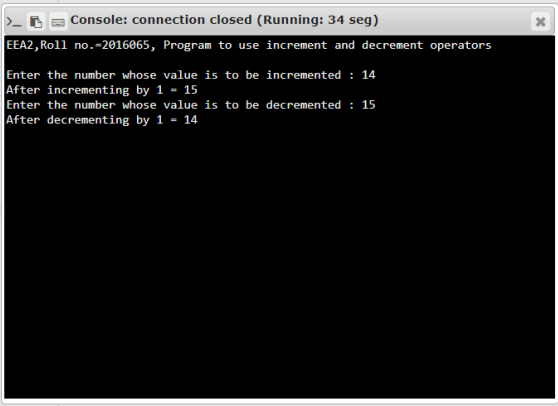
printf("After decrementing by 1 = %d\n",q);

return 0;

}
```

Output:


```
1 #include<stdio.h>
2
3 int main()
4 {
5
6
7 int x,p=++x,y,q=--y;
8 printf("EEA2,Roll no.=2016065, Program to use increment and decrement operators \n\n");
9
10 printf("Enter the number whose value is to be incremented : ");
11 scanf("%d",&x);
12 p=++x;
13 printf("After incrementing by 1 = %d\n",p);
14
15 printf("Enter the number whose value is to be decremented : ");
16 scanf("%d",&y);
17 q=--y;
18 printf("After decrementing by 1 = %d\n",q);
19
20 return 0;
21
22 }
23
```



```
>_ Console: connection closed (Running: 34 seg)
EEA2,Roll no.=2016065, Program to use increment and decrement operators
Enter the number whose value is to be incremented : 14
After incrementing by 1 = 15
Enter the number whose value is to be decremented : 15
After decrementing by 1 = 14
```

Practical-13

Program to perform conditional statements, if and else, if-else ladder

Program code:

//Program to perform conditional statements if and else, if-else ladder

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

```
int main()
```

```
{
```

```
int k,l,m;
```

```
printf("EEA2,Roll no.=2016065, Program to perform conditional statements if and else, if-else ladder \n\n");
```

```
printf("Enter the 1st number : ");
```

```
scanf("%d",&k);
```

```
printf("Enter the 2nd number : ");
```

```
scanf("%d",&l);
```

```
printf("Enter the 3rd number : ");
```

```

scanf("%d",&m);

printf("1st number = %d\n",k);
printf("2nd number = %d\n",l);
printf("3rd number = %d\n",m);


if(k>l && k>m && l>m)
{
    printf("the ascending order is given by :");
    printf("%d<%d<%d\n",m,l,k);
}
else if(k<l && k>m && l>m)
{
    printf("the ascending order is given by :");
    printf("%d<%d<%d\n",m,k,l);
}
else if(k>m && m>l && k>l)
{
    printf("the ascending order is given by :");
    printf("%d<%d<%d\n",l,m,k);
}
else if(m>k && m>l && k>l)
{
    printf("the ascending order is given by :");
    printf("%d<%d<%d\n",l,k,m);
}
else if (l>m && m>k && l>k)
{

```

```

printf("the ascending order is given by :");

printf("%d<%d<%d\n",k,m,l);

}

else if(m>k && m>l && l>k)

{

printf("the ascending order is given by :");

printf("%d<%d<%d\n",k,l,m);

}

printf("This was just a demonstration, program can be modified using more logical and relational operators!!\n");

return 0; }

```

Output:

```

1  #include <stdio.h>
2  int main()
3  {
4      int k,l,m;
5
6      printf("EEA2,Roll no.-2016065, Program to perform conditional statements if and else, if-else ladder \n\n");
7      printf("Enter the 1st number : ");
8      scanf("%d",&k);
9      printf("Enter the 2nd number : ");
10     scanf("%d",&l);
11     printf("Enter the 3rd number : ");
12     scanf("%d",&m);
13     printf("1st number = %d\n",k);
14     printf("2nd number = %d\n",l);
15     printf("3rd number = %d\n",m);
16
17     if(k<l && k<m && l>m)
18     {
19         printf("the ascending order is given by :");
20         printf("%d<%d<%d\n",m,l,k);
21     }
22     else if(k<l && k>m && l>l)
23     {
24         printf("the ascending order is given by :");
25         printf("%d<%d<%d\n",m,k,l);
26     }
27     else if(k>m && m>l && k>l)
28     {
29         printf("the ascending order is given by :");
30         printf("%d<%d<%d\n",l,m,k);
31     }
32     else if(m>k && m>l && k>l)
33     {
34         printf("the ascending order is given by :");
35         printf("%d<%d<%d\n",l,k,m);
36     }
37     else if (l>m && m>k && l>k)
38     {
39         printf("the ascending order is given by :");
40         printf("%d<%d<%d\n",k,m,l);
41     }
42     else if(m>k && m>l && l>k)
43     {
44         printf("the ascending order is given by :");
45         printf("%d<%d<%d\n",k,l,m);
46     }
47     printf("This was just a demonstration, program can be modified using more logical and relational operators!!\n");

```

```

>_ Console: connection closed (Running: 13 seg)
EEA2,Roll no.-2016065, Program to perform conditional statements if and else, if-else ladder
Enter the 1st number : 3
Enter the 2nd number : 5
Enter the 3rd number : 25
1st number = 3
2nd number = 5
3rd number = 25
the ascending order is given by :3<5<25
This was just a demonstration, program can be modified using more logical and relational operators!!

```

Practical:-14

Aim :To find factorial of a given number

Code:

```

#include<stdio.h>

int main()
{
    int i,num,fact=1;

    printf("Shivam Gupta 2016065\n\n");

    printf("To find the factorial of a number\n\n");


    printf("Enter the number:-");

    scanf("%d",&num);

    for(i=1;i<=num;i++)
    {

        fact=fact*i;

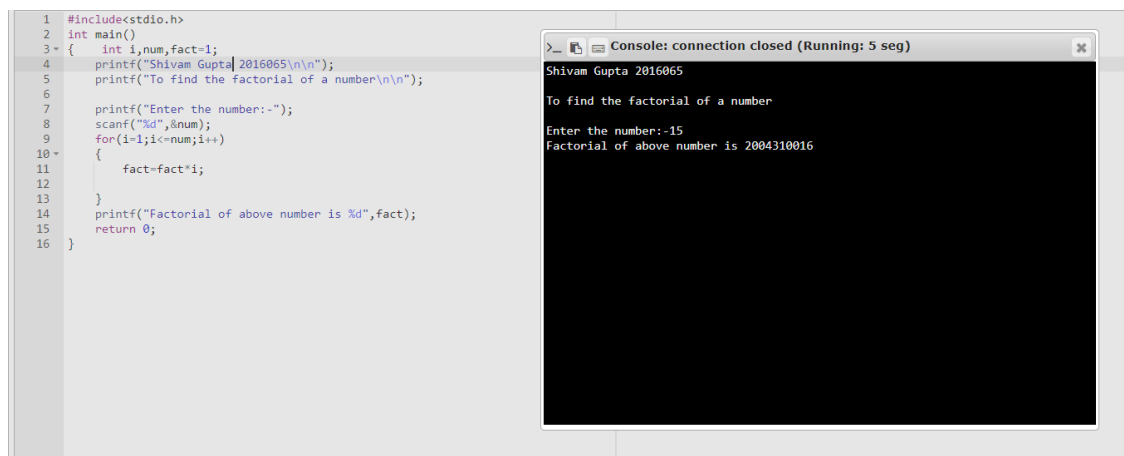
    }

    printf("Factorial of above number is %d",fact);

    return 0;
}

```

Output:-



The screenshot shows a code editor on the left with the following C code:

```

1  #include<stdio.h>
2  int main()
3  {
4      int i,num,fact=1;
5      printf("Shivam Gupta 2016065\n\n");
6      printf("To find the factorial of a number\n\n");
7
8      printf("Enter the number:-");
9      scanf("%d",&num);
10     for(i=1;i<=num;i++)
11     {
12         fact=fact*i;
13     }
14     printf("Factorial of above number is %d",fact);
15     return 0;
16 }

```

On the right, a console window titled "Console: connection closed (Running: 5 seg)" displays the program's output:

```

Shivam Gupta 2016065

To find the factorial of a number

Enter the number:-15
Factorial of above number is 2004310016

```