



Bahria University, Islamabad
Department of Software Engineering

Computer Programming Lab
(Fall-2023)

Teacher: Engr. M Waleed Khan

Student : Abdul Hadi

Enrollment : 01-131232-075

Lab Journal: X

Date: 30/10/2023

Task No:	Task Wise Marks		Documentation Marks		Total Marks (20)
	Assigned	Obtained	Assigned	Obtained	
1	3		5		
2	3				
3	3				
4	3				
5	3				

Comments:

Signature

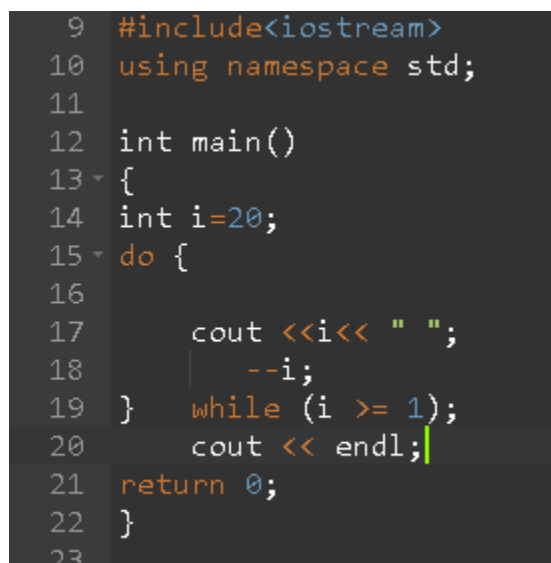
Program 01

```
#include<iostream>

using namespace std;

int main()
{
    int i=20;
    do {
        cout <<i<< " ";
        --i;
    } while (i >= 1);
    cout << endl;
    return 0;
}
```

Screenshots

A screenshot of a code editor showing a C++ program. The code is as follows:

```
9  #include<iostream>
10 using namespace std;
11
12 int main()
13 {
14     int i=20;
15     do {
16
17         cout <<i<< " ";
18         --i;
19     } while (i >= 1);
20     cout << endl;
21     return 0;
22 }
23
```

The code is color-coded: keywords like #include, using, int, do, while, cout, endl, and return are in orange; variables like i are in blue; and string literals like " " are in green. The line numbers 9 through 23 are visible on the left side of the editor.

```
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
```

Program 02

```
#include<iostream>

using namespace std;

int main()
{
    int n,factorial=1;

    int i=1;
    cout<<"enter a number";
    cin>>n;
    do{
        factorial*=i;
        i++;
    }
    while(i<=n);
    cout<<"factorial of"<<n<<"="<<factorial;
    return 0;
}
```

Screenshots

```

9  #include<iostream>
10 using namespace std;
11
12 int main()
13 {
14     int n,factorial=1;
15
16     int i=1;
17     cout<<"enter a number";
18     cin>>n;
19     do{
20         factorial*=i;
21         i++;
22     }
23     while(i<=n);
24     cout<<"factorial of"<<n<<"="<<factorial;
25     return 0;
26 }

```

```

enter a number7
factorial of7=5040

```

Program 03

```

#include<iostream>

using namespace std;

int main()
{
    int decimal,digit,i=1,octal=0;

    cout<<"enter the decimal number: ";

    cin>>decimal;

    do{
        digit=decimal%8;

        decimal/=8;
    }
}

```

```

    octal+=(digit*i);

    i*=10;

}

while(i!=0);

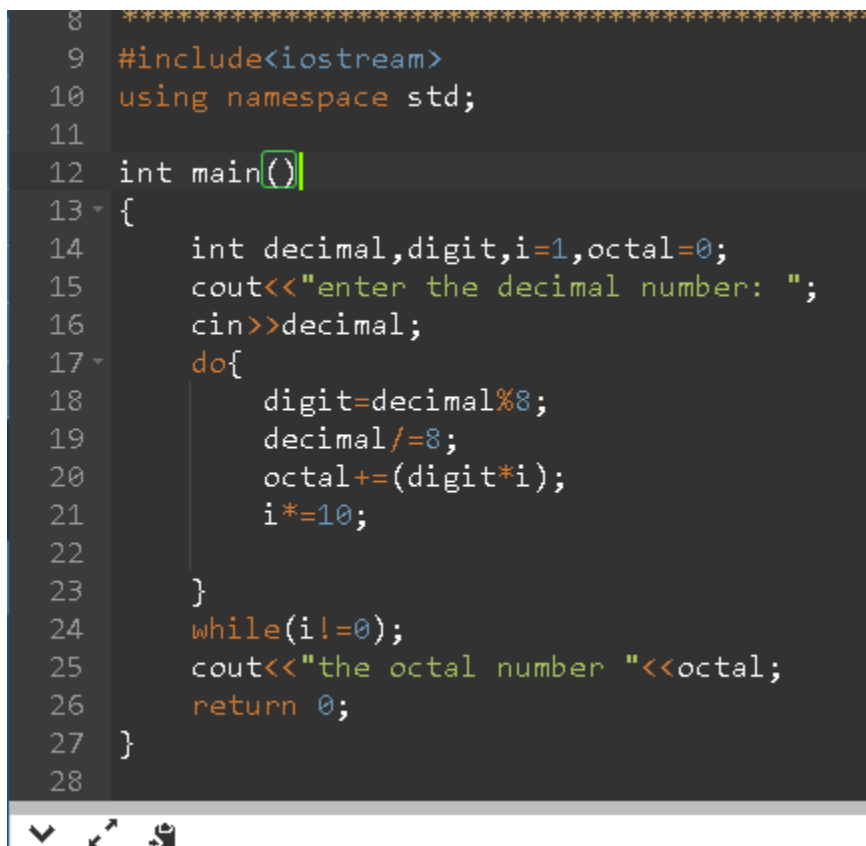
cout<<"the octal number "<<octal;

return 0;

}

```

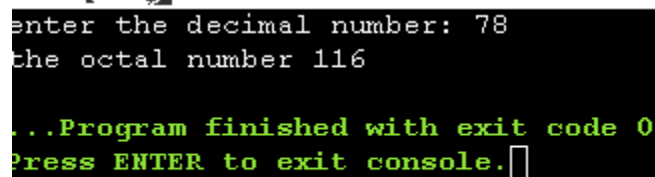
Screenshots



```

8  ****
9  #include<iostream>
10 using namespace std;
11
12 int main()
13 {
14     int decimal,digit,i=1,octal=0;
15     cout<<"enter the decimal number: ";
16     cin>>decimal;
17     do{
18         digit=decimal%8;
19         decimal/=8;
20         octal+=(digit*i);
21         i*=10;
22     }
23     while(i!=0);
24     cout<<"the octal number "<<octal;
25     return 0;
26 }
27
28

```



```

enter the decimal number: 78
the octal number 116

...Program finished with exit code 0
Press ENTER to exit console.

```

PROGRAM 4

```
#include<iostream>

using namespace std;

int main()
{

    double num1, num2,ans;
    char operation;

    cout << "Enter the first number: ";
    cin >> num1;

    cout << "Enter the operation (+, -, x, /): ";
    cin >> operation;

    cout << "Enter the second number: ";
    cin >> num2;

    switch (operation)
    {
    case '+':
        ans = num1 + num2;
        cout<<"num1 plus num2 = "<<ans;
        break;
    case '-':
        ans = num1 - num2;
```

```
cout<<"num1-num2="<<ans;
break;
case '*':
ans = num1 * num2;
cout<<"num1*num2 "<<ans;
break;
case '/':
ans = num1 / num2;
cout<<"num1/num2 :"<<ans;
break;
}
return 0;
}
```

Screenshots

```

1  #include<iostream>
2  using namespace std;
3  int main(){
4      double num1, num2,ans;
5      char operation;
6
7      cout << "Enter the first number: ";
8      cin >> num1;
9      cout << "Enter the operation (+, -, x, /): ";
10     cin >> operation;
11     cout << "Enter the second number: ";
12     cin >> num2;
13     switch (operation)
14     {
15     case '+':
16         ans = num1 + num2;
17         cout<<"num1 plus num2 = "<<ans;
18         break;
19     case '-':
20         ans = num1 - num2;
21         cout<<"num1-num2="<<ans;
22         break;
23     case '*':
24         ans = num1 * num2;
25         cout<<"num1*num2 "<<ans;
26         break;
27     case '/':
28         ans = num1 / num2;
29         cout<<"num1/num2 : "<<ans;
30         break;
31     }
32     return 0;

```

```

Enter the operation (+, -, x, /): +
Enter the second number: 6
num1 plus num2 = 15

```

EXTRA TASK

TASK 1

```
#include <iostream>
```

```
using namespace std;
```

```
int main() {
```

```
    int num = 7;
```

```
    do {
```

```
        cout << num << " ";
```

```
        num += 7;
```



```

    } while (num <= 70);

    return 0;
}

```

SCREENSHOTS

```

1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int num = 7;
6      do {
7          cout << num << " ";
8          num += 7;
9      } while (num <= 98);
10     return 0;
11 }

```

```

7 14 21 28 35 42 49 56 63 70 77 84 91 98
...Program finished with exit code 0
Press ENTER to exit console.

```

TASK 2

```

#include <iostream>

using namespace std;

int main() {

    int num = 1;

    do {

        cout << num << " ";

        num *= 2;

    } while (num <= 256);

    return 0;

}

```

SCREENSHOTS

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int num = 1;
6      do {
7          cout << num << " ";
8          num *= 2;
9      } while (num <= 512);
10     return 0;
11 }
```

```
1 2 4 8 16 32 64 128 256 512

...Program finished with exit code 0
Press ENTER to exit console.[]
```