



**Bahria University, Islamabad**

**Department of Software Engineering**

**Computer Programming Lab**

**(Fall-2023)**

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**Enrollment : 01-131232-011**

**Lab Journal: 6**

**Date: 1/11/2023**

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**

## Task#1

Code:

```
#include<iostream>

using namespace std;

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

    return 0;
}
```

Screenshots:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int i=20;
5     do{
6         cout<<i<<" ";
7         i--;https://www.onlinegdb.com/#editor_1
8     }while(i>=1);
9
10
11     return 0;
12 }
13 }
```

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

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

## TASK#2

Code: #include <iostream>

using namespace std;

int main() {

int n;

cout << "Enter a number: ";

```
cin >> n;

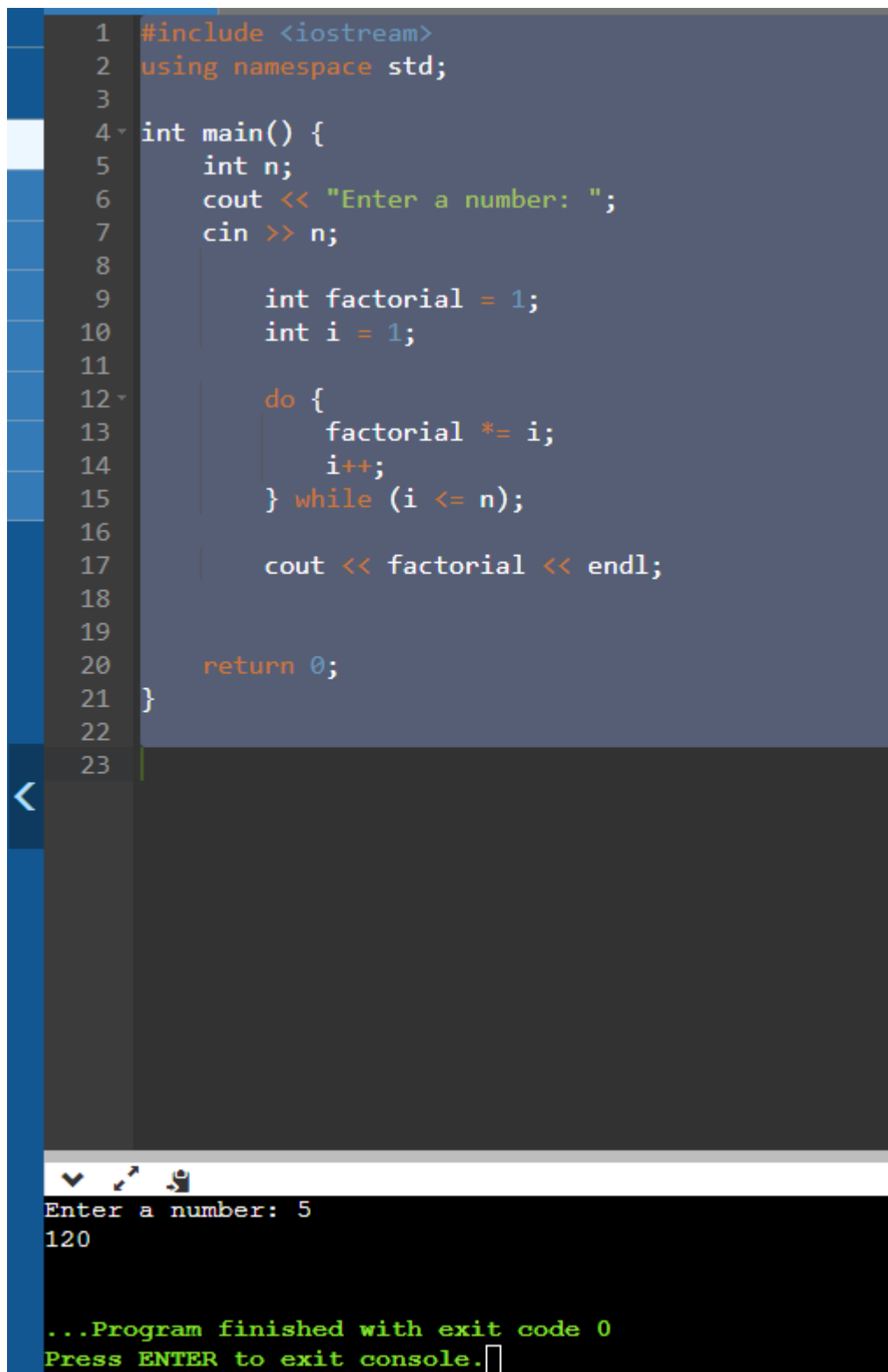
int factorial = 1;
int i = 1;

do {
    factorial *= i;
    i++;
} while (i <= n);

cout << factorial << endl;

return 0;
}
```

Screen shots:



```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5      int n;
6      cout << "Enter a number: ";
7      cin >> n;
8
9      int factorial = 1;
10     int i = 1;
11
12     do {
13         factorial *= i;
14         i++;
15     } while (i <= n);
16
17     cout << factorial << endl;
18
19
20     return 0;
21 }
22
23
```

Enter a number: 5  
120

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

### Task 3

Code:

Task 3:

Code:

```
#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:

```
1  #include<iostream>
2  using namespace std;
3
4  int main()
5  {
6  int decimal,digit,i=1,octal=0;
7  cout<<"enter the decimal number: ";
8  cin>>decimal;
9  do{
10 digit=decimal%8;
11 decimal/=8;
12     octal+=(digit*i);
13     i*=10;
14 }
15 while(i!=0);
16 cout<<"the octal number "<<octal;
17 return 0;
18 }
19
20
21
```

<

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enter the decimal number: 9  
the octal number 11

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

Task 4:

Code:

#include <iostream>

using namespace std;

```
int main() {  
    char choice,op,s,y;  
    int n1,n2;  
  
    do {  
        cout<<"Enter first number:"<<endl;  
cin>>n1;  
        cout<<"Enter a operator:"<<endl;  
cin>>op;  
        cout<<"Enter a second number:"<<endl;  
cin>>n2;  
        switch(op){  
  
        case '+':  
            cout<<"your Ans:"<<n1+n2<<endl;  
            break;  
        case '-':  
            cout<<"your Ans"<<n1-n2<<endl;  
            break;  
        case '*':  
            cout<<"your Ans:"<<n1*n2<<endl;  
            break;  
        case '/':  
            cout<<"your Ans is:"<<n1/n2<<endl;
```



```
break;

}

    cout << "Start again? (y/n): ";

    cin >> choice;

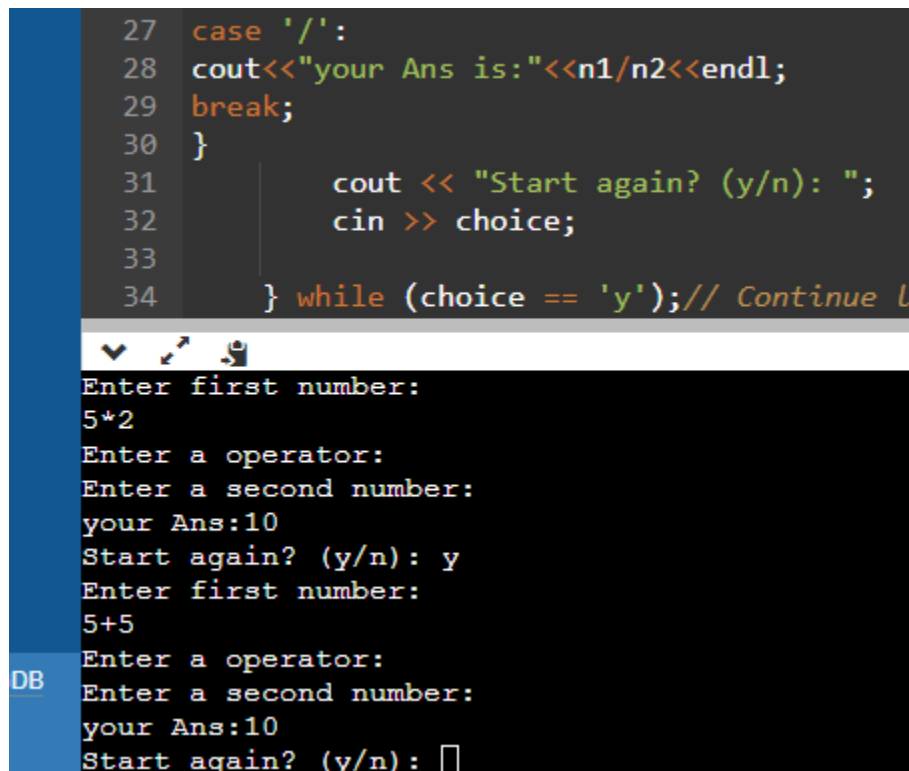
} while (choice == 'y');// Continue loop if user enters 'y' or 'Y'

cout << "Program ended. Goodbye!" << endl;

return 0;

}
```

Screenshots:



```
27 case '/':
28 cout<<"your Ans is:"<<n1/n2<<endl;
29 break;
30 }
31     cout << "Start again? (y/n): ";
32     cin >> choice;
33
34 } while (choice == 'y');// Continue L

Enter first number:
5*2
Enter a operator:
Enter a second number:
your Ans:10
Start again? (y/n): y
Enter first number:
5+5
Enter a operator:
Enter a second number:
your Ans:10
Start again? (y/n):
```

### Extra Task#1

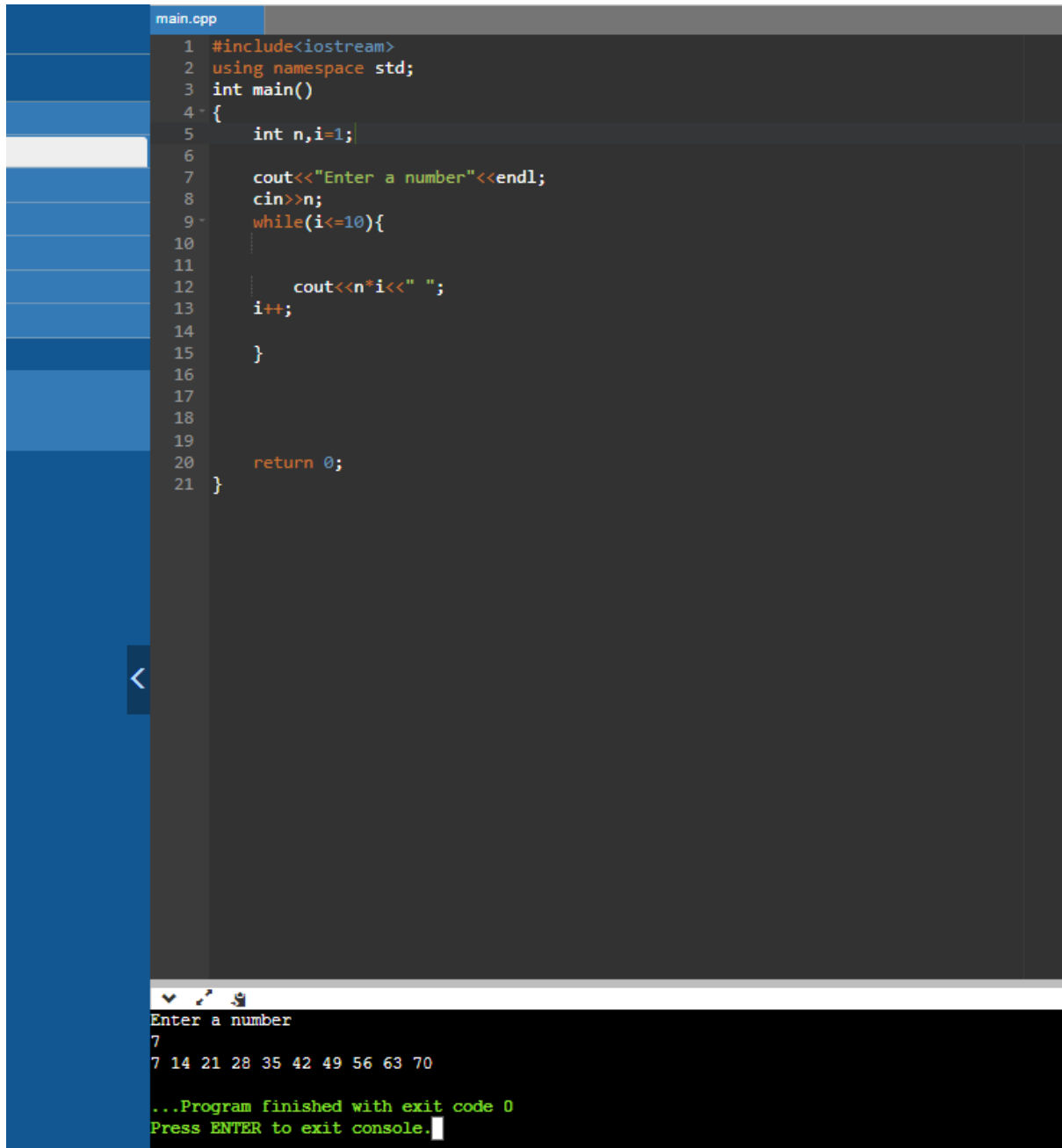
#### CODE

```
#include<iostream>
using namespace std;
int main()
{
    int n,i=1;

    cout<<"Enter a number"<<endl;
    cin>>n;
    do{
        cout<<n*i<<" ";
        i++;
    }
```

```
    }while(i<=10);  
  
    return 0;  
  
}
```

### Screenshots:



The screenshot shows a code editor with a file named 'main.cpp'. The code is a C++ program that prompts the user to enter a number and then prints the multiplication table for that number using a while loop. The console output shows the program running, with the user entering '7' and the program printing the multiplication table from 7 to 70. The program then finishes with exit code 0.

```
main.cpp  
1 #include<iostream>  
2 using namespace std;  
3 int main()  
4 {  
5     int n,i=1;  
6  
7     cout<<"Enter a number"<<endl;  
8     cin>>n;  
9     while(i<=10){  
10  
11         cout<<n*i<<" ";  
12         i++;  
13     }  
14  
15  
16  
17  
18  
19  
20     return 0;  
21 }
```

Enter a number  
7  
7 14 21 28 35 42 49 56 63 70  
...Program finished with exit code 0  
Press ENTER to exit console.

### Task #2

Code:

```
#include <iostream>  
  
using namespace std;
```

Student Name  
Enrollment Number

Computer Programming  
Lab # 01

Engr. M Waleed Khan  
Dept of SE, BUIC

```
int main() {  
  
    int num = 1;  
  
    do {  
  
        cout << num << " ";  
  
        num *= 2;  
  
    } while (num <= 512);  
  
  
    return 0;  
  
}
```

Screen shots:

```
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
11     return 0;
12 }
13
14
```

1 2 4 8 16 32 64 128 256 512

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