

***Department of Artificial Intelligence and Multimedia Gaming Fundamentals
of Programming
(Fall-2025)***

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Section: D

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LAB No. 08

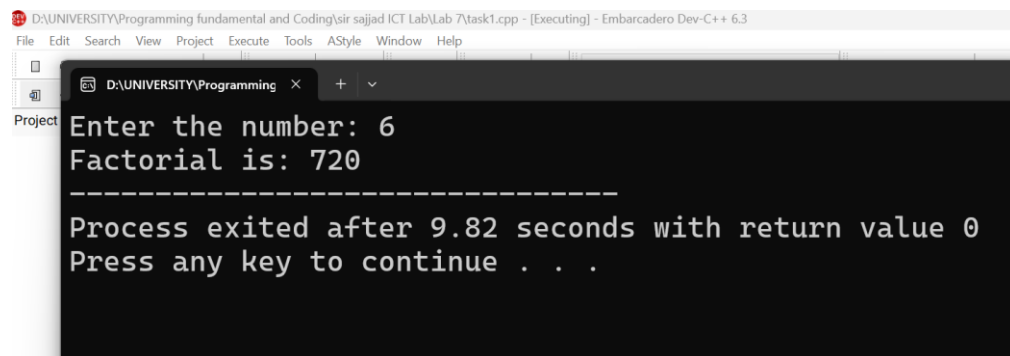
LECTURER: SAJJAD ALI RAJPER

Task 1:

Code:

```
#include<iostream>
using namespace std;
int main(){
int num,fact=1;
cout<<"Enter the number: ";
cin>>num;
for(int i=1;i<=num;i++){
    fact=fact*i;
}
cout<<"Factorial is: "<<fact;
```

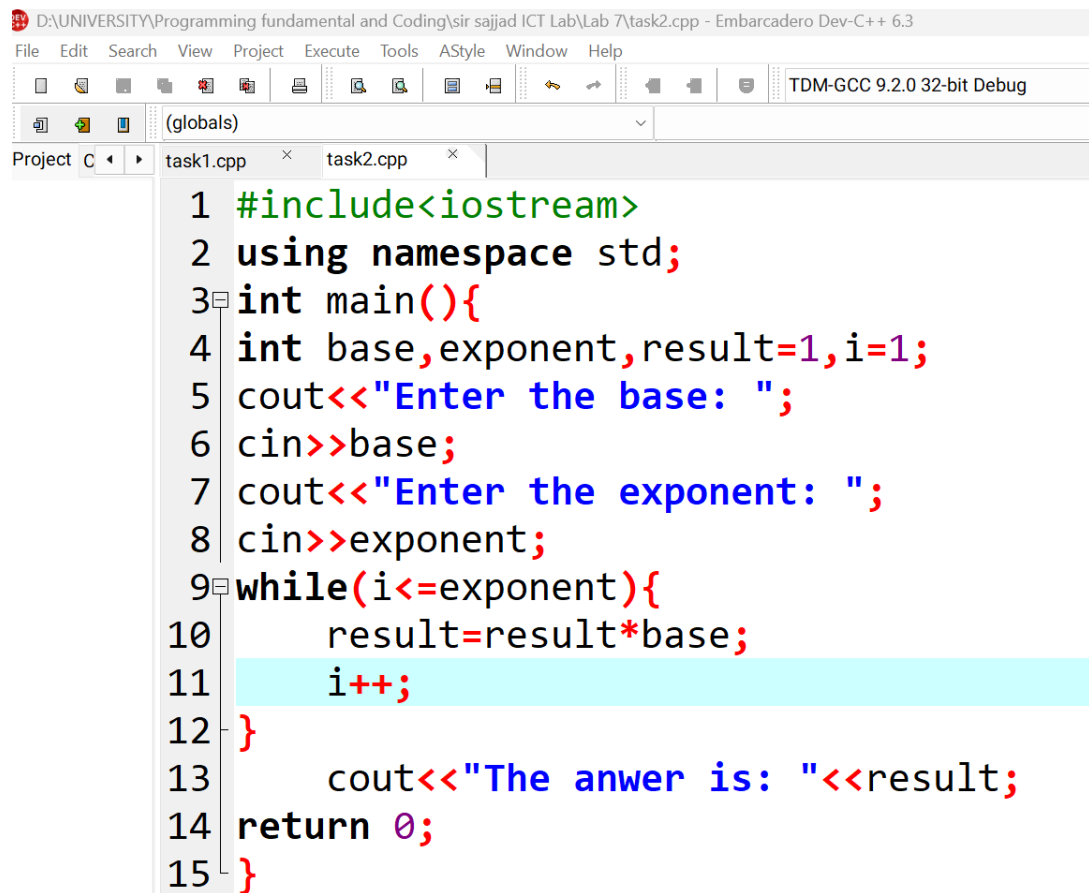
Output:



```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task1.cpp - [Executing] - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
D:\UNIVERSITY\Programming x + v
Project
Enter the number: 6
Factorial is: 720
-----
Process exited after 9.82 seconds with return value 0
Press any key to continue . . .
```

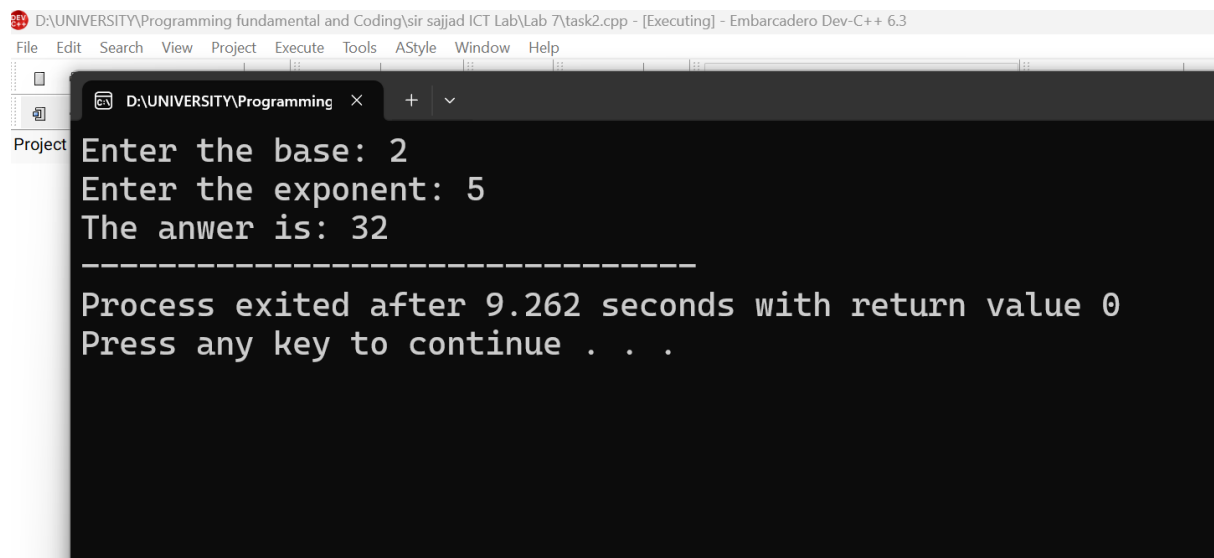
Task 2:

Code:



```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task2.cpp - Embarcadero Dev-C++ 6.3
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 9.2.0 32-bit Debug
(globals)
task1.cpp task2.cpp
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int base,exponent,result=1,i=1;
5     cout<<"Enter the base: ";
6     cin>>base;
7     cout<<"Enter the exponent: ";
8     cin>>exponent;
9     while(i<=exponent){
10         result=result*base;
11         i++;
12     }
13     cout<<"The anwer is: "<<result;
14     return 0;
15 }
```

Output:



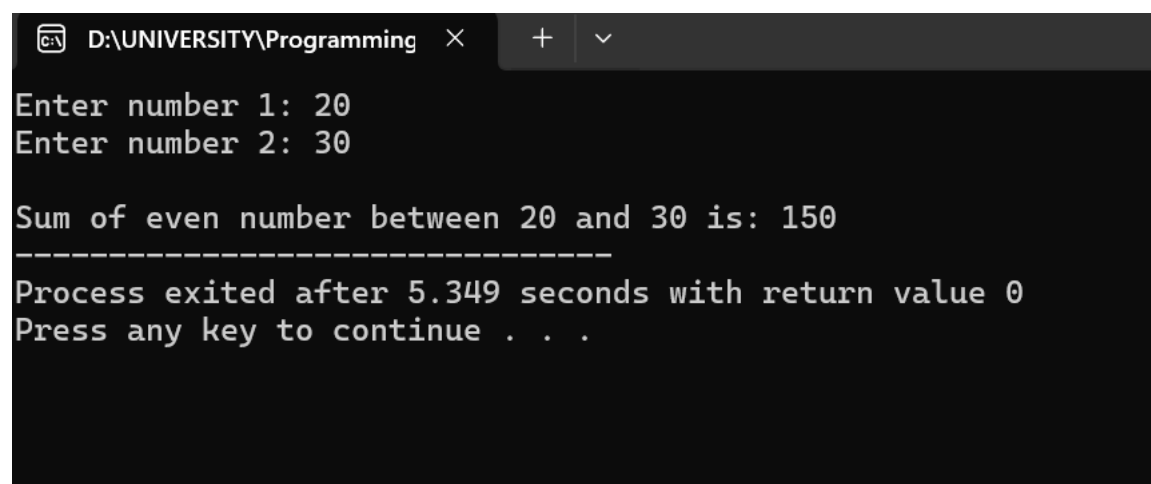
```
D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task2.cpp - [Executing] - Embarcadero Dev-C++ 6.3
D:\UNIVERSITY\Programming
Enter the base: 2
Enter the exponent: 5
The anwer is: 32
-----
Process exited after 9.262 seconds with return value 0
Press any key to continue . . .
```

Task 3:

Code:

```
#include<iostream>
using namespace std;
int main(){
int num1,num2,i,sum=0;
cout<<"Enter number 1: "<<endl;
cin>>num1;
cout<<"Enter number 2: ";
cin>>num2;
i=num1;
do{
if(i%2==0){
sum=sum+i;
}
i++;
}
while(i<=num2);
cout<<endl<<"Sum of even number between "<<num1<<" and "<<num2<<" is: "<<sum;
return 0;
}
```

Output:



```
D:\UNIVERSITY\Programming >
Enter number 1: 20
Enter number 2: 30

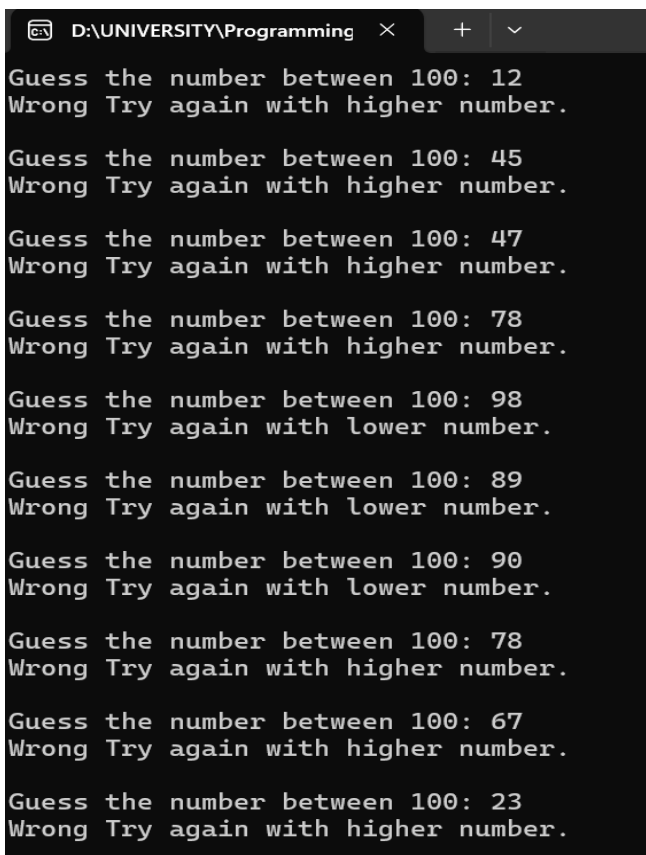
Sum of even number between 20 and 30 is: 150
-----
Process exited after 5.349 seconds with return value 0
Press any key to continue . . .
```

Task 4:

Code:

```
#include<iostream>
#include<ctime>
using namespace std;
int main(){
    srand(time(0));
    int number=rand() %100;
    //cout<<number;
    int guess,i;
    while(true){
        cout<<"Guess the number between 100: ";
        cin>>guess;
        if(guess==number){
            cout<<"Correct Congratulation You Win"<<endl<<endl;
            break;
        }
        if(guess>number) {
            cout<<"Wrong Try again with lower number."<<endl<<endl;
        }
        if(guess<number){
            cout<<"Wrong Try again with higher number."<<endl<<endl;
        }
        i++;
    }
    return 0;
}
```

Output:



```
D:\UNIVERSITY\Programming
Guess the number between 100: 12
Wrong Try again with higher number.

Guess the number between 100: 45
Wrong Try again with higher number.

Guess the number between 100: 47
Wrong Try again with higher number.

Guess the number between 100: 78
Wrong Try again with higher number.

Guess the number between 100: 98
Wrong Try again with lower number.

Guess the number between 100: 89
Wrong Try again with lower number.

Guess the number between 100: 90
Wrong Try again with lower number.

Guess the number between 100: 78
Wrong Try again with higher number.

Guess the number between 100: 67
Wrong Try again with higher number.

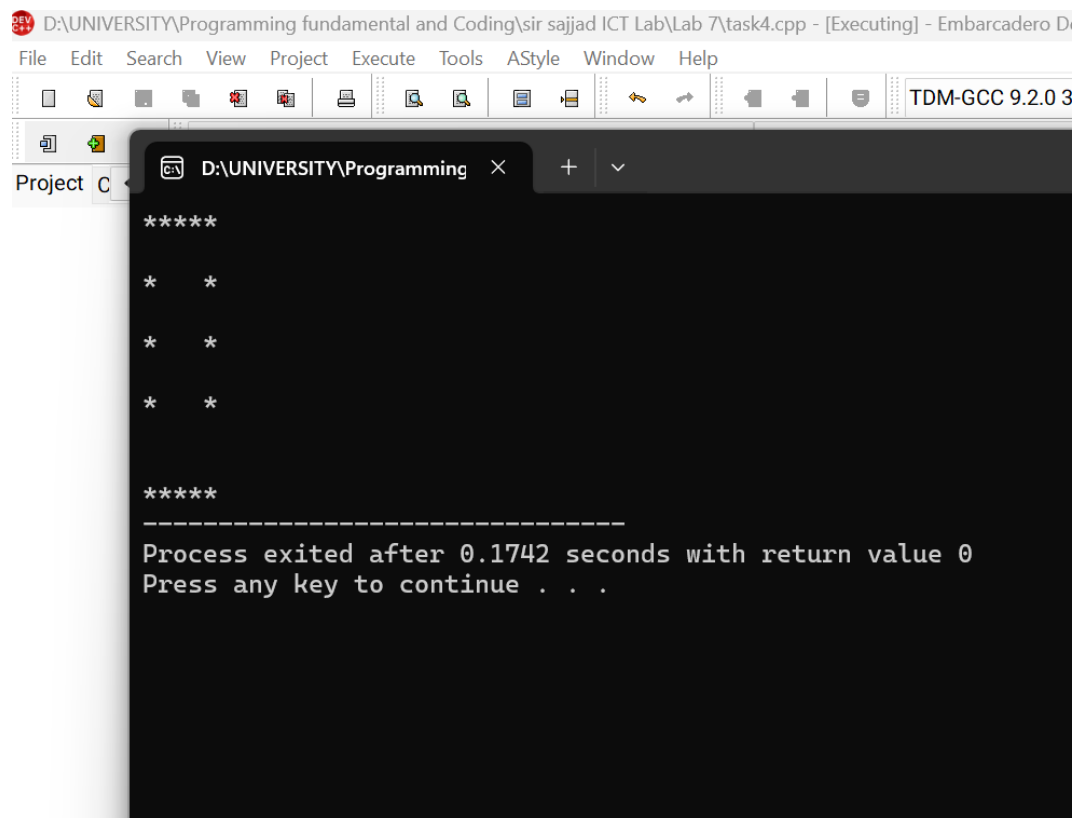
Guess the number between 100: 23
Wrong Try again with higher number.
```

Task 5:

Code:

```
#include<iostream>
using namespace std;
int main(){
for(int i=1;i<=5;i++){
cout<<"*";
}
cout<<endl<<endl;
for(int j=1;j<=3;j++){
cout<<"*   *"<<endl<<endl;
}
cout<<endl;
for(int k=1;k<=5;k++){
cout<<"*";
}
return 0;
}
```

Output:



The screenshot shows a C++ IDE window titled "D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task4.cpp - [Executing] - Embarcadero D". The IDE has a menu bar (File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help) and a toolbar. The output window displays the following text:

```
*****
*   *
*   *
*   *

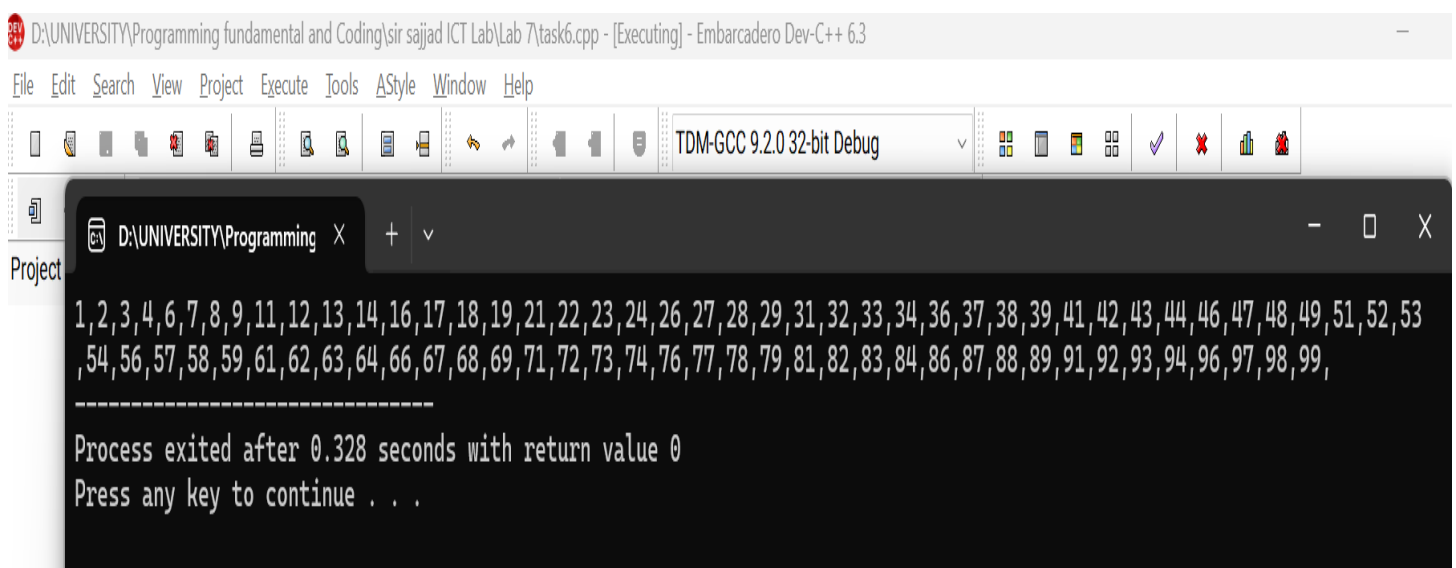
*****
-----
Process exited after 0.1742 seconds with return value 0
Press any key to continue . . .
```

Task 6:

Code:

```
#include<iostream>
using namespace std;
int main(){
int i=1;
while(i<=100){
if(i%5==0){
i++;
continue;
}
cout<<i<<" ";
i++;
}
return 0;
}
```

Output:



D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task6.cpp - [Executing] - Embarcadero Dev-C++ 6.3

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 9.2.0 32-bit Debug

D:\UNIVERSITY\Programming X + v

1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 26, 27, 28, 29, 31, 32, 33, 34, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 49, 51, 52, 53, 54, 56, 57, 58, 59, 61, 62, 63, 64, 66, 67, 68, 69, 71, 72, 73, 74, 76, 77, 78, 79, 81, 82, 83, 84, 86, 87, 88, 89, 91, 92, 93, 94, 96, 97, 98, 99,

Process exited after 0.328 seconds with return value 0

Press any key to continue . . .

Task 7:

Code:

```
#include<iostream>
using namespace std;
int main(){
    int i,j=1;
    float num1,num2;
    do{
        cout<<"\n-----Simple Calculator-----\n";
        cout<<"\n1. Addition\n";
        cout<<"2. Subtraction\n";
        cout<<"3. Multiplication\n";
        cout<<"4. Division\n";
        cout<<"5. Exit\n";
        cout<<"Enter your choice: ";
        cin>>i;
        if(i==5){
            cout<<"\nExit";
            break;
        }
        j++;
        if(i>=1 && i<=4){
            cout<<"Enter number 1: ";
            cin>>num1;
            cout<<"Enter number 2: ";
            cin>>num2;
        }
        switch(i){
            case 1:
                if(i==1){
                    cout<<"\nAddition of "<<num1<<" + "<<num2<<" = "<<num1+num2<<endl;
                }
                break;
            case 2:
                if(i==2){
                    cout<<"\nSubtraction of "<<num1<<" - "<<num2<<" = "<<num1-num2<<endl;
                }
                break;
            case 3:
                if(i==3){
                    cout<<"\nMultiplication of "<<num1<<" * "<<num2<<" = "<<num1*num2<<endl;
                }
                break;
            case 4:
                if(i==4){
                    cout<<"\nDivision of "<<num1<<" / "<<num2<<" = "<<num1/num2<<endl;
                }
                break;
            default:
                cout<<"\nInvalid choice Try again";
        }
    }
    while(true);
    return 0;
}
```


Output:

```
D:\UNIVERSITY\Programming X + v

-----Simple Calculator-----

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
Enter your choice: 1
Enter number 1: 2
Enter number 2: 3

Addition of 2 + 3 = 5

-----Simple Calculator-----

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
Enter your choice: 3
Enter number 1: 4
Enter number 2: 5

Multiplication of 4 * 5 = 20

-----Simple Calculator-----

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Exit
Enter your choice:
```