

***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

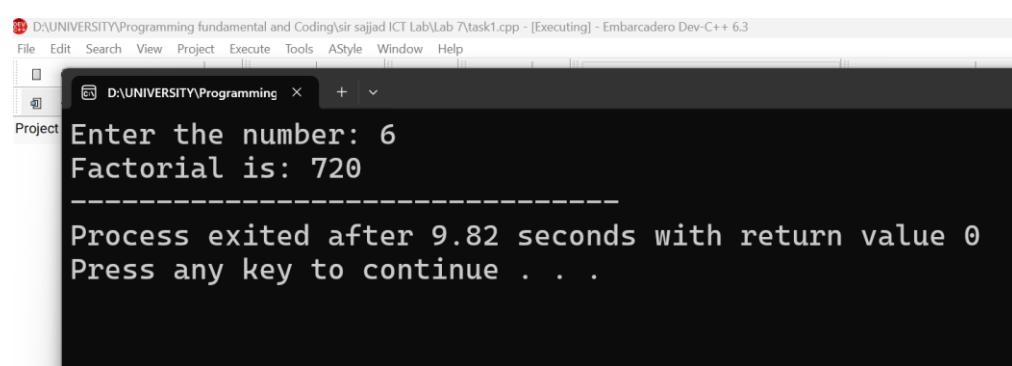
LECTURER: SAJJAD ALI RAJPER

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:

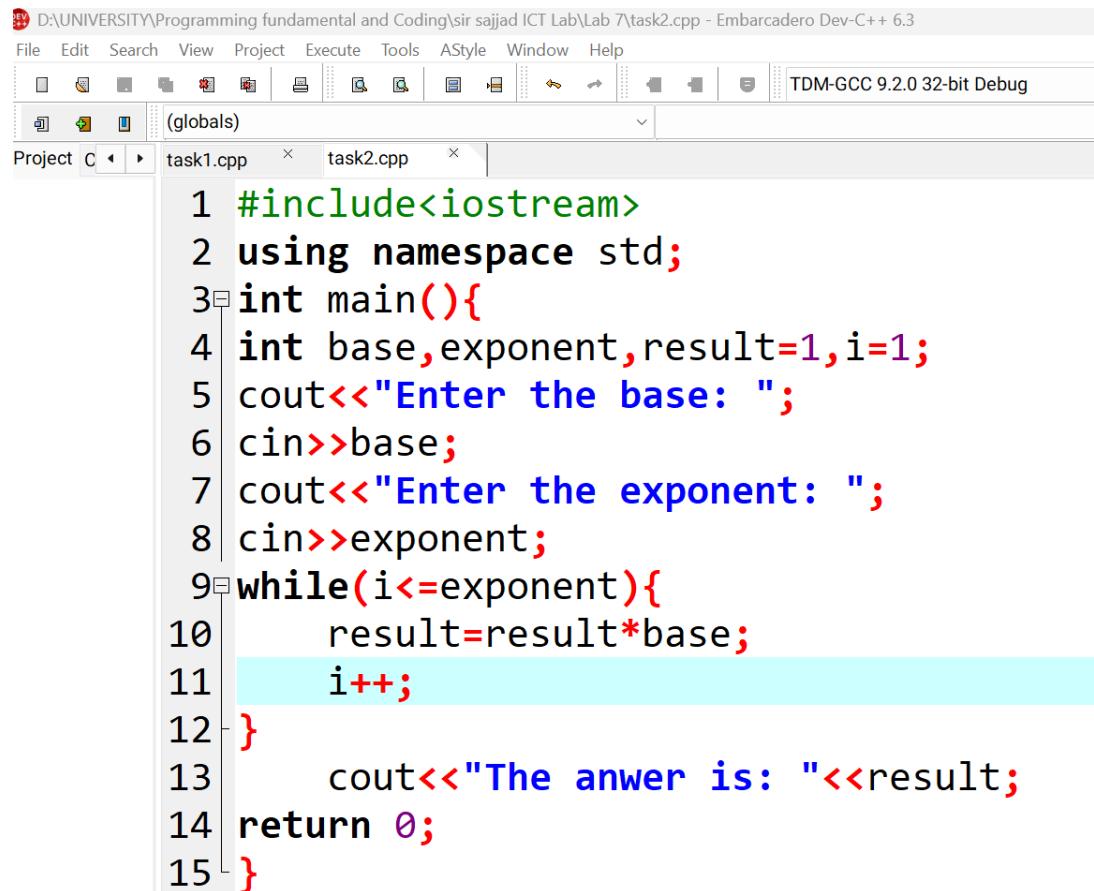


The screenshot shows a terminal window from the Embarcadero Dev-C++ 6.3 IDE. The window title is "D:\UNIVERSITY\Programming". The terminal output is as follows:

```
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:

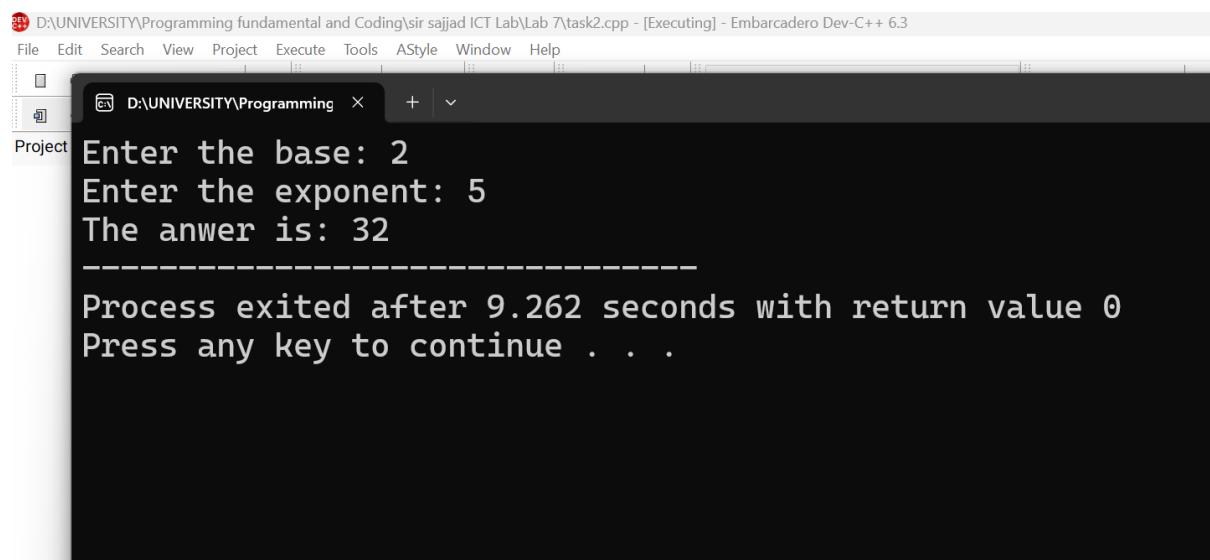


The screenshot shows the Embarcadero Dev-C++ 6.3 IDE interface. The menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar has various icons for file operations. The title bar displays "D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task2.cpp - Embarcadero Dev-C++ 6.3". The status bar at the bottom right says "TDM-GCC 9.2.0 32-bit Debug". The project list on the left shows "task1.cpp" and "task2.cpp". The main code editor window contains the following C++ code:

```
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 answer is: "<<result;
14     return 0;
15 }
```

The line "i++;" is highlighted with a light blue background.

Output:



The screenshot shows the terminal window of the Dev-C++ IDE displaying the execution output for the program. The output is:

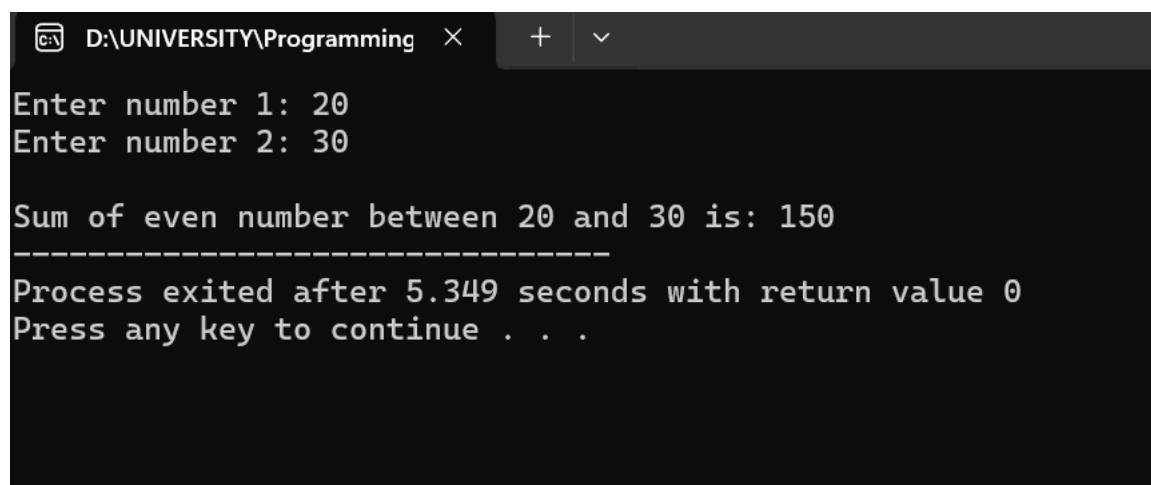
```
Enter the base: 2
Enter the exponent: 5
The answer is: 32
-----
Process exited after 9.262 seconds with return value 0
Press any key to continue . . .
```

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 x + v

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;
            break;
        }
        if(guess>number) {
            cout<<"Wrong Try again with lower number."endl;
        }
        if(guess<number){
            cout<<"Wrong Try again with higher number."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.

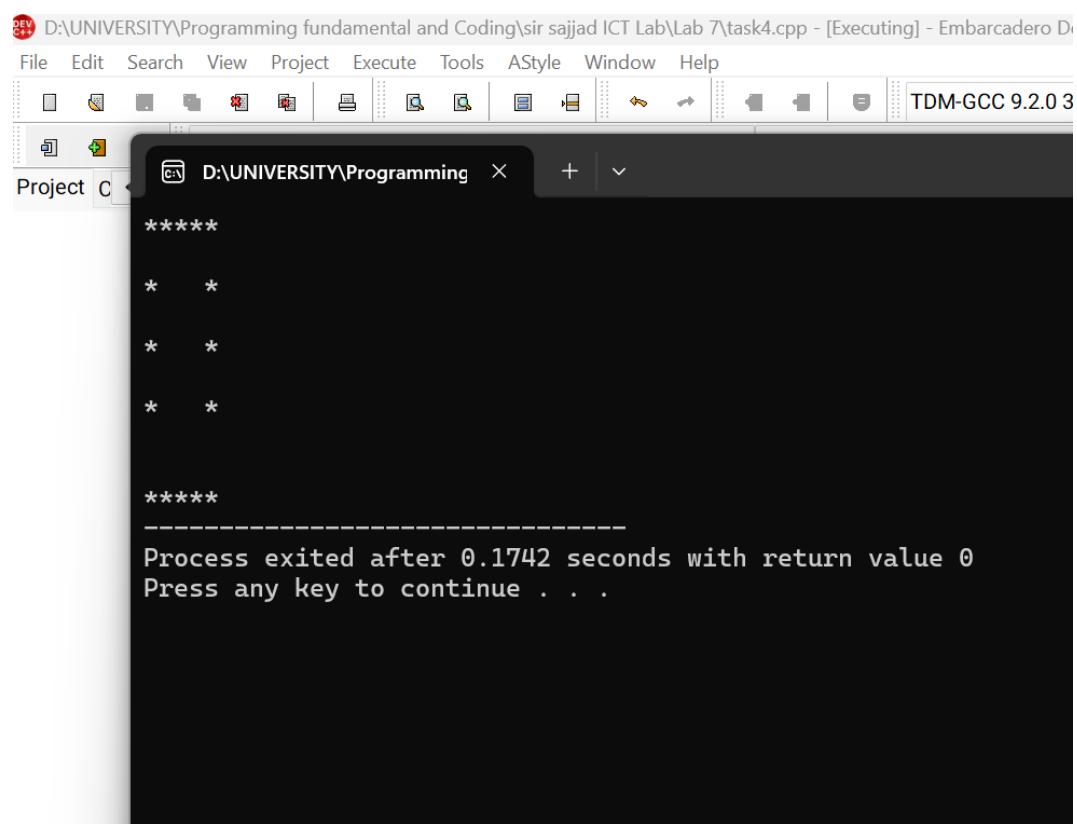
Guess the number between 100: 23
Wrong Try again with higher number.
```

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 the Embarcadero IDE interface with the following details:

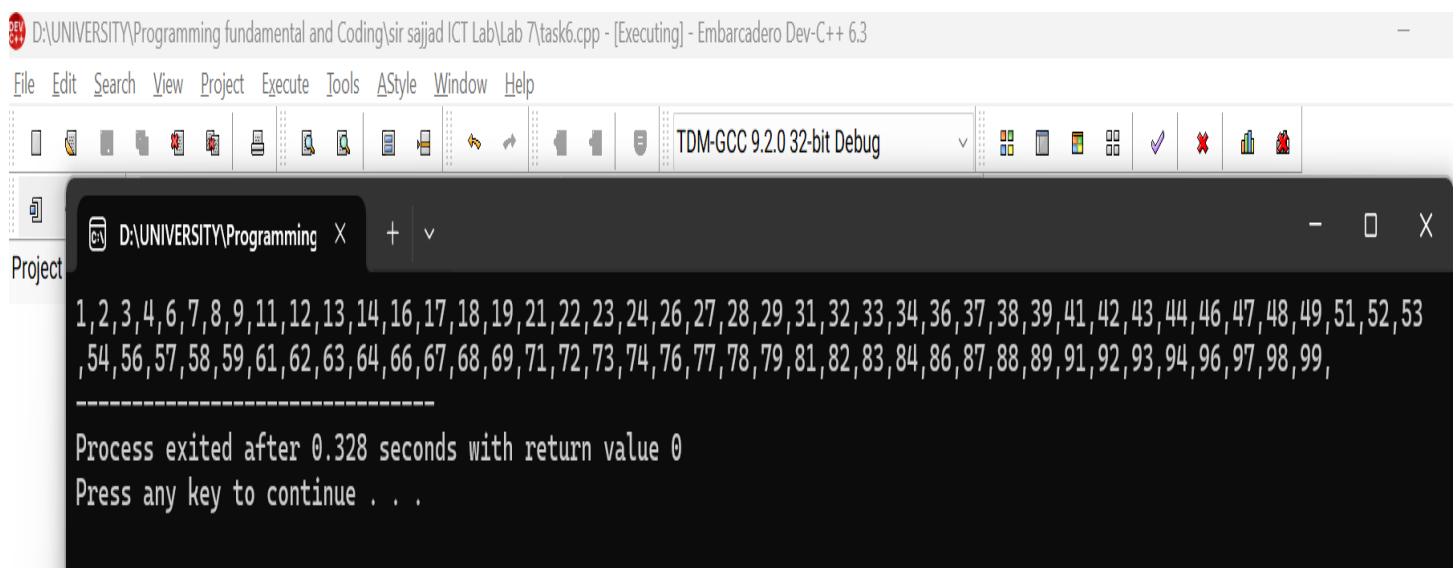
- Title Bar:** D:\UNIVERSITY\Programming fundamental and Coding\sir sajjad ICT Lab\Lab 7\task4.cpp - [Executing] - Embarcadero D
- Toolbar:** Standard IDE toolbar with icons for file operations, search, and tools.
- Menu Bar:** File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help.
- Toolbox:** Standard IDE toolbox with icons for project management, code editor, and other development tools.
- StatusBar:** TDM-GCC 9.2.0 3
- Project Explorer:** Shows a project named "D:\UNIVERSITY\Programming".
- Code Editor:** Displays the C++ code provided in the "Code" section.
- Output Window:** Shows the execution results:
 - *****
 - * * *
 - * * *
 - * * *
 - *****
 -
 - 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\sriraj 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

Project

```
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<<"1. 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 + | ▾

-----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:
```