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

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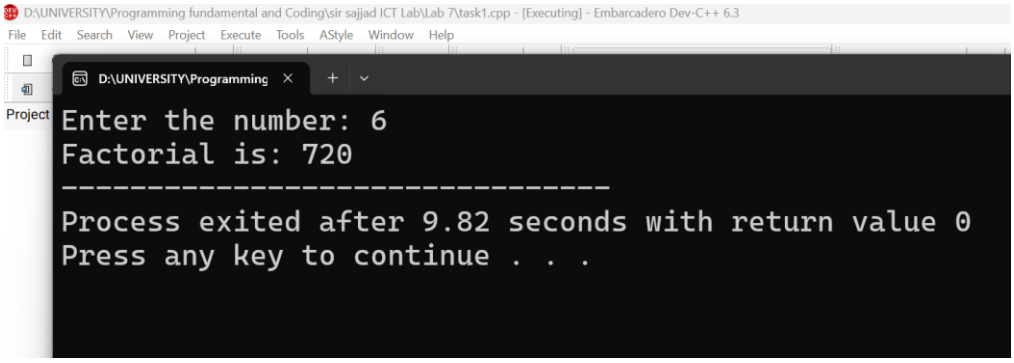
Task 1:

Code:

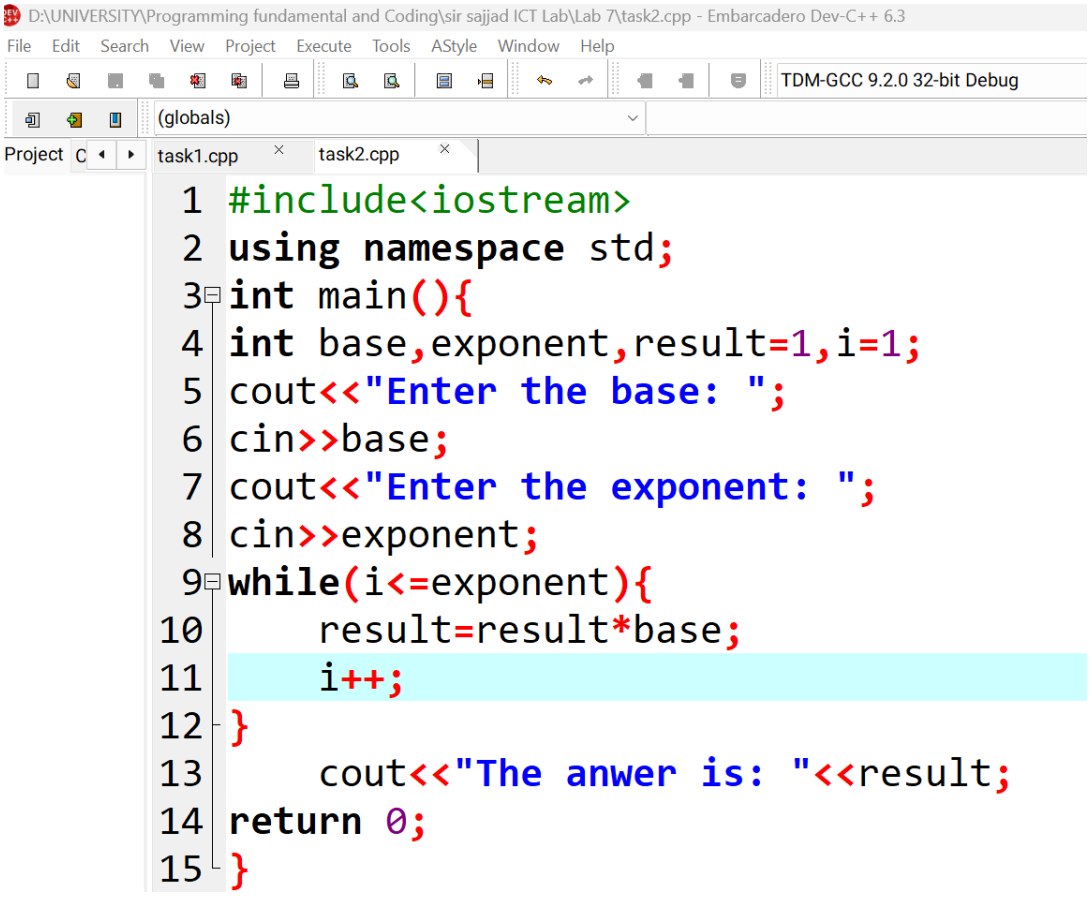
```
#include<iostream>
using namespace std;
int main(){
int num,fact=1;
cout<<"Enter the number: ";
cin>>num;
for(int i=1;i<=num;i++){
    fact=fact*i;
}
cout<<"Factorial is: "<<fact;
```

Output:

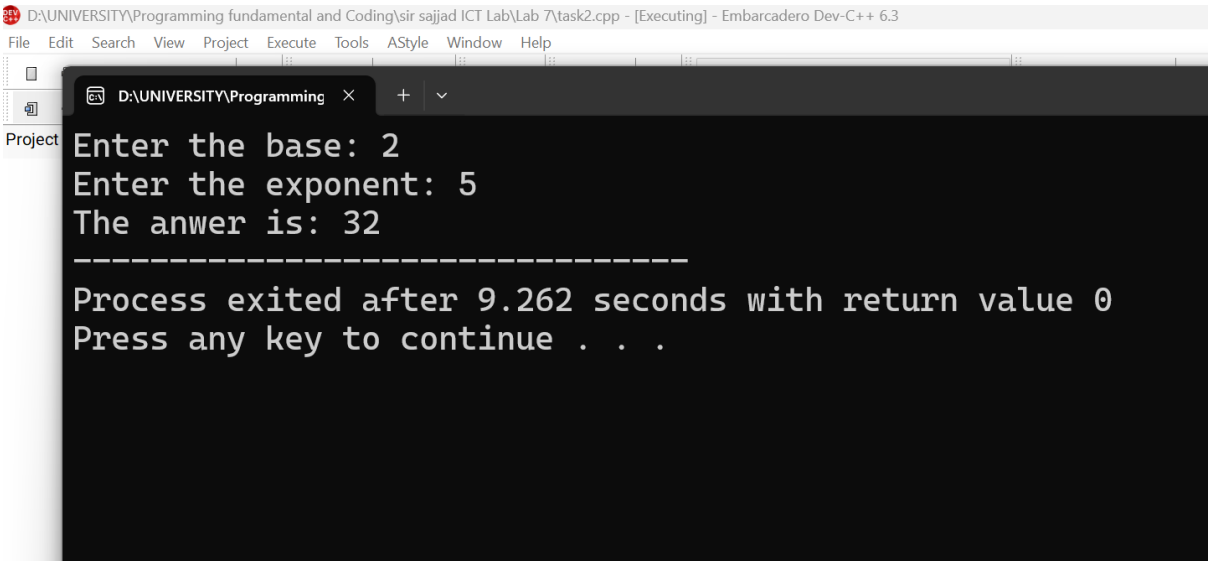


Task 2:

Code:



Output:

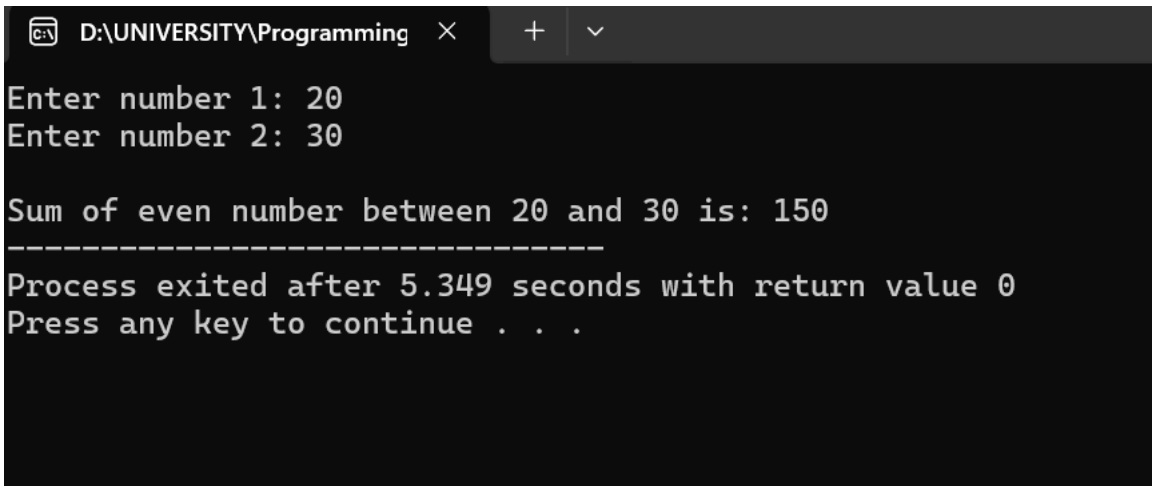


Task 3:

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:



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:

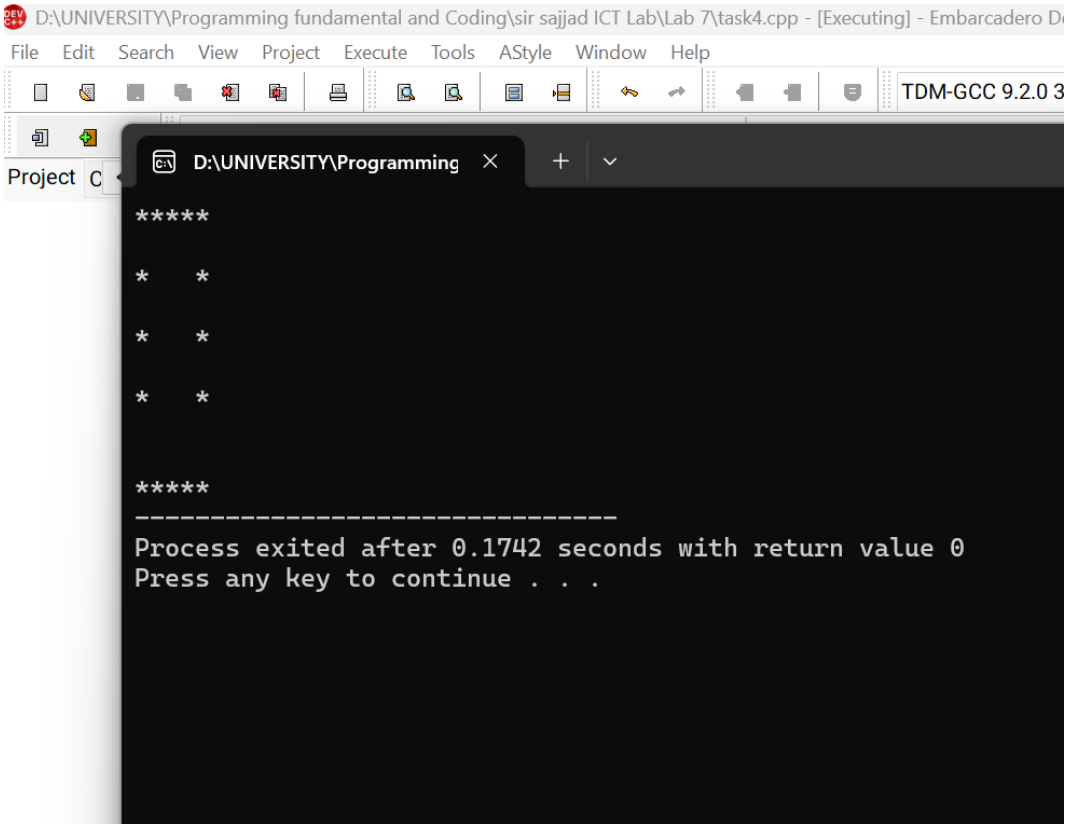
```
D:\UNIVERSITY\Programming
Guess the number between 100: 12
Wrong Try again with higher number.

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:

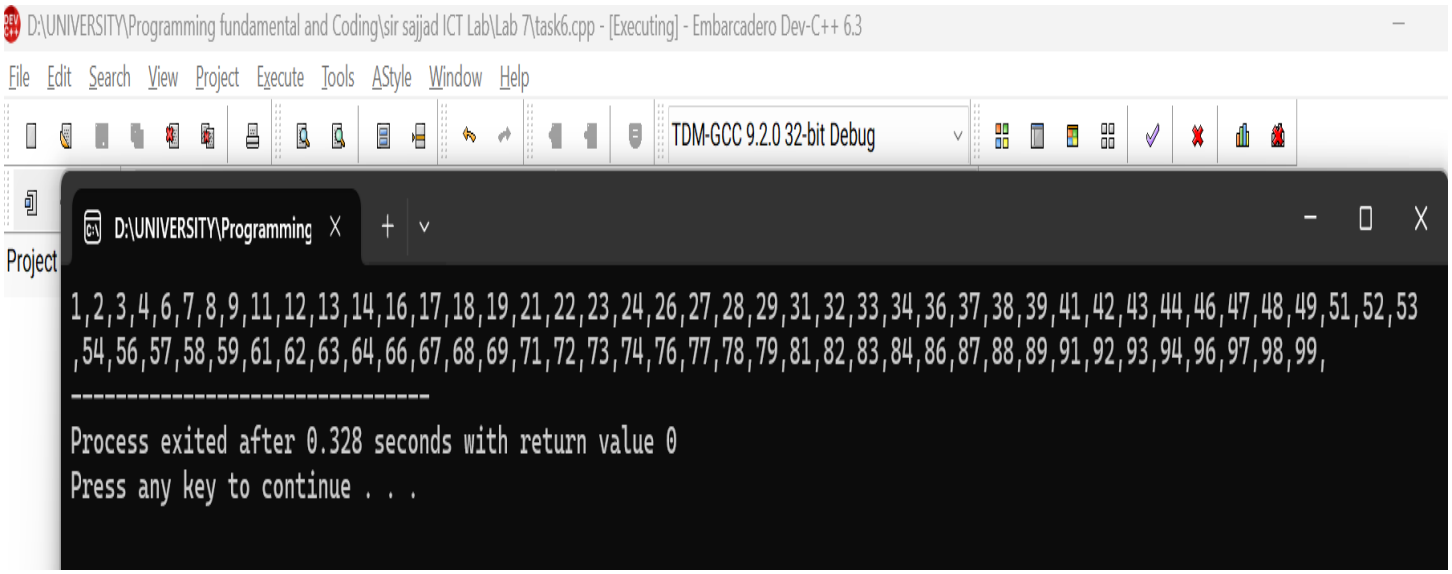


Task 6:

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:

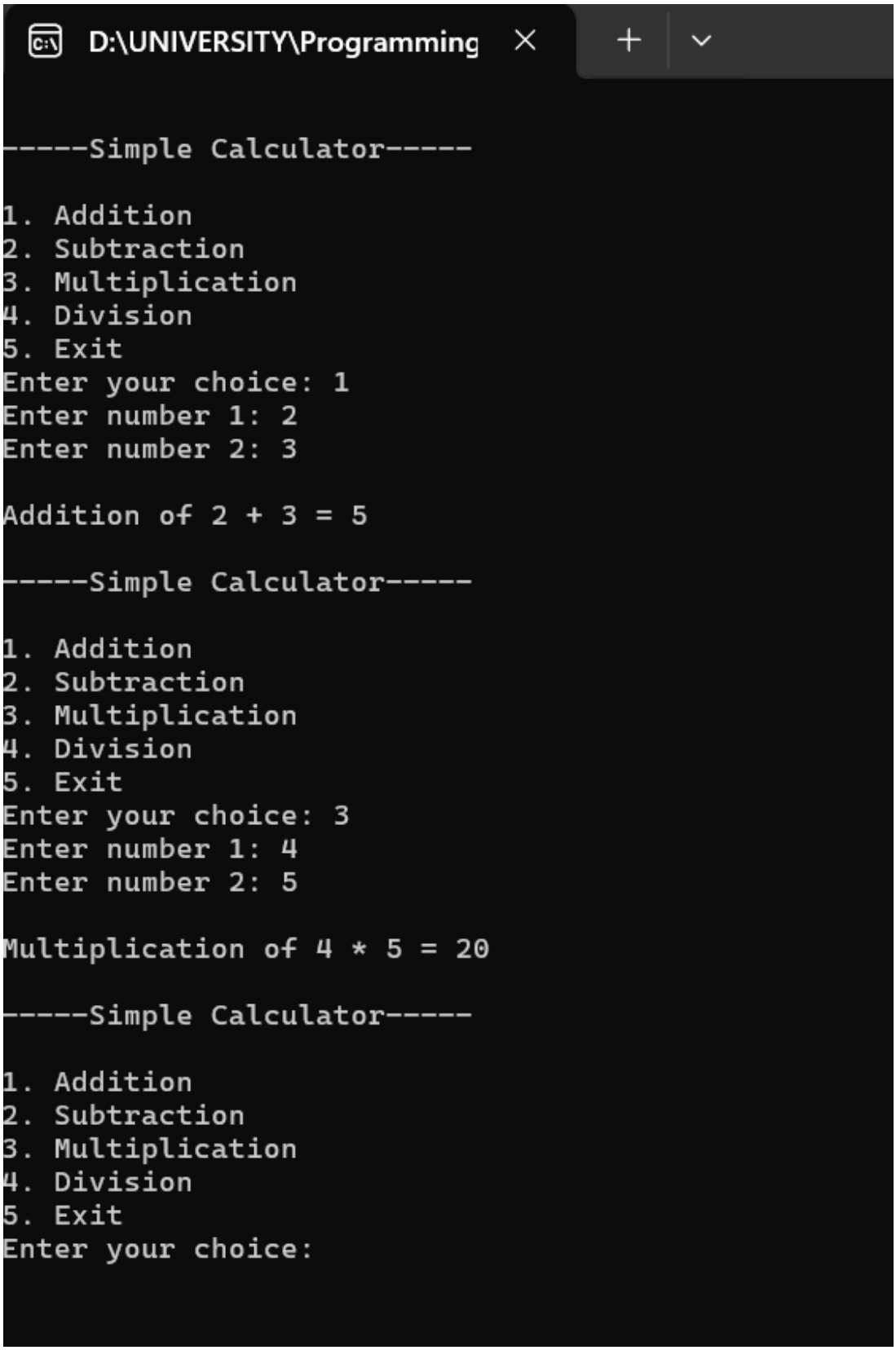


Task 7:

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
-----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: