Department of Artificial Intelligence and Multimedia Gaming Fundamentals of Programming

(Fall-2025)

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Section: D

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LAB No. 9

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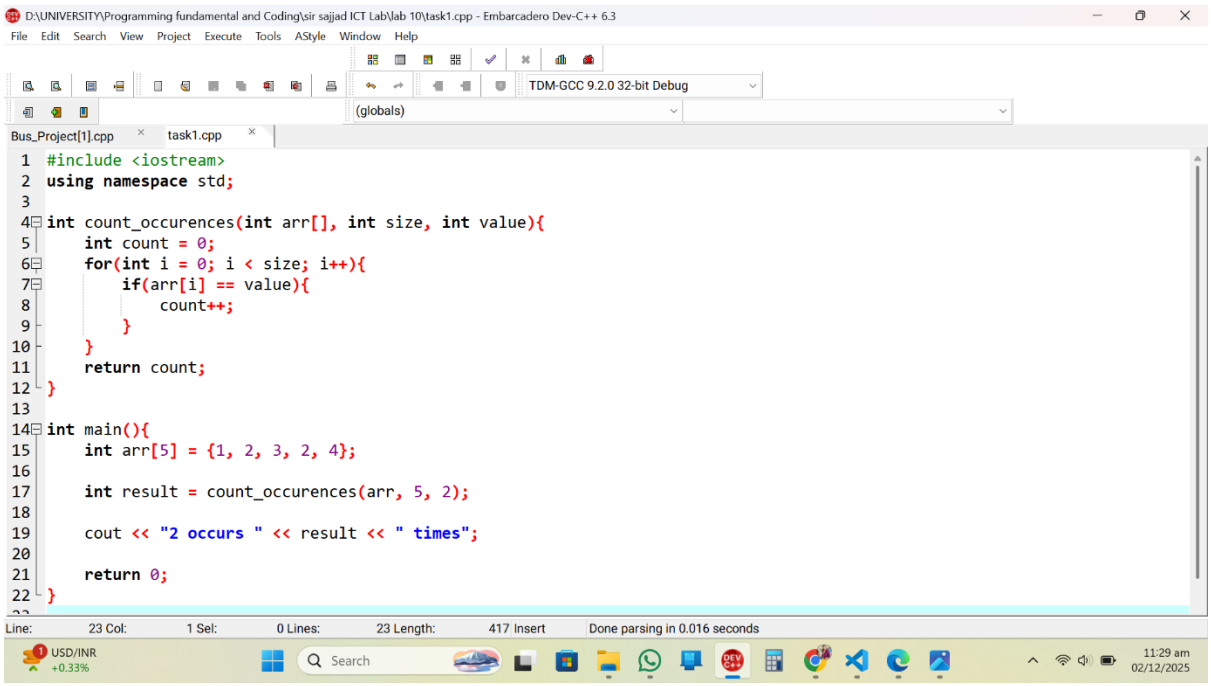
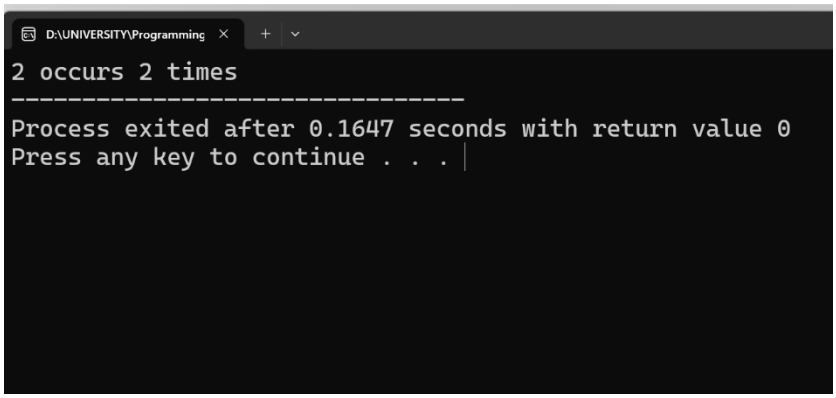
Task 1:

Code:



Output:



Task 2

Code:

task2.cpp

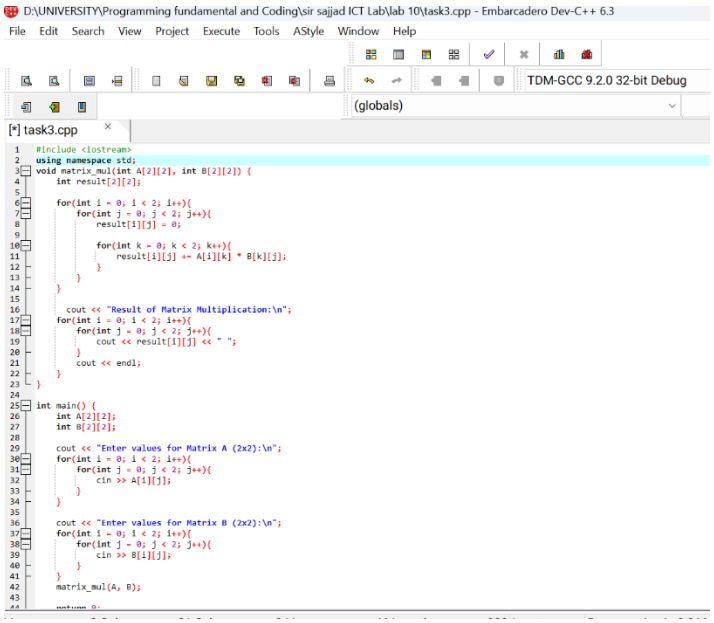
```cpp
#include <iostream>
using namespace std;

string merge_text(string s1, string s2){
    return s1 + s2;   // join the two strings
}

int main(){
    string a = "Hello ";
    string b = "World!";

    string result = merge_text(a, b);

    cout << result;

    return 0;
}
```

Output:

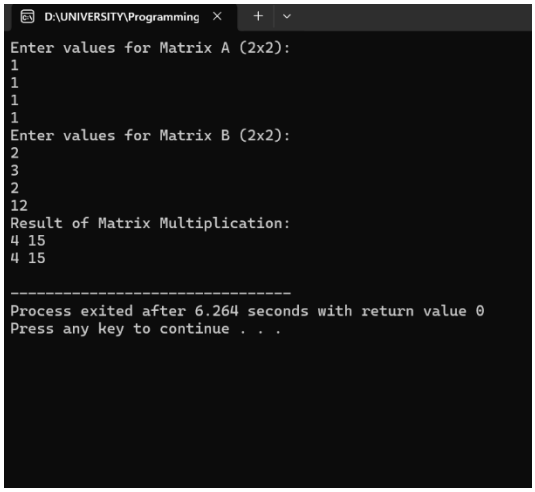
```
D:\UNIVERSITY\Programming
Hello World!
--------------------------------
Process exited after 0.3105 seconds with return value 0
Press any key to continue . . .
```

Task 3

Code:

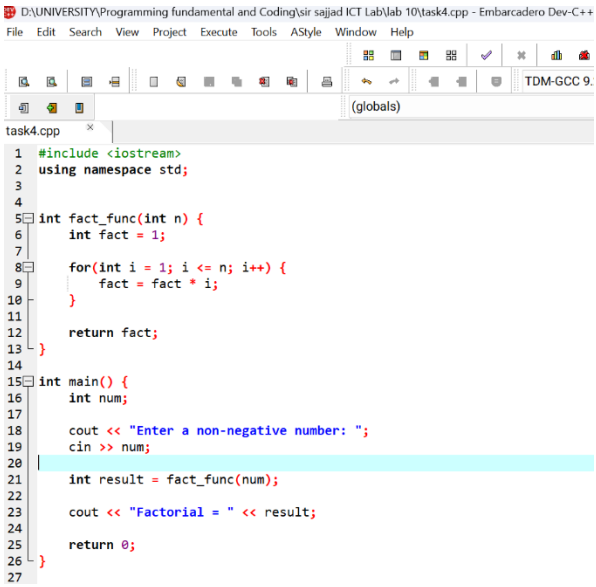


Output:

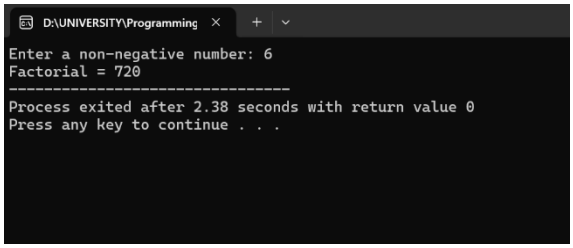


Task 4

Code:



Output:



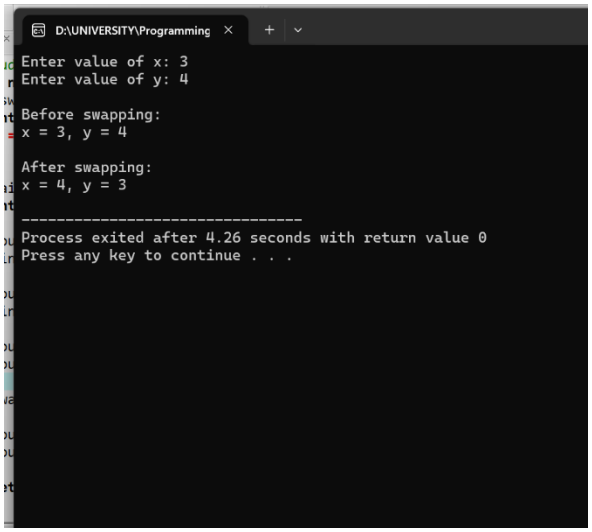
Task 5

Code:

task4.cpp task5.cpp

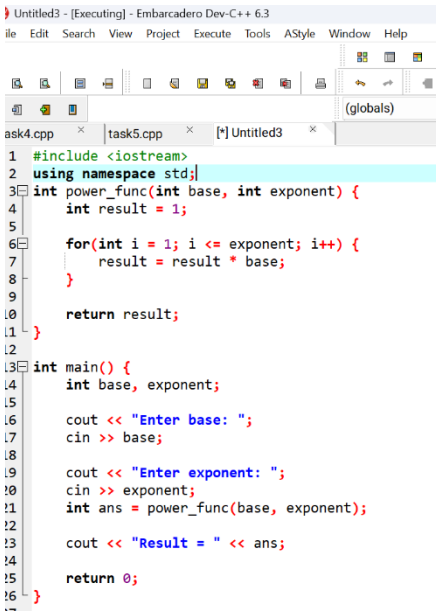
```cpp
#include <iostream>
using namespace std;
void swap_val(int &a, int &b) {
    int temp = a;
    a = b;
        b = temp;       }

int main() {
    int x, y;

    cout << "Enter value of x: ";
    cin >> x;

    cout << "Enter value of y: ";
    cin >> y;

    cout << "\nBefore swapping:\n";
    cout << "x = " << x << ", y = " << y << endl;

    swap_val(x, y);

    cout << "\nAfter swapping:\n";
    cout << "x = " << x << ", y = " << y << endl;

    return 0;
}
```

Output:

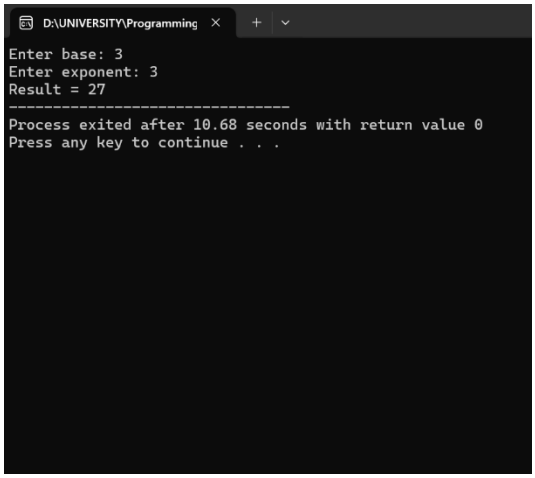


Task 6

Code:



Output:



Task 7

Code:

task4.cpp | task5.cpp | task6.cpp | [*] Untitled4

```cpp
#include <iostream>
using namespace std;
int max_array(int arr[], int size) {
    int maxVal = arr[0];
    for(int i = 1; i < size; i++) {
        if(arr[i] > maxVal) {
            maxVal = arr[i];
        }
    }
    return maxVal;
}
int min_array(int arr[], int size) {
    int minVal = arr[0];
    for(int i = 1; i < size; i++) {
        if(arr[i] < minVal) {
            minVal = arr[i];
        }
    }
    return minVal;
}
int sum_max_min(int arr[], int size) {
    int maxVal = max_array(arr, size);
    int minVal = min_array(arr, size);
    return maxVal + minVal;
}

int main() {
    int arr[5];

    cout << "Enter 5 numbers:\n";
    for(int i = 0; i < 5; i++) {
        cin >> arr[i];
    }

    int result = sum_max_min(arr, 5);

    cout << "Sum of maximum and minimum = " << result;

    return 0;
```

Output:

```
D:\UNIVERSITY\Programming
Enter 5 numbers:
1
2
3
5
6
Sum of maximum and minimum = 7
--------------------------------
Process exited after 5.458 seconds with return value 0
Press any key to continue . . .
```