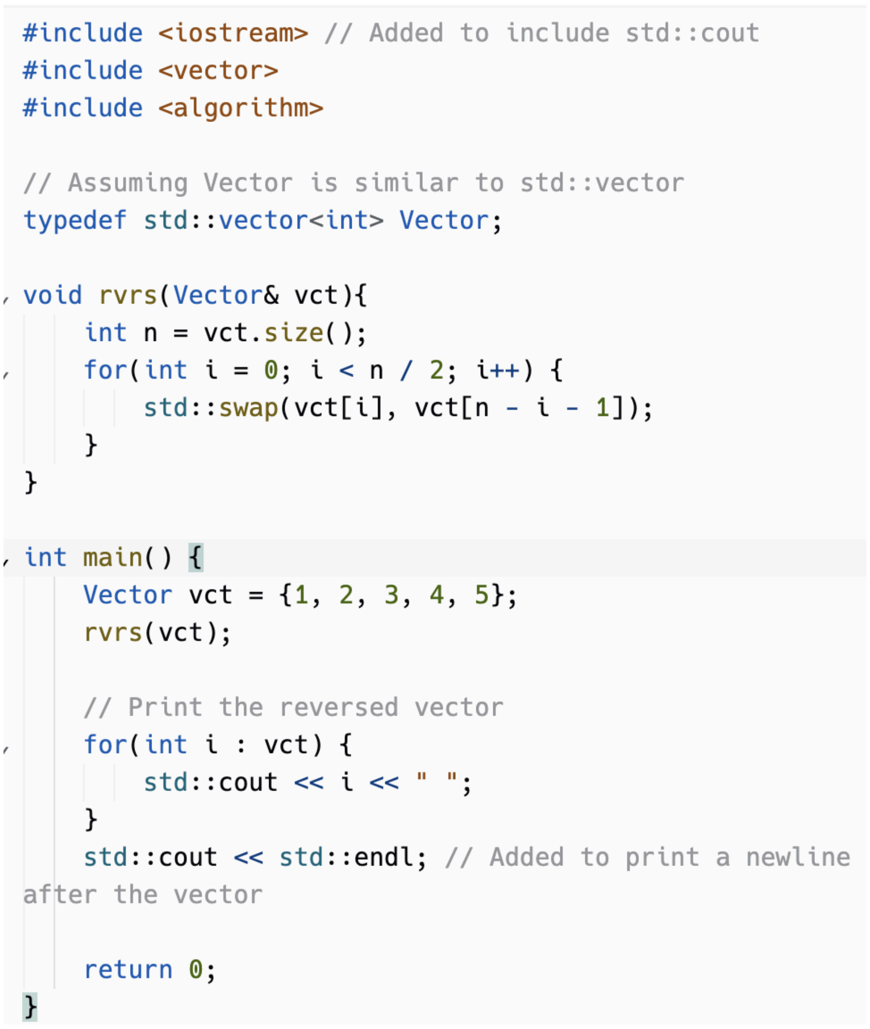
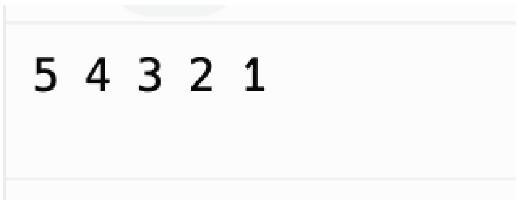
Q1)

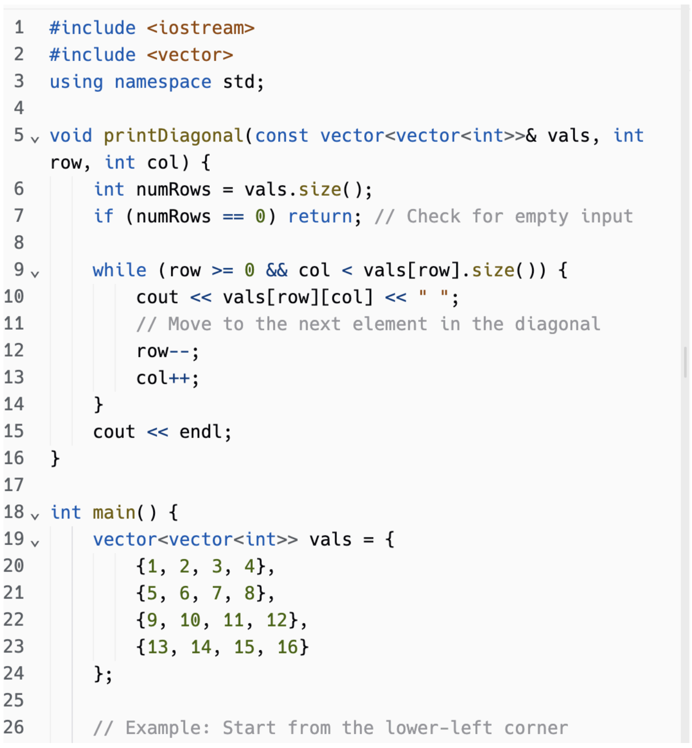


```cpp
#include <iostream> // Added to include std::cout
#include <vector>
#include <algorithm>

// Assuming Vector is similar to std::vector
typedef std::vector<int> Vector;

void rvrs(Vector& vct){
    int n = vct.size();
    for(int i = 0; i < n / 2; i++) {
        std::swap(vct[i], vct[n - i - 1]);
    }
}

int main() {
    Vector vct = {1, 2, 3, 4, 5};
    rvrs(vct);

    // Print the reversed vector
    for(int i : vct) {
        std::cout << i << " ";
    }
    std::cout << std::endl; // Added to print a newline after the vector

    return 0;
}
```

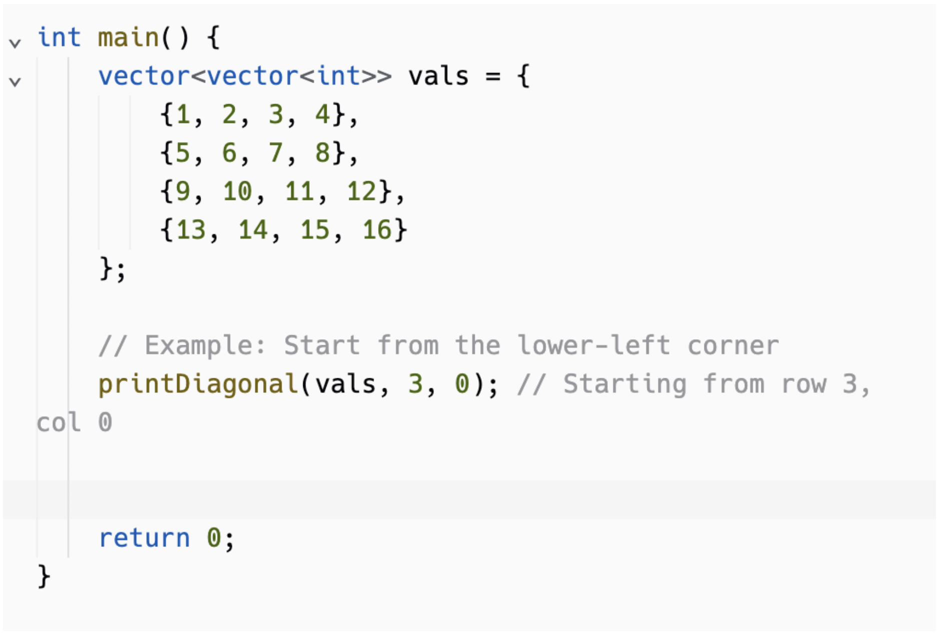


```
5 4 3 2 1
```

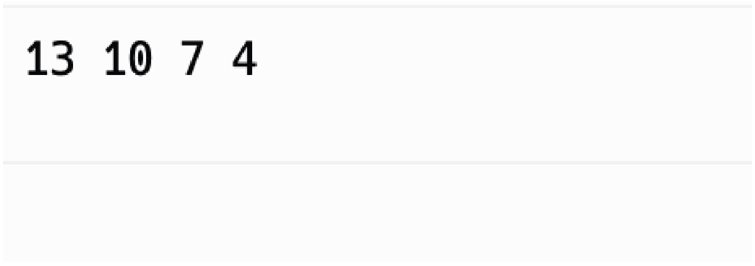
Q2)



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

void printDiagonal(const vector<vector<int>>& vals, int row, int col) {
    int numRows = vals.size();
    if (numRows == 0) return; // Check for empty input

    while (row >= 0 && col < vals[row].size()) {
        cout << vals[row][col] << " ";
        // Move to the next element in the diagonal
        row--;
        col++;
    }
    cout << endl;
}

int main() {
    vector<vector<int>> vals = {
        {1, 2, 3, 4},
        {5, 6, 7, 8},
        {9, 10, 11, 12},
        {13, 14, 15, 16}
    };

    // Example: Start from the lower-left corner
```

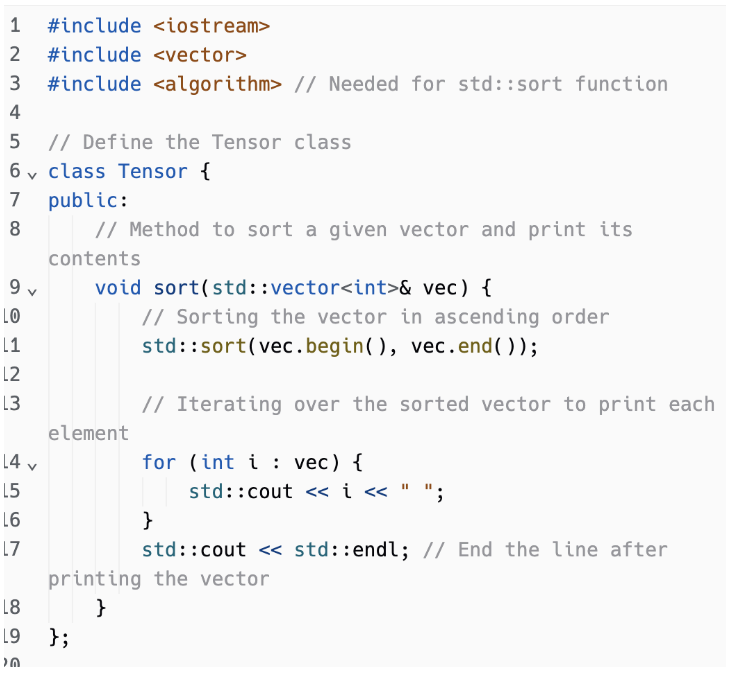


```cpp
int main() {
    vector<vector<int>> vals = {
        {1, 2, 3, 4},
        {5, 6, 7, 8},
        {9, 10, 11, 12},
        {13, 14, 15, 16}
    };

    // Example: Start from the lower-left corner
    printDiagonal(vals, 3, 0); // Starting from row 3, col 0


    return 0;
}
```

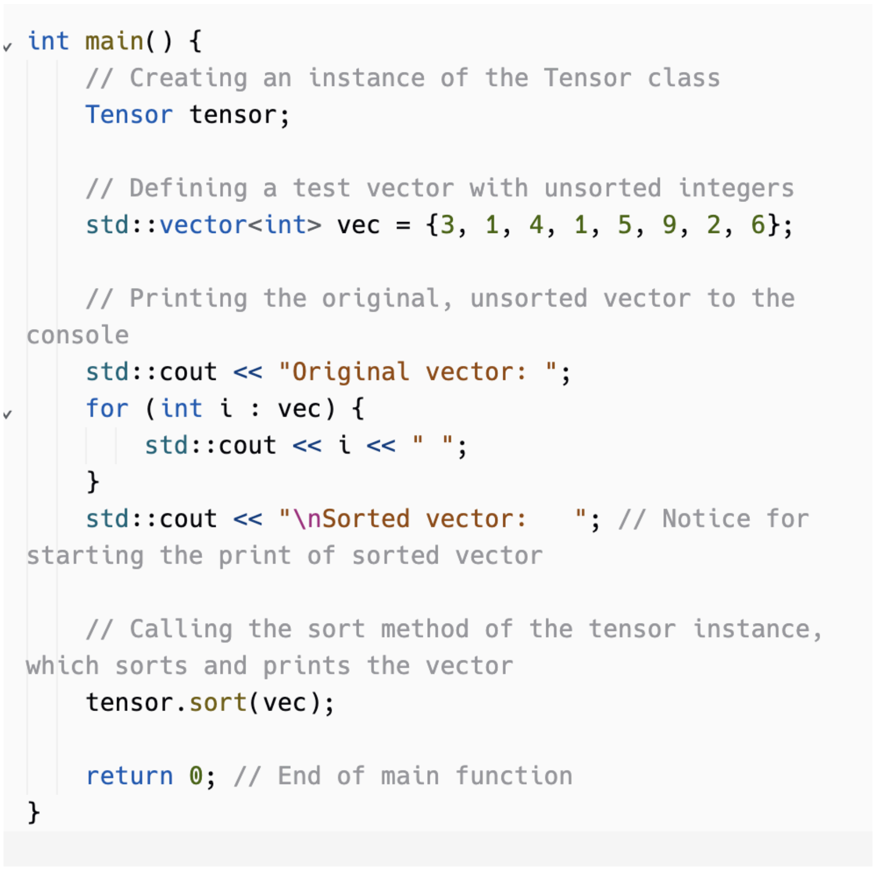


```
13 10 7 4
```

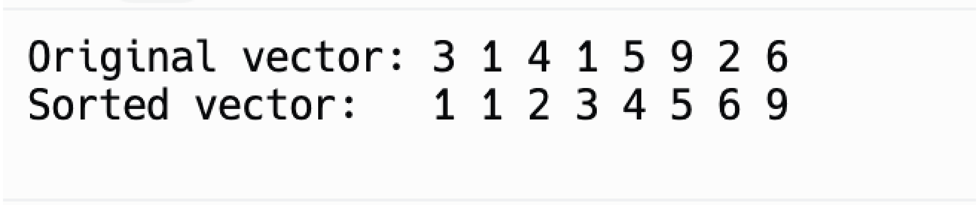
Q3)



```cpp
#include <iostream>
#include <vector>
#include <algorithm> // Needed for std::sort function

// Define the Tensor class
class Tensor {
public:
    // Method to sort a given vector and print its contents
    void sort(std::vector<int>& vec) {
        // Sorting the vector in ascending order
        std::sort(vec.begin(), vec.end());

        // Iterating over the sorted vector to print each element
        for (int i : vec) {
            std::cout << i << " ";
        }
        std::cout << std::endl; // End the line after printing the vector
    }
};
```



```cpp
int main() {
    // Creating an instance of the Tensor class
    Tensor tensor;

    // Defining a test vector with unsorted integers
    std::vector<int> vec = {3, 1, 4, 1, 5, 9, 2, 6};

    // Printing the original, unsorted vector to the console
    std::cout << "Original vector: ";
    for (int i : vec) {
        std::cout << i << " ";
    }
    std::cout << "\nSorted vector:   "; // Notice for starting the print of sorted vector

    // Calling the sort method of the tensor instance, which sorts and prints the vector
    tensor.sort(vec);

    return 0; // End of main function
}
```



```
Original vector: 3 1 4 1 5 9 2 6
Sorted vector:   1 1 2 3 4 5 6 9
```

Q4)

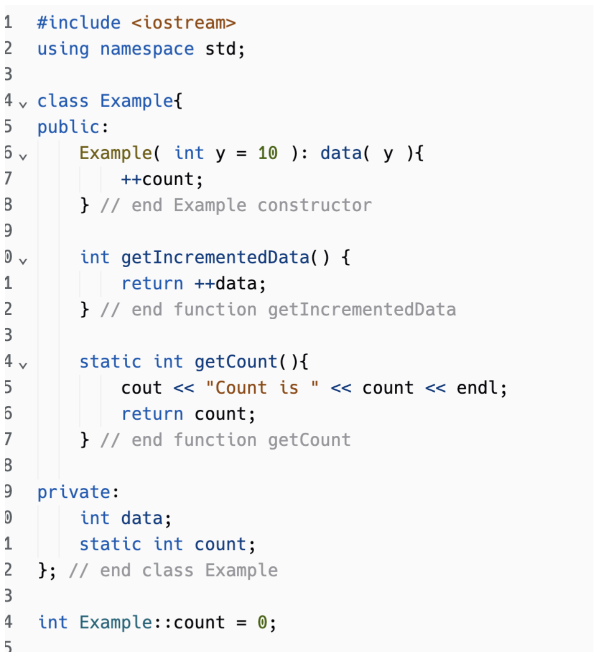
1. getIncrementedData is const but modifies data: Remove const or don't modify data.

2. getCount tries to access non-static data: Remove access to data or make data static.

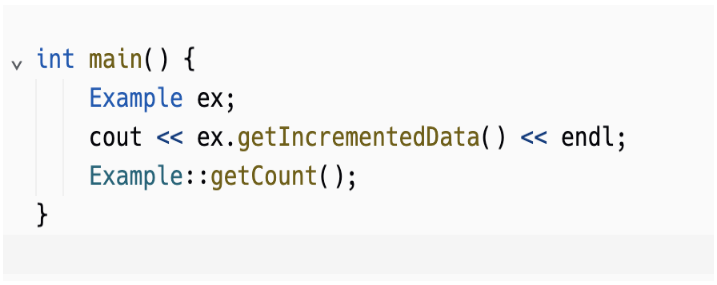
3. count is declared but not defined: Define count outside the class with int Example::count = 0;.

4. Missing #include <iostream> and namespace for cout: Add #include <iostream> and use std::cout or using namespace std;.

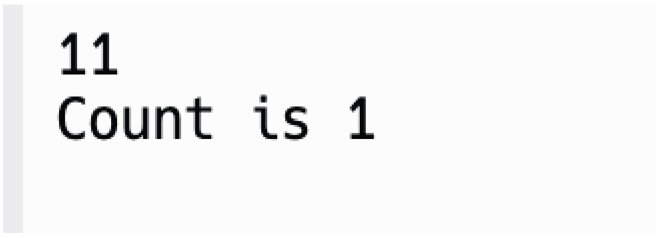
Correction:



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

class Example{
public:
    Example( int y = 10 ): data( y ){
        ++count;
    } // end Example constructor

    int getIncrementedData() {
        return ++data;
    } // end function getIncrementedData

    static int getCount(){
        cout << "Count is " << count << endl;
        return count;
    } // end function getCount

private:
    int data;
    static int count;
}; // end class Example

int Example::count = 0;
```



```cpp
int main() {
    Example ex;
    cout << ex.getIncrementedData() << endl;
    Example::getCount();
}
```



```
11
Count is 1
```