Attention: please follow the instructions below, otherwise may influence your grade.

1. **Prepare a simple lab report** (in word or PDF format), including the core of your solution code and the screenshot of your running program.

Example:

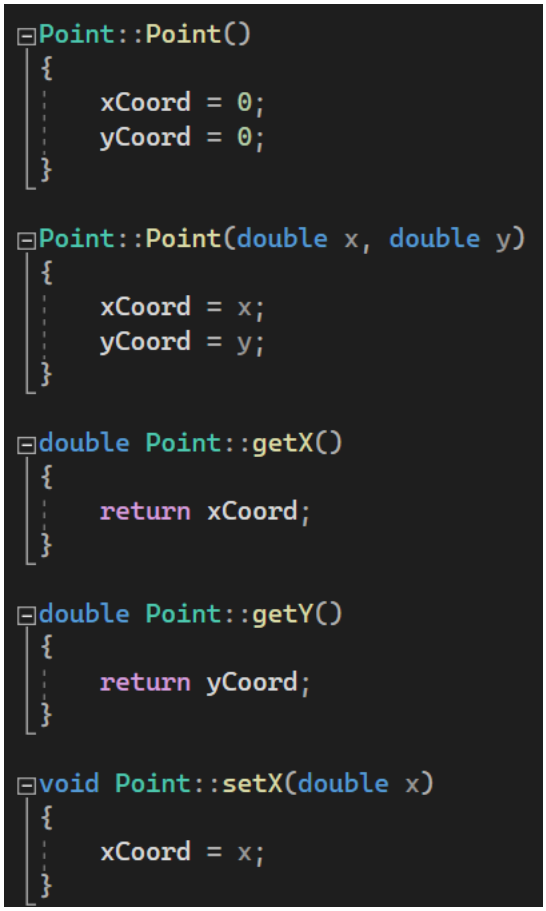
Problem 1:

Point.h

```
class Point
{
private:
    double xCoord, yCoord;

public:
    Point();
    Point(double x, double y);
    double getX();
    double getY();
    void setX(double x);
    void setY(double y);
    double dist2origin();
};
```

Point.c



```
Point::Point()
{
    xCoord = 0;
    yCoord = 0;
}

Point::Point(double x, double y)
{
    xCoord = x;
    yCoord = y;
}

double Point::getX()
{
    return xCoord;
}

double Point::getY()
{
    return yCoord;
}

void Point::setX(double x)
{
    xCoord = x;
}
```

main.cpp

```
int main()
{
    cout << "Creating a point with the default constructor: " << endl;
    Point p1;
    cout << "The point is (" << p1.getX() << ", " << p1.getY() << ")" << endl;

    cout << "Creating a point with the parameterized constructor: " << endl;
    cout << "Enter two coordinates (x, y): ";
    double x, y;
    cin >> x >> y;
    Point p2(x, y);
    cout << "The point is (" << p2.getX() << ", " << p2.getY() << ")" << endl;

    cout << "Change the x coordinate of p2, enter the new coordinate: ";
    cin >> x;
    p2.setX(x);
    cout << "The point is (" << p2.getX() << ", " << p2.getY() << ")" << endl;

    cout << "Change the y coordinate of p2, enter the new coordinate: ";
    cin >> y;
    p2.setY(y);
    cout << "The point is (" << p2.getX() << ", " << p2.getY() << ")" << endl;
```

Screenshot of running program:

```
Microsoft Visual Studio Debug Console
Creating a point with the default constructor:
The point is (0, 0)
Creating a point with the parameterized constructor:
Enter two coordinates (x, y): 1 2
The point is (1, 2)
Change the x coordinate of p2, enter the new coordinate: 1
The point is (1, 2)
Change the y coordinate of p2, enter the new coordinate: 3
The point is (1, 3)
Compute the point's euclidean distance to origin (0, 0):
Distance to origin is: 3.16228
Press any key to continue . . .
```

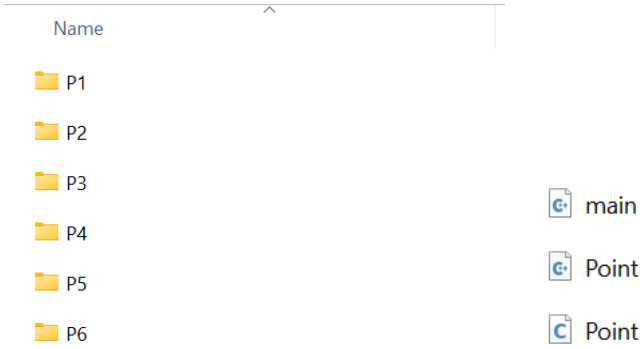
Problem 2:

Xxx

…

2. Prepare your code, every problem has a folder, and **you only put the .cpp and .h files in it**.

Example:



3. Put the report and codes in one folder, folder name is **ESE224_Lab03_yourname**

Example:

The folder name is ESE224_Lab03_James_Bond

The report name is ESE224_Lab03_report_James_Bond

The codes folder contains your codes

4. Zip the folder and upload, the zip file name is **ESE224_Lab03_yourname.zip**