

LAB EXERCISE 2

Name : Najma Shakirah binti Shahrulzaman

Matric no. : A23CS0140

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

double euclideanDistance(int, int, int, int);

int main() {

    int x1 = 1, y1 = 3, x2 = 2, y2 = 6, x3 = 5, y3 = 4;

    int points [] = {x1, y1, x2, y2, x3, y3};

    char labels [] = { 'A', 'B', 'C' };

    cout << "A(1, 3), B(2, 6), and C(5, 4)\n\n";

    cout << "\tx" << "\ty\n\n" ;

    for (int i = 0; i < 3; i++)
    {
        cout << labels[i] << '\t' ;

        for (int j = i*2; j < 6; j++)
        {
            cout << points[j] << '\t';
```

```
if (j % 2 != 0) {  
    cout << "\n\n" ;  
    break;  
}
```

```
}  
}
```

```
cout << "AB = " << euclideanDistance(x1, x2, y1, y2) << '\n';  
cout << "AC = " << euclideanDistance(x1, x3, y1, y3) << '\n';  
cout << "BC = " << euclideanDistance(x2, x3, y2, y3) << '\n';
```

```
return 0;  
}
```

```
double euclideanDistance(int point_x1, int point_x2, int point_y1, int  
point_y2)
```

```
{  
    double d;
```

```
    d = sqrt((pow(point_x2 - point_x1, 2)) + (pow(point_y2 - point_y1, 2)));
```

```
    return d;  
}
```

Output

```
Microsoft Visual Studio Debug Console
A(1, 3), B(2, 6), and C(5, 4)

      x      y
A      1      3
B      2      6
C      5      4

AB = 3.16228
AC = 4.12311
BC = 3.60555

C:\Users\asus\source\repos\ConsoleApplication2\x64\Debug
Press any key to close this window . . .|
```

```
ConsoleApplication2 (Global Scope) main()
1 #include <iostream>
2 #include <cmath>
3 using namespace std;
4
5 double euclideanDistance(int, int, int, int);
6
7 int main() {
8
9     int x1 = 1, y1 = 3, x2 = 2, y2 = 6, x3 = 5, y3 = 4;
10
11     int points [] = {x1, y1, x2, y2, x3, y3};
12
13     char labels [] = { 'A', 'B', 'C' };
14
15     cout << "A(1, 3), B(2, 6), and C(5, 4)\n\n";
16
17     cout << "\tx" << "\ty\n\n";
18
19     for (int i = 0; i < 3; i++)
20     {
21         cout << labels[i] << '\t' ;
22
23         for (int j = i*2; j < 6; j++)
24         {
25             cout << points[j] << '\t';
26
27             if (j % 2 != 0)
28             {
29                 cout << "\n\n";
30                 break;
31             }
32         }
33     }
34
35
36
37
38     cout << "AB = " << euclideanDistance(x1, x2, y1, y2) << '\n';
39     cout << "AC = " << euclideanDistance(x1, x3, y1, y3) << '\n';
40     cout << "BC = " << euclideanDistance(x2, x3, y2, y3) << '\n';
41
42     return 0;
43 }
44
45 double euclideanDistance(int point_x1, int point_x2, int point_y1, int point_y2)
46 {
47     double d;
48
49     d = sqrt((pow(point_x2 - point_x1, 2)) + (pow(point_y2 - point_y1, 2)));
50
51     return d;
52 }
53
54
```