```
//Name: compare.cpp
//Created by:Tan Qi Hao
//Created on: 2/9/2019
/*Synopsis: This program read two points (x1,y1) and (x2,y2) and find the
relative location of (x2,y2) with (x1,y1).  */

#include <iostream>
using namespace std;

int main()
{
  double x1, y1; //coordinate of (x1,y1)
  double x2, y2; //coordinate of (x2,y2)

 cout << "Enter coordinates of the first point (2 values): ";
 cin >> x1 >> y1;

 cout << "Enter coordinates of the second point (2  values): ";
 cin >> x2 >> y2;

 if (x1 < x2 && y1 < y2){
   cout << "Point (" << x2 << "," << y2 << ") is above and right of point
("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 < x2 && y1 > y2){
   cout << "Point (" << x2 << "," << y2 << ") is below and right of point
("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 < x2 && y1 == y2){
   cout << "Point (" << x2 << "," << y2 << ") is right of point ("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 > x2 && y1 < y2){
   cout << "Point (" << x2 << "," << y2 << ") is above and left of point
("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 > x2 && y1 > y2){
   cout << "Point (" << x2 << "," << y2 << ") is below and left of point
("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 > x2 && y1 == y2){
   cout << "Point (" << x2 << "," << y2 << ") is left of point ("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 == x2 && y1 < y2){
   cout << "Point (" << x2 << "," << y2 << ") is above point ("
      << x1 << "," << y1 << ")." << endl;}

 else if (x1 == x2 && y1 > y2){
   cout << "Point (" << x2 << "," << y2 << ") is below point ("
```

```
     << x1 << "," << y1 << ")." << endl;}

 else { cout << "Point (" << x2 << "," << y2
             << ") equals point (" << x1 << "," << y1 << ")." << endl;}

  return 0;
}
```