EXERCISE-76 .Closest-Pair

PROGRAM;

```
import math
def distance(p1, p2):
    return math.sqrt((p1[0] - p2[0])**2 + (p1[1] - p2[1])**2)
def closest_pair(points):
    min_dist = float('inf')
    closest_pair = None
    n = len(points)
    for i in range(n):
        for j in range(i+1, n):
            dist = distance(points[i], points[j])
            if dist < min_dist:
                min_dist = dist
                closest_pair = (points[i], points[j])
    return closest_pair
points = [(1, 2), (3, 4), (5, 6), (7, 8)]
closest_pair = closest_pair(points)
print("Closest pair:", closest_pair)
```

OUTPUT

```
Closest pair: ((1, 2), (3, 4))
```

TIME COMPLEXITY $O(n_2)$