

RESULT WITH DISTANCES (Trial 1)

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```
Microsoft Visual Studio Debug Console

A: 30.521 , B: 43.7765
8: The point is closer to cluster B
A: 57.9057 , B: 42.2414
9: The point is closer to cluster A
A: 45.82 , B: 63.9916
10: The point is closer to cluster B
A: 78.0839 , B: 34.1322
11: The point is closer to cluster B
A: 76.4391 , B: 5.28831
12: The point is closer to cluster A
A: 57.5143 , B: 61.4507
13: The point is closer to cluster A
A: 22.3848 , B: 63.0301
14: The point is closer to cluster A
A: 21.8913 , B: 65.6697
15: The point is closer to cluster B
A: 69.2257 , B: 11.1004
16: The point is closer to cluster B
A: 100.731 , B: 29.5252
17: The point is closer to cluster A
A: 60.8885 , B: 64.7323
18: The point is closer to cluster B
A: 54.1917 , B: 32.2835
19: The point is closer to cluster A
A: 20.4366 , B: 51.138
20: The point is closer to cluster A
A: 35.412 , B: 68.4965

C:\Users\Jay\Desktop\CS\Clusters\x64\Debug\Clusters.exe (process 9404) exited with code 0.
Press any key to close this window . . .
```

RESULT WITHOUT DISTANCES (Trial 2)

```
Microsoft Visual Studio Debug Console

1: The point is closer to cluster B
2: The point is closer to cluster B
3: The point is closer to cluster A
4: The point is closer to cluster A
5: The point is closer to cluster B
6: The point is closer to cluster A
7: The point is closer to cluster A
8: The point is closer to cluster A
9: The point is closer to cluster A
10: The point is closer to cluster A
11: The point is closer to cluster B
12: The point is closer to cluster B
13: The point is closer to cluster B
14: The point is closer to cluster B
15: The point is closer to cluster B
16: The point is closer to cluster B
17: The point is closer to cluster A
18: The point is closer to cluster B
19: The point is closer to cluster A
20: The point is closer to cluster B

C:\Users\Jay\Desktop\CS\Clusters\x64\Debug\Clusters.exe (process 21996) exited with code 0.
Press any key to close this window . . .
```

Issues Faced:

Learning to use casting to make sure the random value was being generated correctly in float instead of an integer.

```
(int i = 0; i < n1; i++) {
(A + i)->SetX(min_a + static_cast<float>(rand()) * static_cast<float>(max_a - min_a) / RAND_MAX);
(A + i)->SetY(min_a + static_cast<float>(rand()) * static_cast<float>(max_a - min_a) / RAND_MAX);

(int i = 0; i < n2; i++) {
(B + i)->SetX(min_b + static_cast<float>(rand()) * static_cast<float>(max_b - min_b) / RAND_MAX);
(B + i)->SetY(min_b + static_cast<float>(rand()) * static_cast<float>(max_b - min_b) / RAND_MAX);

(int i = 0; i < m; i++) {
point p;
p.SetX(min_m + static_cast<float>(rand()) * static_cast<float>(max_m - min_m) / RAND_MAX);
p.SetY(min_m + static_cast<float>(rand()) * static_cast<float>(max_m - min_m) / RAND_MAX);

cout << i + 1 << ": ";
```