Nordcloud
an IBM Company

Tech assignment - Network speed

Problem

Write a program that solves the most suitable (with highest non-zero speed) network station for a device at a given point `(x, y)`.

This problem can be solved in 2-dimensional space. Network stations have reach and speed that depends on the distance to the station.

A network station's speed can be calculated as follows:

```
speed = (reach - device's distance from network station)^2
if distance > reach, speed = 0
```

Network stations are located at points `(x, y)` and have reach `r`:

x	*y*	*reach*
0	0	9
20	20	6
10	0	12
5	5	13
99	25	2

Print out the most suitable network station and the network speed from devices `(x, y)`:

`(0, 0), (100, 100), (15, 10), (18, 18), (13, 13)` **and** `(25, 99)`

Program should output the solution to these two cases:

- Best station found, output station location and speed
- No station within reach found, output error message

It can be in the form of:

```
"Best network station for point x,y is x,y with speed z"
"No network station within reach for point x,y"
```

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Requirements

Please make this project **as complete** as you think it should be to be **maintainable** in the **long term** by **more than one** maintainer.

A maintainable solution should have at minimum:

- Instructions on how to run the solution
- Code should be testable and unit tested

Optional

Provide the functionality and instructions for deploying the solution using any cloud provider.

Nordcloud is a cloud company so we appreciate the display of cloud skills.

Submission

After you have finished the assignment:

1. Push the assignment to e.g. Github or Gitlab (make sure the repository is private!)
2. Use the following accounts to share it with us
   Github: ncrecruitment
   Gitlab: ncrecruitment
3. Send an email to your Nordcloud contact and mention that you have finished your assignment