Amazon Bright Network Code

Challenge Solution Documentation

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Task (simplified)

Imagine a logistics bot (let's call it a bee) has a parcel to get from point a in a warehouse to point b. How would it do that?

Solution Breakdown

Status: ✅ = Done | 🕐 = In Progress

- ✅ Create a digital map of the warehouse.
- ✅ Plot the start position on the map
- ✅ Plot the targeted finish position on the map
- ✅ Plot any obstacles (walls, tables, etc..) to the map
- 🕐 Calculate a route from start to finish that avoids obstacles (use *A** or *Dijkstra's algorithm*)
- Highlight the route on the map and pass it onto the bee

Possible Improvements

- Complete the pathfinding algorithm
- Grid internal data structure could be a graph, not a Node[ ]

Instructions to Run

Below is an example program creating the scenario described in the brief:

```
import Grid from "./Grid";

const grid = new Grid([10,10], [0,0], [9,9])
grid.addObstacle([9,7]);
grid.addObstacle([8,7]);
grid.addObstacle([6,7]);
grid.addObstacle([6,8]);

grid.print();
```

To run the example quickly, run the following line in your terminal:

```
git clone https://github.com/umaryusuf11/amazon-bn-code-challenge-
2022
  && cd amazon-bn-code-challenge-2022 && npm install &&
  npm start
```

Find the full code here: https://github.com/umaryusuf11/amazon-bn-code-challenge-2022

Class Diagram