

Home Assignment

Guidelines

Please consider the following guidelines when producing your code.

- Explain in English the decisions you made when designing the code, what other alternatives you considered, if any.
- Sprinkle the code with an appropriate amount of comments.
- Ensure that you include your name, email and date in the code header.
- The code can be written in any high-level language you are comfortable with.

Question: Where did I put my keys?

You are given a config file. The config file consists of locations and objects. The locations are defined implicitly when describing how to get to an object.

The config file looks like this:

```
Estate:House:Basement:Kitchen - knife
Estate:House:Basement:Stairs:Bedroom - pillow
Estate:House:Hallway - keys
Estate:Garden:Toolshed - knife
... et cetera ...
```

Write a script which, given a current location and one object, will tell you the shortest path from the start location to the object.

You can assume that the Estate in question is modest in size, owned by a peculiar gentleman with very little material needs. You may also assume that there is one and only one path between any two locations.

Example output:

```
$ path-to-object bedroom keys
```

```
You are in the Bedroom. Go to Stairs Go to Basement
```

```
Go to House Go to Hallway get keys.
```

```
$
```

Bonus question #1: How would you modify your program if we knew that the gentleman had multiple ways to get to some of the rooms?

Bonus question #2: Assuming multiple paths, how would you modify the program if walking up the staircase was more strenuous than walking down the same?