HW 10: Fantasy Game

Display an overhead map for a role-playing video game, showing a wizard (or other player) in a fantasy world.

The file `terrain.png` is a 256×64 PNG file containing 4 terrain types: clearing, water, tree, and cottage. The file `player.png` contains a small wizard, representing the player character. You want to display an 11×11 map of tiles, with the player character placed over the terrain in the center, like this:

Each tile on the map will be determined randomly, with an equal chance of each one. Thus, of all 121 tiles, you would expect about 30 to be of each type.

Be sure to use the `GraphicsWindow` class that has been provided for you. You probably won't be able to understand every line in it, but read the documentation page that has been provided. It contains the utilities you will need to finish this project.

Try not to "hard code" any numbers. For example, the size of each tile is 64×64 pixels. But instead of using the number 64 directly, try making a static final int called `TILE_SIZE`, and set it equal to 64. That way, when you're in the real world and the evil marketing people

tell you that the game needs to have 128×128 tiles, you can change it immediately. Hard coding makes bugs...sometimes really nasty ones.

The class will be called `Fantasy`. You don't need to turn in the graphics files (unless you make your own).

Extra Credit

There are a couple of opportunities for extra credit. For example, you may make new terrain types in addition to the four here. Or you may create a way to alter the distributions of the tiles. For example, you could ask the user if they want to place the character in a forest (with lots of trees), a rocky desert (mostly empty land), or something else entirely.

And if you're not completely happy with the wizard character in a fantasy world—make your own environment! (If you like, download the GIMP and Inkscape. Those are open-source, free equivalents to Photoshop and Illustrator, and will help you make your own graphics.)