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1  /*
2  -----
3  Laboratory   : labo_11
4  File        : labo_11_schaufelberger_yannick_gallay_david.cpp
5  Author(s)   : Yannick Schaufelberger and David Gallay
6  Date        : 18.01.2020
7
8  Goal        : Run one or more simulation of treasure hunt.
9                The searchers progress randomly through a map.
10               Statistics about the simulation are displayed at the end.
11 Remark(s)   :
12
13               There is the github repository:
14               https://github.com/dgheig/lab011
15
16 Compiler    : MinGW-g++ 6.3.0 and g++ 7.4.0
17 -----*/
18 #include <iostream>
19 #include <cstdlib>
20 #include "src/treasure.h"
21 #include "src/utilities.h"
22
23 using namespace std;
24
25 #define WAIT_ENTER while(cin.get()!='\n')
26
27 int main() {
28
29     do {
30         size_t startX, startY;
31         Map world = initWorld(50, 50, startX, startY);
32         displayWorld(world);
33         cout << endl;
34
35         size_t simulationNumber = (size_t)askForNumberOfSimulation();
36         SearcherList list = runSimulation(world, startX, startY, simulationNumber);
37         displaySearcherList(list);
38
39         double probability = 0, avgSteps = 0.0;
40         if(getStatistics(list, probability, avgSteps))
41             cout << "probability : " << probability << "\tavgSteps : " << avgSteps << endl;
42         else
43             cerr << "Sorry, we couldn't afford to get the simulations statistics";
44
45     } while (askForRestart());
46
47     std::cout << "Press <ENTER> to quit the program" << std::endl;
48     WAIT_ENTER;
49     return EXIT_SUCCESS;
50 }
51
52
```