Topics:
Flood fill algorithm, Breadth-First search algorithm

Problem 1 (3%)

Use the standard class stack in a program which implements Flood fill algorithm painting arbitrary closed figure in raster graphics editors (like Microsoft Paint). Program reads the text representation of some picture and starting pixel's coordinates and prints the text representation of the picture after painting.

Sample input:
```
10 15
...............
...............
...+++++.......
...+...+.......
...+...++++....
...+......+....
...++++++++....
...............
...............
...............
5 6
```

Where:
10 15 – height and width of graphic document
5 6 – coordinates (row and column) of starting pixel

Sample output:
```
...............
...............
...+++++.......
...+***+.......
...+***++++....
...+******+....
...++++++++....
...............
...............
...............
```

Problems 2, 3 (6%)
Any 2 problems from this section, solved with the stack-implementation of Flood-Fill algorithm

Problem 4 (3%)

Use the standard class queue in a program which implements Breadth-First search algorithm finding the shortest path from one place of some maze to another. Program reads the text representation of some maze and shows the maze with the shortest path.

Sample input:
```
..X.X..
..X..F.
..X.X..
S.X.X..
....X..
..X.X..
..X....
```

Where:
X represents wall;
S represents start;
F represents finish;

Sample output:
```
distance: 10
..X.X..
..X+++.
..X+X..
++X+X..
.+++X..
..X.X..
..X....
```

Problems 5, 6 (6%)
Any 2 problems from this section or this section, solved with the Breadth-First search algorithm