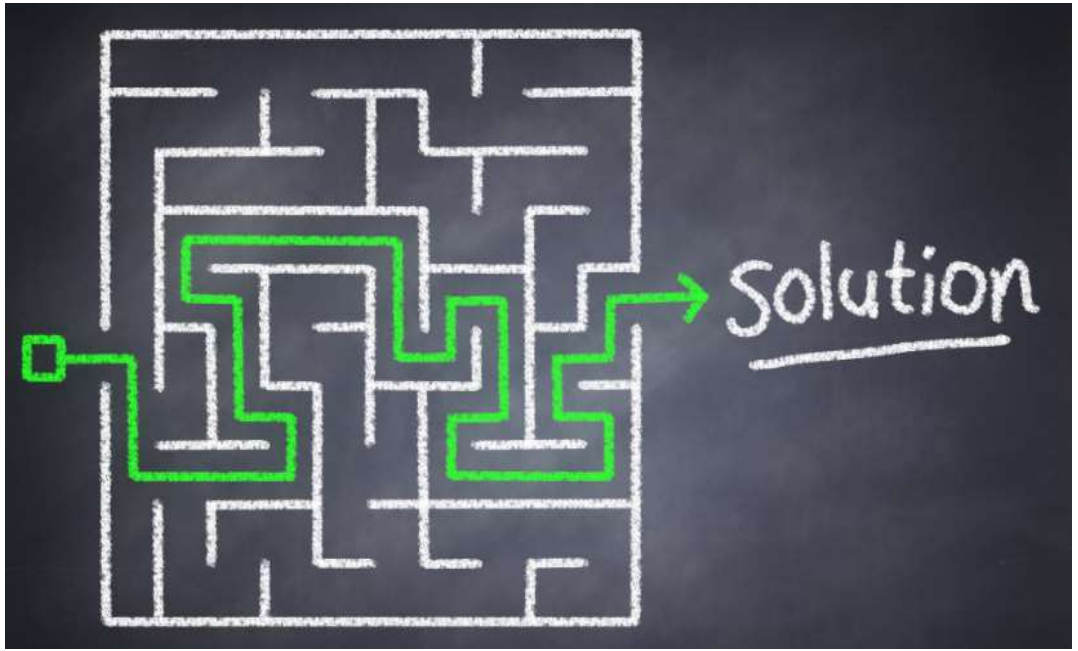
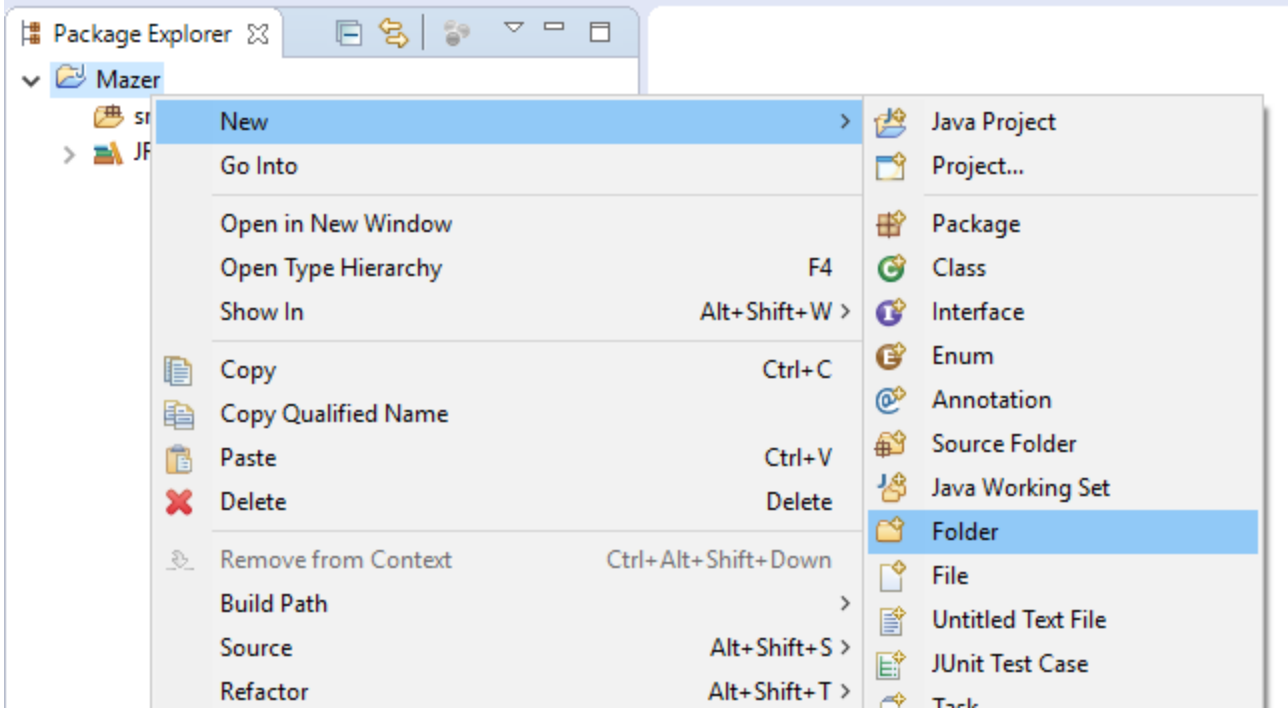
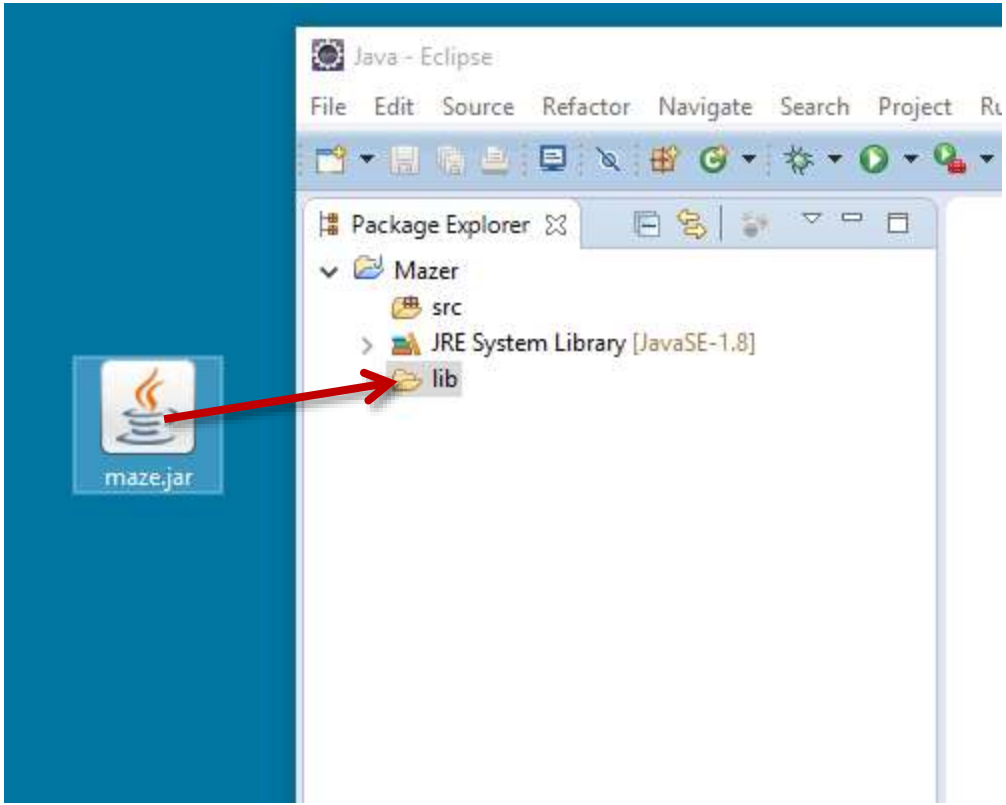
Solution 3: The Maze Solver



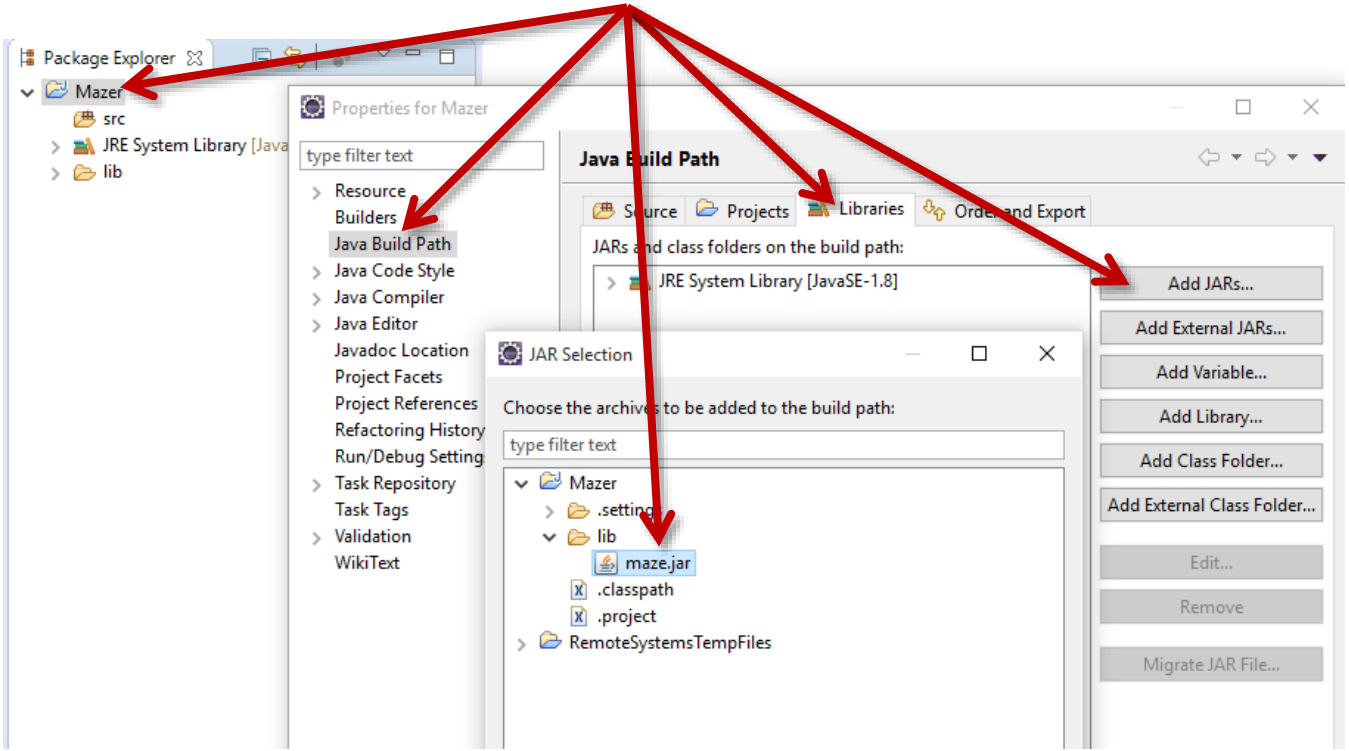
Step 1: Create a Project



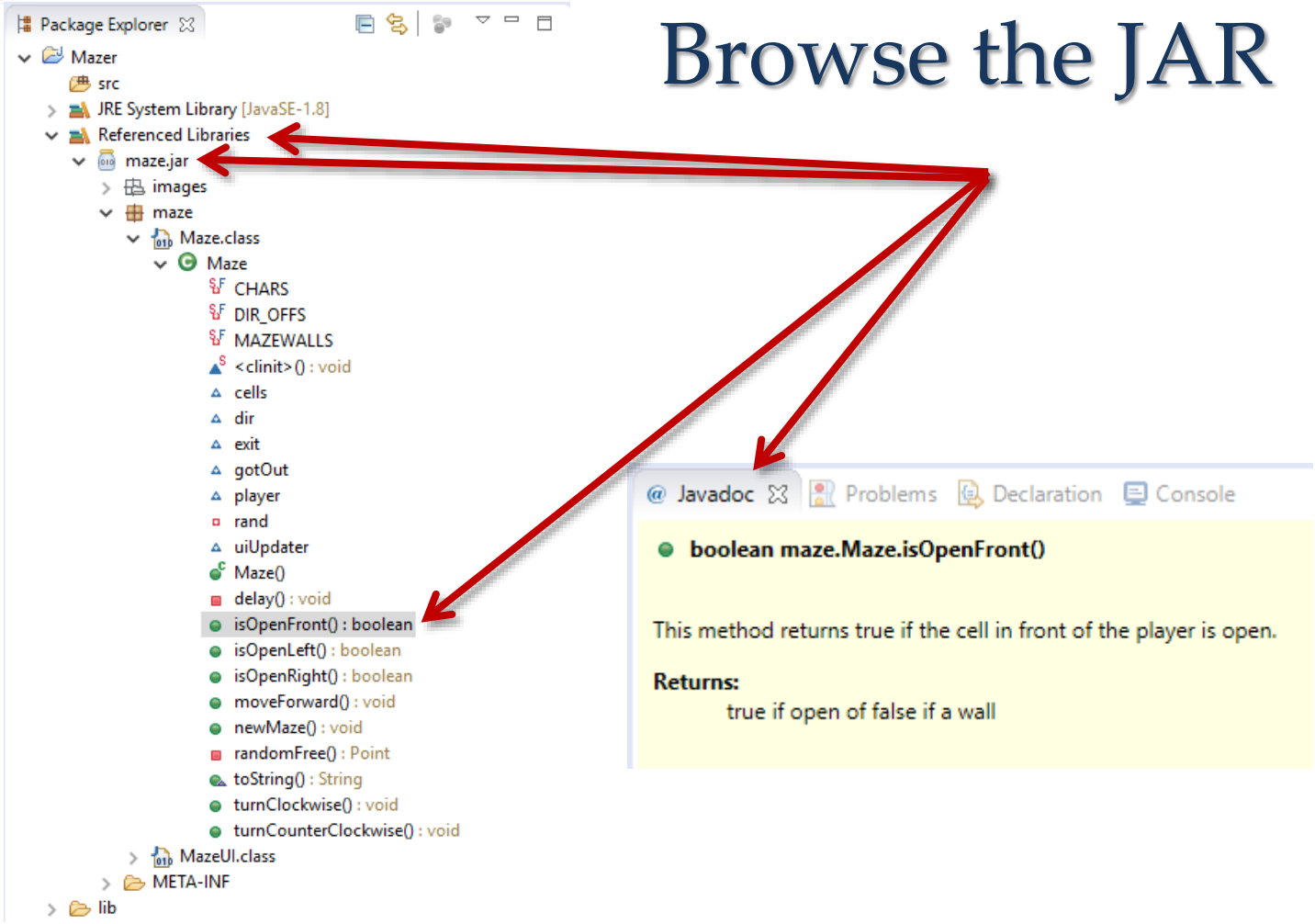
Drag in the JAR



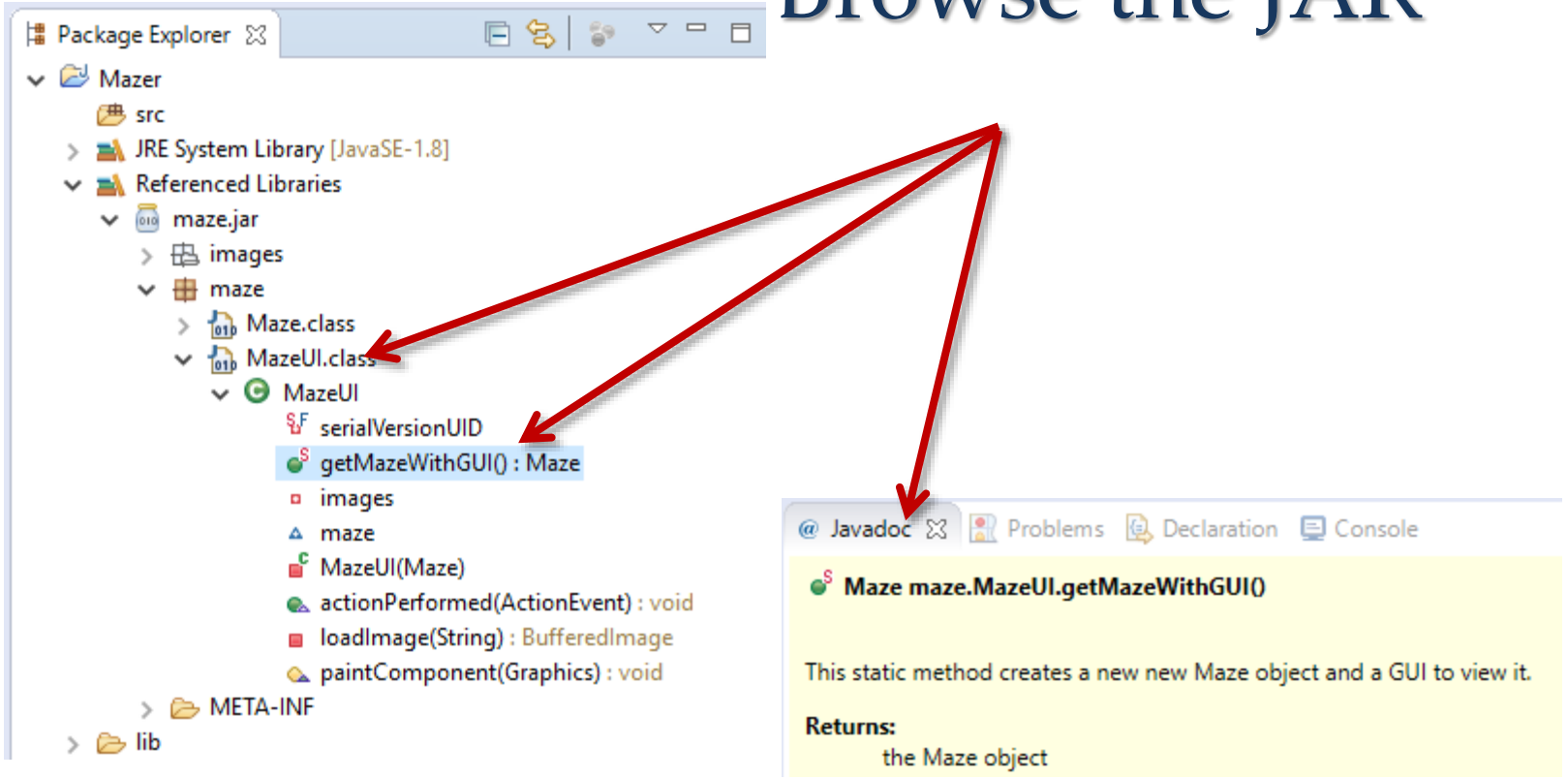
Add JAR to the build path



Browse the JAR



Browse the JAR



Make a Maze

*Solver.java

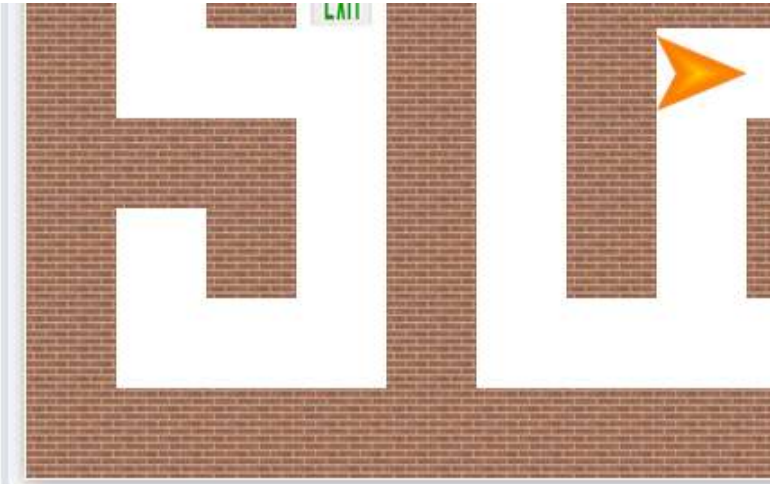
```
1  import maze.Maze;
2  import maze.MazeUI;
3
4  public class Solver {
5
6      public static void main(String[] args) {
7
8          Maze maze = MazeUI.getMazeWithGUI();
9
10         maze.
11
12     }
13
14 }
15
```

- equals(Object obj) : boolean - Object
- getClass() : Class<?> - Object
- hashCode() : int - Object
- isOpenFront() : boolean - Maze
- isOpenLeft() : boolean - Maze
- isOpenRight() : boolean - Maze
- moveForward() : void - Maze
- newMaze() : void - Maze
- notify() : void - Object
- notifyAll() : void - Object
- toString() : String - Maze
- turnClockwise() : void - Maze
- turnCounterClockwise() : void - Maze
- wait() : void - Object
- wait(long timeout) : void - Object
- wait(long timeout, int nanos) : void - Object

Press 'Ctrl+Space' to show Template Proposals

Remote Control

```
import maze.Maze;
import maze.MazeUI;

public class Solver {

    public static int getInteger() {}

    public static void main(String[] args) {

        Maze maze = MazeUI.getMazeWithGUI();
        System.out.println(maze);

    }

}
```



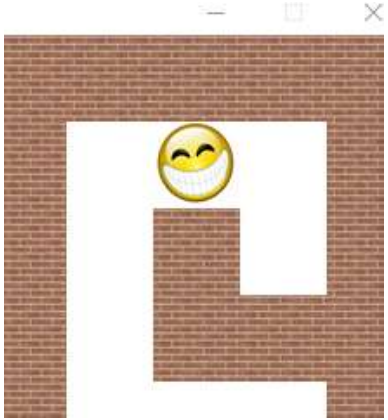
Javadoc | Problems | Declaration | Console

Solver [Java Application] C:\Program Files\Java\jdk1.8.0_45\bin\javaw.exe (Aug

```
##########
# #      #
# # ######
# #      #
# #$# ####
#   # #* #
### # # ##
# # # # ##
#   #    #
##########
```

Remote Control

```
while(true) {

    boolean left = maze.isOpenLeft();
    boolean right = maze.isOpenRight();
    boolean front = maze.isOpenFront();

    System.out.println(left+":"+front+":"+right);

    int command = getInteger();
    switch(command) {
    case 0:
        maze.moveForward();
        break;
    case 1:
        maze.turnClockwise();
        break;
    case -1:
        maze.turnCounterClockwise();
        break;
    }

}
```



Javadoc | Problems | Declaration | Console

```
Solver [Java Application] C:\Program Files\Java\jdk1.8.0_45\bin\javaw.
false:true:false
0
false:true:false
1
false:false:true
false:true:true
0
You are out of the maze!
false:true:false
```

Robot Solver

```
import maze.Maze;
import maze.MazeUI;

public class Solver {

    public static void main(String[] args) {

        Maze maze = MazeUI.getMazeWithGUI();

        while(true) {

            if(maze.isOpenLeft()) {
                // Left is open ... turn and go left
                maze.turnCounterClockwise();
                maze.moveForward();
            } else if(maze.isOpenFront()) {
                // Forward is open ... go forward
                maze.moveForward();
            } else {
                // Left and forward blocked
                maze.turnClockwise();
            }

        }

    }

}
```