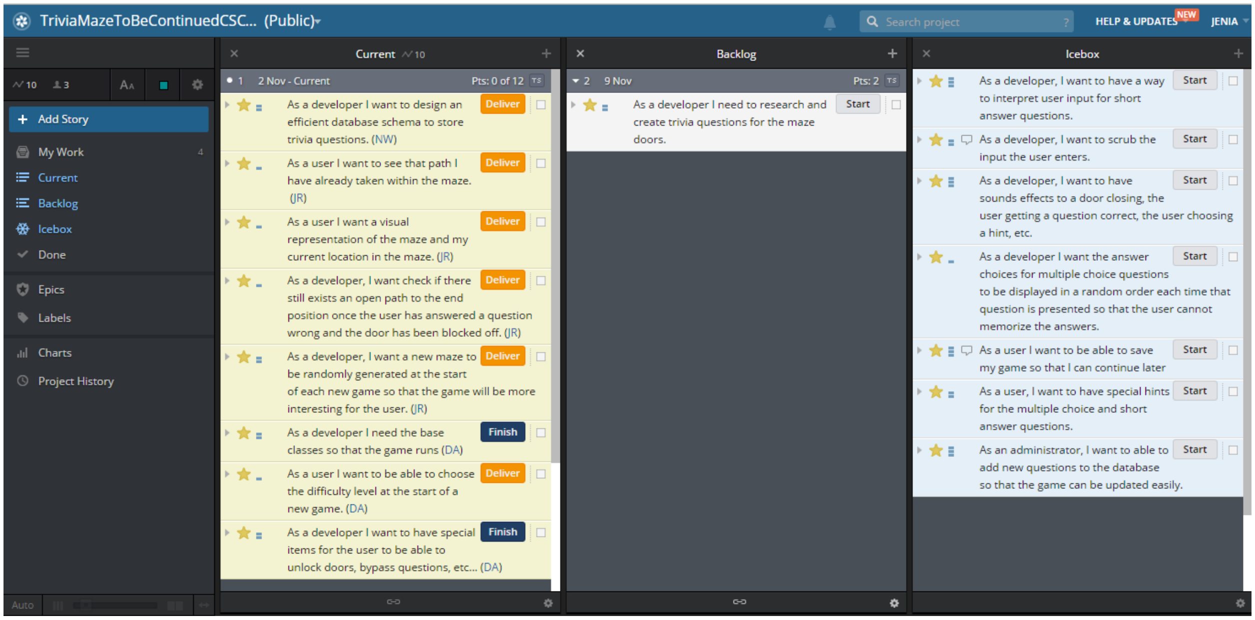
CSCD 350 Software Engineering

End of 1st Iteration

Jenia's Work for Iteration 1:

Finishing stories:



Current 10

1 2 Nov - Current Pts: 0 of 12

- As a developer I want to design an efficient database schema to store trivia questions. (NW) Deliver
- As a user I want to see that path I have already taken within the maze. (JR) Deliver
- As a user I want a visual representation of the maze and my current location in the maze. (JR) Deliver
- As a developer, I want check if there still exists an open path to the end position once the user has answered a question wrong and the door has been blocked off. (JR) Deliver
- As a developer, I want a new maze to be randomly generated at the start of each new game so that the game will be more interesting for the user. (JR) Deliver
- As a developer I need the base classes so that the game runs (DA) Finish
- As a user I want to be able to choose the difficulty level at the start of a new game. (DA) Deliver
- As a developer I want to have special items for the user to be able to unlock doors, bypass questions, etc... (DA) Finish

Backlog

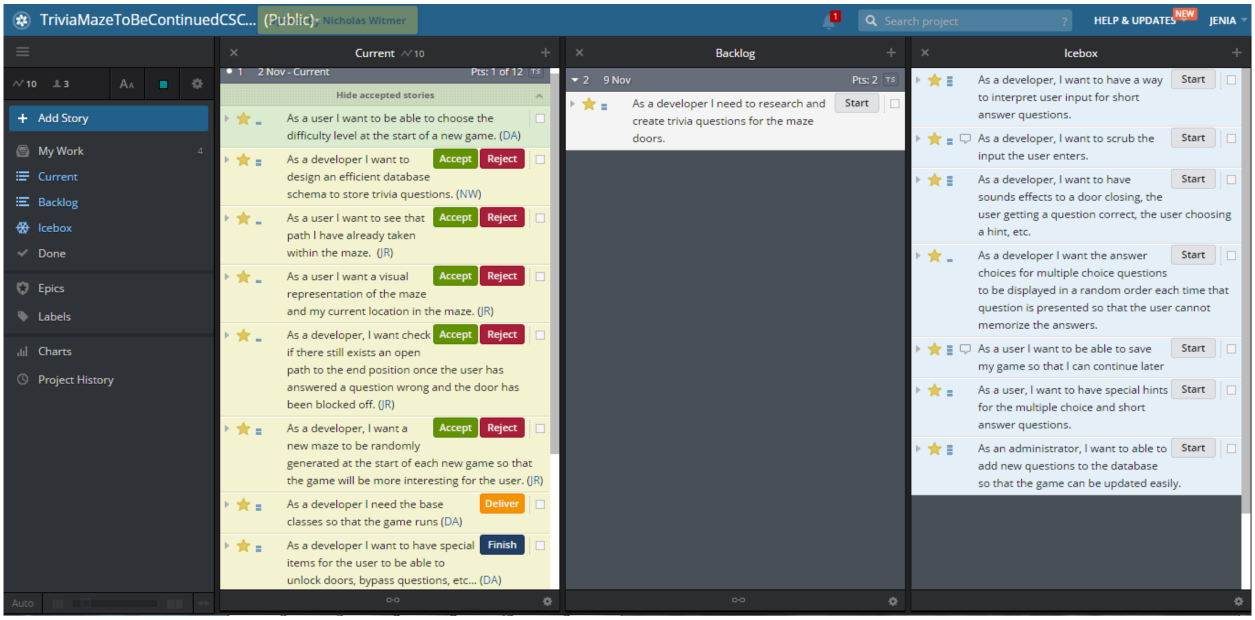
2 9 Nov Pts: 2

- As a developer I need to research and create trivia questions for the maze doors. Start

Icebox

- As a developer, I want to have a way to interpret user input for short answer questions. Start
- As a developer, I want to scrub the input the user enters. Start
- As a developer, I want to have sounds effects to a door closing, the user getting a question correct, the user choosing a hint, etc. Start
- As a developer I want the answer choices for multiple choice questions to be displayed in a random order each time that question is presented so that the user cannot memorize the answers. Start
- As a user I want to be able to save my game so that I can continue later Start
- As a user, I want to have special hints for the multiple choice and short answer questions. Start
- As an administrator, I want to able to add new questions to the database so that the game can be updated easily. Start

Delivering user stories:



Current 10

1 2 Nov - Current Pts: 1 of 12

Hide accepted stories

- As a user I want to be able to choose the difficulty level at the start of a new game. (DA)
- As a developer I want to design an efficient database schema to store trivia questions. (NW) Accept Reject
- As a user I want to see that path I have already taken within the maze. (JR) Accept Reject
- As a user I want a visual representation of the maze and my current location in the maze. (JR) Accept Reject
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- As a developer, I want a new maze to be randomly generated at the start of each new game so that the game will be more interesting for the user. (JR) Accept Reject
- As a developer I need the base classes so that the game runs (DA) Deliver
- As a developer I want to have special items for the user to be able to unlock doors, bypass questions, etc... (DA) Finish

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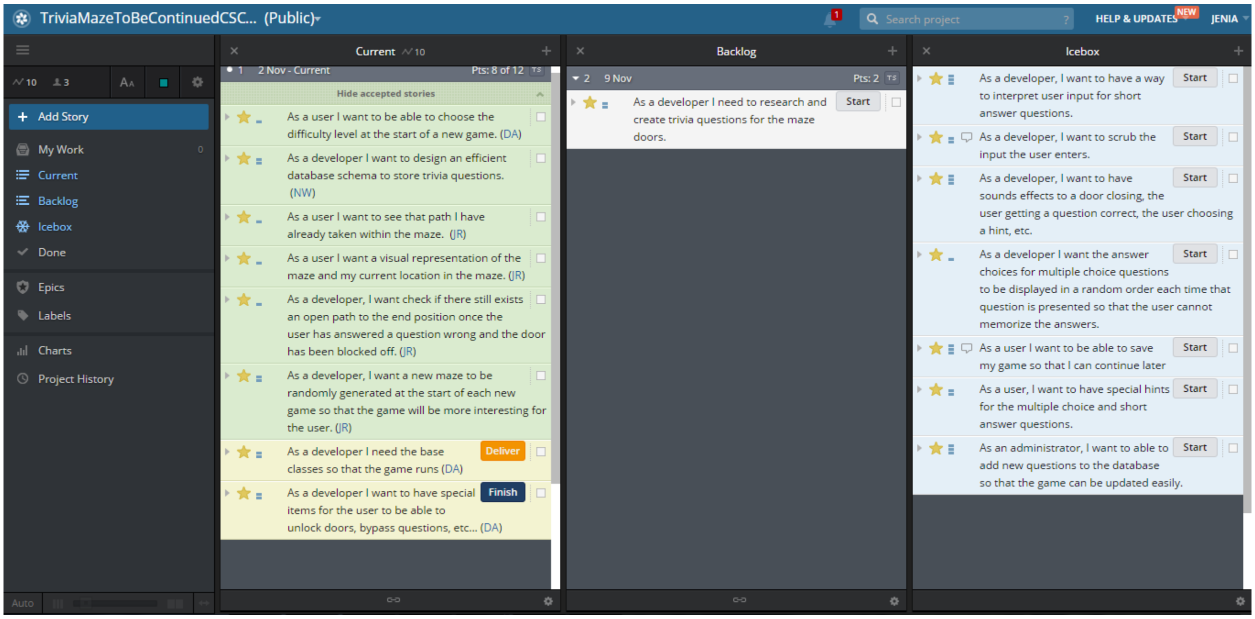
Stories accepted:



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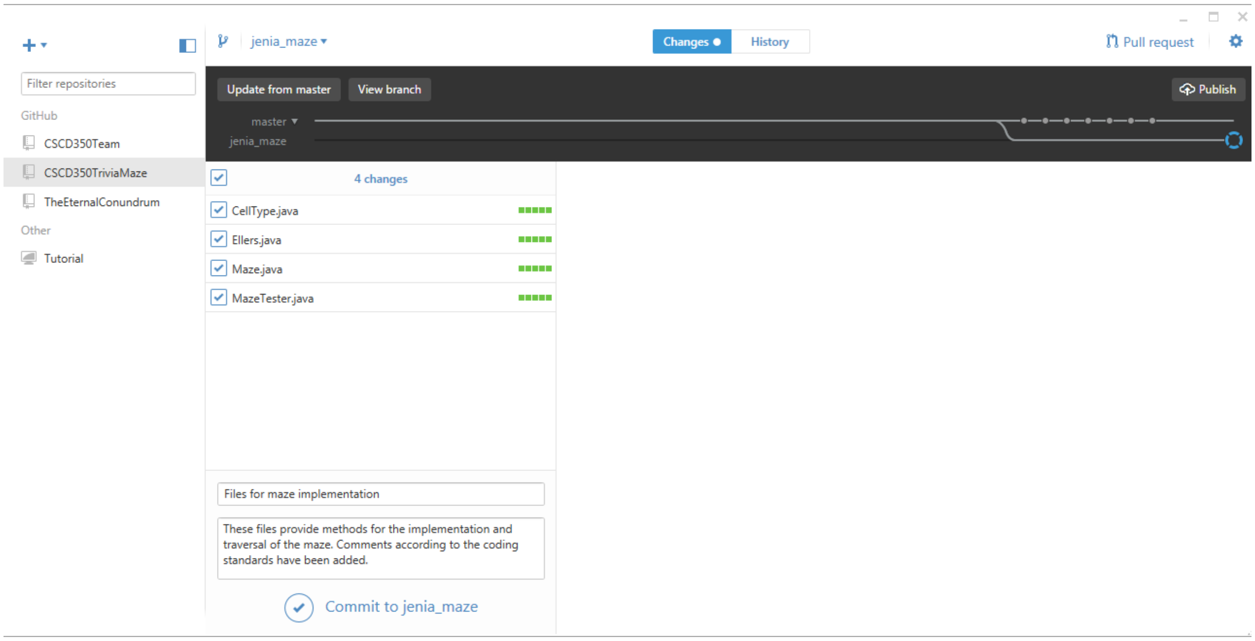
Adding files to GitHub:



☑ 4 changes

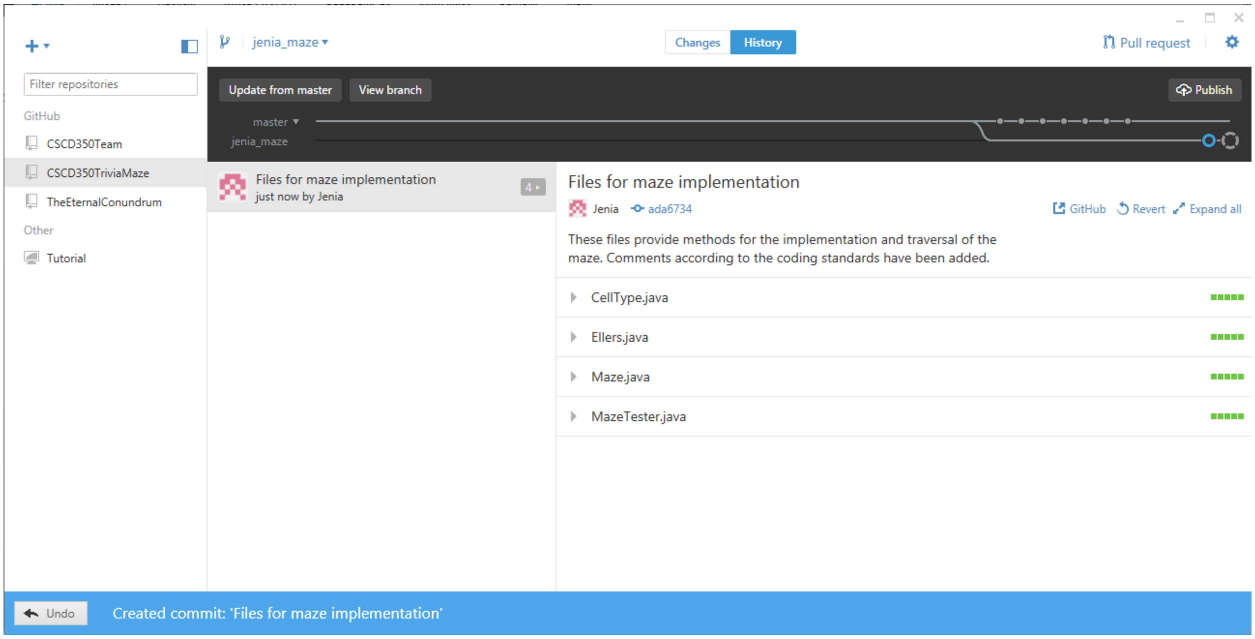
- ☑ CellType.java
- ☑ Ellers.java
- ☑ Maze.java
- ☑ MazeTester.java

Files for maze implementation

These files provide methods for the implementation and traversal of the maze. Comments according to the coding standards have been added.

Commit to jenia_maze

Committing the changes:



Files for maze implementation
just now by Jenia

Files for maze implementation

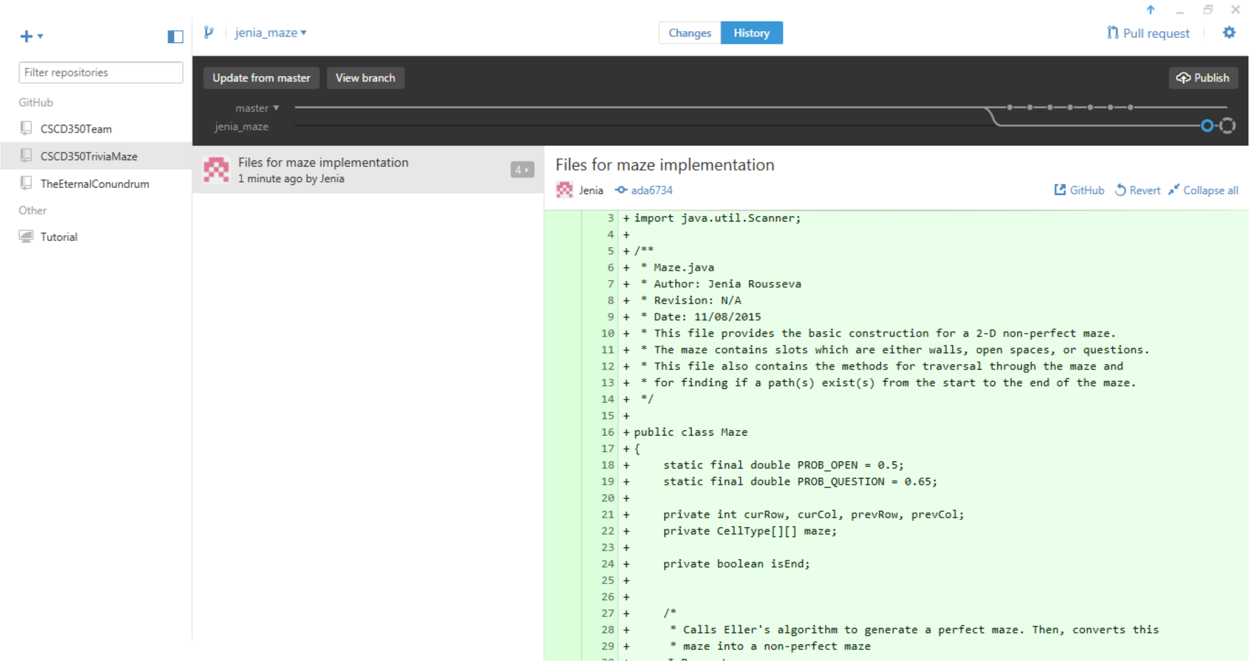
Jenia ada6734

These files provide methods for the implementation and traversal of the maze. Comments according to the coding standards have been added.

- CellType.java
- Ellers.java
- Maze.java
- MazeTester.java

Created commit: 'Files for maze implementation'

Code Snippets:

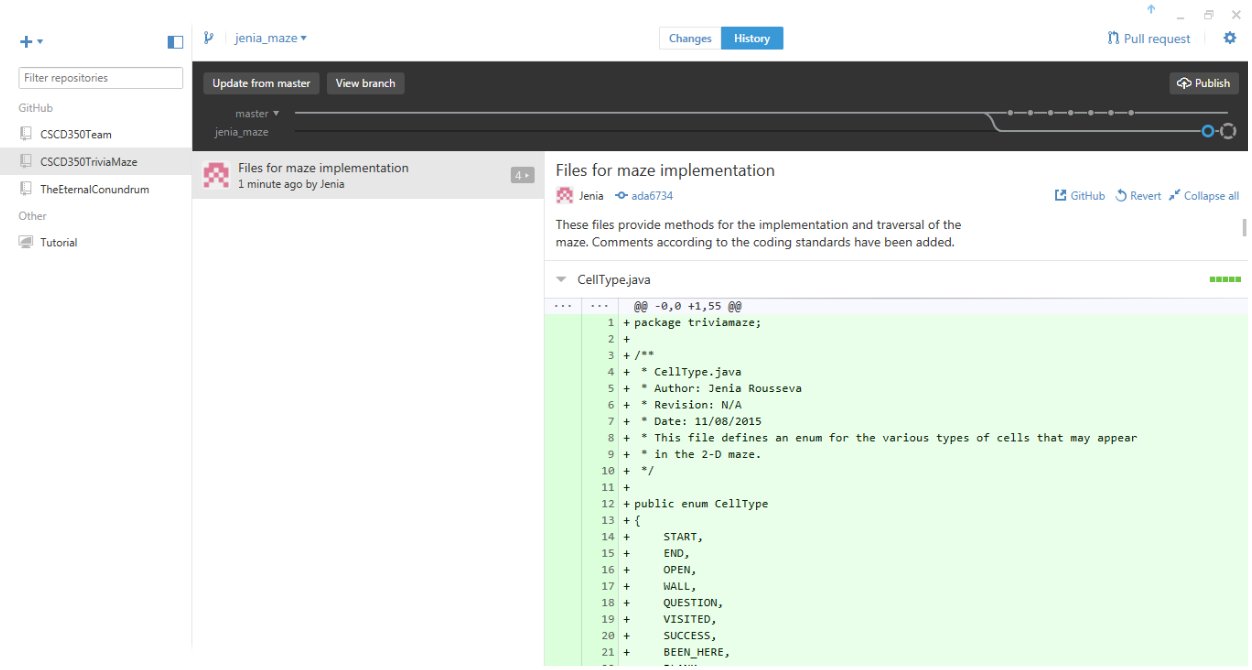


Files for maze implementation
1 minute ago by Jenia

Files for maze implementation

Jenia ada6734

```
+ import java.util.Scanner;
+
+ /**
+  * Maze.java
+  * Author: Jenia Rousseva
+  * Revision: N/A
+  * Date: 11/08/2015
+  * This file provides the basic construction for a 2-D non-perfect maze.
+  * The maze contains slots which are either walls, open spaces, or questions.
+  * This file also contains the methods for traversal through the maze and
+  * for finding if a path(s) exist(s) from the start to the end of the maze.
+  */
+
+ public class Maze
+ {
+     static final double PROB_OPEN = 0.5;
+     static final double PROB_QUESTION = 0.65;
+
+     private int curRow, curCol, prevRow, prevCol;
+     private CellType[][] maze;
+
+     private boolean isEnd;
+
+
+     /*
+      * Calls Eller's algorithm to generate a perfect maze. Then, converts this
+      * maze into a non-perfect maze
```



Files for maze implementation
1 minute ago by Jenia

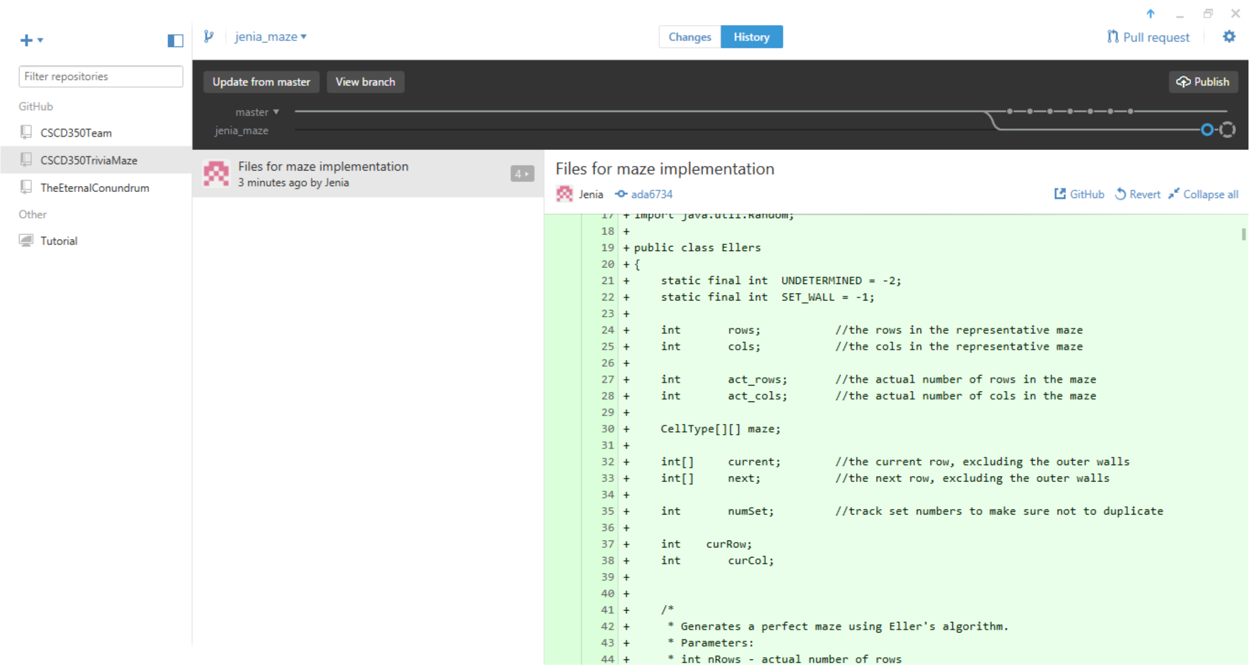
Files for maze implementation

Jenia ada6734

These files provide methods for the implementation and traversal of the maze. Comments according to the coding standards have been added.

CellType.java

```
@@ -0,0 +1,55 @@
+ package triviamaze;
+
+ /**
+  * CellType.java
+  * Author: Jenia Rousseva
+  * Revision: N/A
+  * Date: 11/08/2015
+  * This file defines an enum for the various types of cells that may appear
+  * in the 2-D maze.
+  */
+
+ public enum CellType
+ {
+     START,
+     END,
+     OPEN,
+     WALL,
+     QUESTION,
+     VISITED,
+     SUCCESS,
+     BEEN_HERE,
```



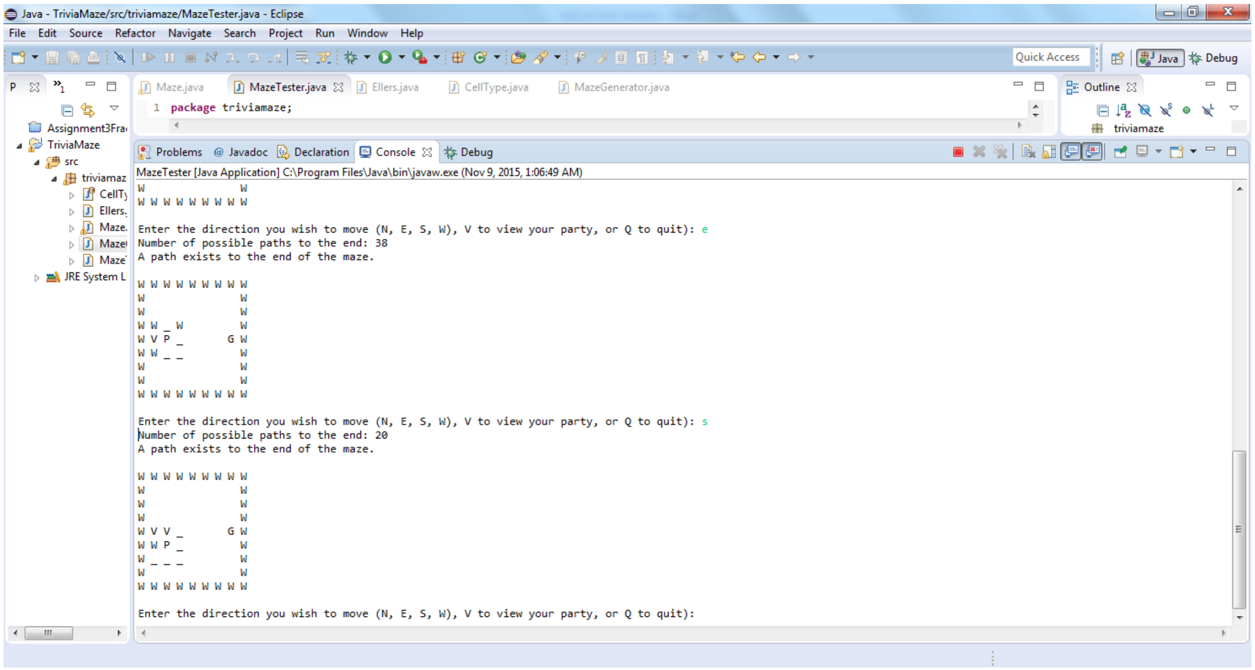
Files for maze implementation
3 minutes ago by Jenia

Files for maze implementation

Jenia ada6734

```
+ import java.util.Random;
+
+ public class Ellers
+ {
+     static final int  UNDETERMINED = -2;
+     static final int  SET_WALL = -1;
+
+     int       rows;           //the rows in the representative maze
+     int       cols;           //the cols in the representative maze
+
+     int       act_rows;       //the actual number of rows in the maze
+     int       act_cols;       //the actual number of cols in the maze
+
+     CellType[][] maze;
+
+     int[]     current;        //the current row, excluding the outer walls
+     int[]     next;           //the next row, excluding the outer walls
+
+     int       numSet;         //track set numbers to make sure not to duplicate
+
+     int    curRow;
+     int       curCol;
+
+
+     /*
+      * Generates a perfect maze using Eller's algorithm.
+      * Parameters:
+      * int nRows - actual number of rows
```

Example of maze traversal:



```java
package triviamaze;
```

MazeTester [Java Application] C:\Program Files\Java\bin\javaw.exe (Nov 9, 2015, 1:06:49 AM)

```
W               W
W W W W W W W W W

Enter the direction you wish to move (N, E, S, W), V to view your party, or Q to quit): e
Number of possible paths to the end: 38
A path exists to the end of the maze.

W W W W W W W W W
W               W
W               W
W W _ W         W
W V P _       G W
W W _ _         W
W               W
W               W
W W W W W W W W W

Enter the direction you wish to move (N, E, S, W), V to view your party, or Q to quit): s
Number of possible paths to the end: 20
A path exists to the end of the maze.

W W W W W W W W W
W               W
W               W
W               W
W V V _       G W
W W P _         W
W _ _ _         W
W               W
W W W W W W W W W

Enter the direction you wish to move (N, E, S, W), V to view your party, or Q to quit):
```