**package** com.fita.game;

**import** java.util.Random;

**public** **class** Forest {

**private** **static** **char**[][] *forest*;

**public** **static** **void** main(String[] args) {

// Generate a forest with 10 rows and 10 columns

*forest* = *generateForest*(10,10);

// Display the forest

*displayForest*(*forest*);

// Move the player to the right

*movePlayer*(*forest*,'R');

// Display the forest again

*displayForest*(*forest*);

}

**private** **static** **char**[][] generateForest(**int** rows, **int** cols) {

**char**[][] forest = **new** **char**[rows][cols];

Random random = **new** Random();

**for** (**int** i = 0; i < rows; i++) {

**for** (**int** j = 0; j < cols; j++) {

// Randomly generate a tree or open space

forest[i][j] = random.nextBoolean() ? 'T' : '.';

}

}

// Place the player at a random empty location

**int** playerRow = random.nextInt(rows);

**int** playerCol = random.nextInt(cols);

**while** (forest[playerRow][playerCol] == 'T') {

playerRow = random.nextInt(rows);

playerCol = random.nextInt(cols);

}

forest[playerRow][playerCol] = 'P';

**return** forest;

}

**private** **static** **void** displayForest(**char**[][] forest) {

**for** (**int** i = 0; i < forest.length; i++) {

**for** (**int** j = 0; j < forest[0].length; j++) {

System.***out***.print(forest[i][j]);

}

System.***out***.println();

}

}

**private** **static** **void** movePlayer(**char**[][] forest, **char** direction) {

**int** playerRow = 0;

**int** playerCol = 0;

**for** (**int** i = 0; i < forest.length; i++) {

**for** (**int** j = 0; j < forest[0].length; j++) {

**if** (forest[i][j] == 'P') {

playerRow = i;

playerCol = j;

**break**;

}

}

}

**int** newPlayerRow = playerRow;

**int** newPlayerCol = playerCol;

**switch** (direction) {

**case** 'W':

newPlayerRow--;

**break**;

**case** 'A':

newPlayerCol--;

**break**;

**case** 'S':

newPlayerRow++;

**break**;

**case** 'D':

newPlayerCol++;

**break**;

}

// Check if the move is valid

**if** (newPlayerRow < 0 || newPlayerRow >= forest.length|| newPlayerCol < 0 || newPlayerCol >= forest[0].length || forest[newPlayerRow][newPlayerCol] == 'T')

{

System.out.println("Invalid move!");

**return**;

}

// Move the player

forest[playerRow][playerCol] ='.';

forest[newPlayerRow][newPlayerCol]='P';

    }

}