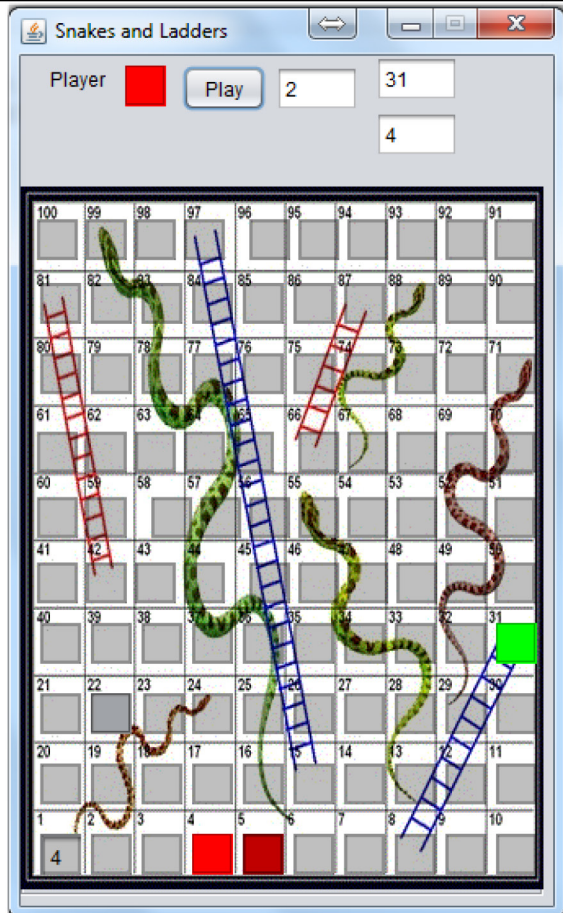


Fundamentals of Programming II Lab 11

0040



ADice

```
abstract class ADice {
    int rank;
}
```

Dice

```
public class Dice extends ADice{
    void genRank()
    {
        rank=(((int)(Math.random()*10))%6)+1;
    }
    int getRank()
    {
        return rank;
    }
}
```

ABoard

```
int player1,player2;
abstract void playPlayer1(int d);
abstract void playPlayer2(int d);
abstract int getPlayer1();
```

		<pre> abstract int getPlayer2(); abstract void setPlayer1(int p); abstract void setPlayer2(int p); </pre>
	Board	<pre> public class Board extends ABoard { Board() { player1 = 0; player2 = 0; } void playPlayer1(int d) { player1 = (player1+d); if(player1>99) player1=99; } void playPlayer2(int d) { player2 = (player2+d); if(player2>99) player2=99; } int getPlayer1() { return player1; } int getPlayer2() { return player2; } void setPlayer1(int p) { player1=p; } void setPlayer2(int p) { player2=p; } void checkExpectations() { if (player1 == 7) { player1=(30); } } } </pre>

```

if (player2 == 7) {
    player2=(30);
}
if (player1 == 14) {
    player1=(96);
}
if (player2 == 14) {
    player2=(96);
}
if (player1 == 41) {
    player1=(80);
}
if (player2 == 41) {
    player2=(80);
}
if (player1 == 65) {
    player1=(86);
}
if (player2 == 65) {
    player2=(86);
}
if (player1 == 23) {
    player1=(0);
}
if (player2 == 23) {
    player2=(0);
}
if (player1 == 54) {
    player1=(12);
}
if (player2 == 54) {
    player2=(12);
}
if (player1 == 70) {
    player1=(28);
}

```

		<pre> if (player2 == 70) { player2=(28); } if (player1 == 87) { player1=(66); } if (player2 == 87) { player2=(66); } if (player1 == 98) { player1=(5); } if (player2 == 98) { player2=(5); } } } </pre>
	Form attributes	<pre> Dice dice = new Dice(); Board board = new Board(); int winner = 0; </pre>
	Form constructor	<pre> clearBoard(); </pre>
	Play button	<pre> play(); swapPlayer(); checkWinner(); </pre>
	play()	<pre> void play() { if (winner > 0) { return; } dice.genRank(); jTextField1.setText(Integer.toString(dice.getRank())); if (Player.getBackground().getRGB() == Color.green.getRGB()) { board.playPlayer1(dice.getRank()); jTextField2.setText(Integer.toString(board.getPlayer1()) </pre>

		<pre> + 1)); } else if (Player.getBackground().getRGB() == Color.red.getRGB()) { board.playPlayer2(dice.getRank()); jTextField3.setText(Integer.toString(board.getPlayer2() + 1)); } board.checkExpectations(); clearBoard(); renderBoard(); } </pre>
	clearBoard()	<pre> void clearBoard() { for (int p = 0; p < 100; p++) { renderPanel(p, new Color(0,0,0,64)); } } </pre>
	renderPanel(int p, Color c)	<pre> void renderPanel(int p, Color c) { switch (p) { case 0: _00.setBackground(c); break; case 1: _01.setBackground(c); break; ... case 27: _27.setBackground(c); break; ... case 99: _99.setBackground(c); break; } } </pre>
	renderBoard()	<pre> void renderBoard() { </pre>

		<pre> int p1; int p2; p1 = board.getPlayer1(); p2 = board.getPlayer2(); renderPanel(p1, Color.green); renderPanel(p2, Color.red); jLabel2.repaint(); } </pre>
	swapPlayer()	<pre> void swapPlayer() { if (winner > 0) { return; } if (Player.getBackground().getRGB() == Color.green.getRGB()) { Player.setBackground(Color.red); } else if (Player.getBackground().getRGB() == Color.red.getRGB()) { Player.setBackground(Color.green); } } </pre>
	checkWinner()	<pre> void checkWinner() { if(winner>0) return; if (board.getPlayer1() == 99) { JOptionPane.showMessageDialog(this, "Palyer 1 (Green) wins", "winner", JOptionPane.INFORMATION_MESSAGE); winner = 1; } else if (board.getPlayer2() == 99) { winner = 2; JOptionPane.showMessageDialog(this, "Plater 2 (Red) wins", "winner", JOptionPane.INFORMATION_MESSAGE); } } </pre>