

Your program assignment is a simulation of the bingo game. The game consists of two players, human and computer. Each player has a bingo card with 24 randomly generated numbers and free number in the center box of the card. The winner is decided when a player has five numbers connected horizontally, vertically, or diagonally. The computer player automatically knows when it has bingo and claims the game, while the human player would have to click on the “Bingo” button when he/she thinks they have the connected numbers. Your program needs to allow user to restart a new game without having to close the frame. You can play Yahoo’s Bingo to understand the game play.

Classes Require(you may create additional classes)

- BingoCard extends JComponent
 - represent a bingo card of 25 boxes with numbers
- BingoCardComputer extends BingoCard
 - the computer player that knows he has the winning numbers
- BingoCardHuman extends BingoCard
 - the human player that has to click on the bingo button when he/she has the winning numbers
- BingoNumbers
 - generates and stores random numbers from 1 to 78, inclusively.
- BingoGame
 - builds the frame, display bingo cards and bingo numbers, add buttons and listeners,...

Game Play

- Bingo numbers are displayed and generated every 5 seconds
- Two bingo cards are displayed on the frame.
 - o The card has 24 random numbers for every game.
 - Column 1 contains numbers 1 – 16
 - Column 2 contains numbers 17 – 32
 - Column 3 contains numbers 33 – 47
 - Column 4 contains numbers 48 – 63
 - Column 5 contains numbers 64 - 78
 - o Computer bingo card automatically highlights the matching numbers.
 - o Human has to click on their bingo card to have the numbers highlighted. (note: the number on the card does not have to match the bingo number for the box to be highlighted)
- “Restart” button allows players to start a new game.
- “Bingo” button allows human player call bingo, however, if the human player does not have the number, then a message “No Bingo” will be displayed and the game continues.
- Display a message to congratulate the appropriate player when they call bingo.

Grading

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| - Bingo cards with 24 random numbers | 15 points |
| - Boxes are automatically highlighted (computer) | 10 points |
| - Boxes are highlighted when clicked (human) | 10 points |

-	Bingo numbers (1-78) generated every 5 seconds	15 points
-	“Bingo” button works properly	20 points
-	Computer claims bingo automatically when applies	15 points
-	Appropriate prompts of messages for user events	10 points
-	“Restart” button works properly	5 points
	Total points possible	100 points