COMP20050 - Group 47 - Game Instructions
Final Submission
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Provided is a .jar file of the current state of the game.
(JDK version: 21.0.2)

- Running the file

1) Firstly, download the .jar file and simply double click but if you wish to start program from command line, follow the instructions 2 - 4
2) Put it somewhere in which you can access through the command line/ terminal.
3) Open the command line/ terminal and navigate to the location where the .jar file of the game is located.
4) Run the command 'java -jar BlackBoxPlus.jar' and the program will begin

- Playing the game

5) You will firstly be met with the Menu screen and prompted to Play or Exit
6) You will then be brought to a game mode screen and prompted to play "Single Player" or "Multiplayer" - (Multiplayer is the implementation of the game required in the brief while single player is a mode which lets 1 player play against the computer)

- Multiplayer

7) Firstly, once you click "Multiplayer" a new window will appear in which you can input a username or alternatively do not enter a name and click submit - in which you will be given the name "Player 1" or "Player 2" respectively
8) Once submitted, the window will open again and prompt the second player to enter the name and instructions are the same as above (step 7)
9) The game will automatically assign the role of "setter" to player 1 and will then open up a new window including the game board
10) The game requires the setter click inside a hexagon in which they wish to place the atom
11) You also have the option to click an already placed atom, which will lead to that atom being removed from the board
12) Once 6 atoms are on the board, the game will present a button called "Advance" at the bottom right of the screen, click to advance to the allow the experimenter to begin playing and the atoms will then be hidden on the board

13) The experimenter will then be prompted either guess an atom - done by clicking inside a hexagon or send a ray - done by clicking on one of the numbers which surround the board

14) Again the experimenter can remove an atom if they are not happy with their decision and once they have placed 6 atoms onto the board, the game will advance present the advance button to allow the player to progress

15) The full game picture will then be displayed onto the board, showing the original atoms placed by the setter and also the ray markers and ray paths placed by the experimenter

16) To continue, you must click the "Advance" button at the bottom right corner in which the game will restart but the roles will be exchanged.

17) You will be brought back to step 10 and will have to play another round again to finish

18) Once you view the Full Game Picture screen again and click the "Advance" button, the game will finish and an end scoring screen will appear to display the winner and also the statistics from the game - number of correctly guessed atoms and number of rays sent.

19) To exit you must click the "Menu" button at the bottom left corner and you will then be brought back to the Main menu screen and can click "Exit" to terminate the program

- Single Player

20) The game will firstly ask for your name by opening a new window in which to enter an name

21) You will them be prompted to select a difficulty in which you want to play against

22) The program will then automatically place 6 atoms onto the board and you will be prompted to either send a ray or place an atom. This can be done by clicking inside the desired hexagon for placing an atom or clicking one of the numbers which surround the board for sending rays

23) If you accidentally click the wrong location you also have the ability to click the same atom again which will remove that atom from the board

24) Once you have 6 atoms placed onto the board, the program will present the advance button at the bottom right of the screen to allow the user to progress

25) The game will then display the full picture of that round including where the original atoms were placed and also the paths of the rays which entered the board and their respective ray markers

26) You will then need to click next to advance to the next part of the game

27) You will then take on the role of setter and be required to place 6 atoms onto the board in which the computer will then use to play the role of experimenter

28) Again you will be able to remove an atom by clicking an already placed atom and once you have placed 6 atoms, the game will display a button to advance

29) The computer will then automatically start sending in rays from different locations and once it has finished, you will need to click the "Advance" button in the bottom right corner
30) The computer will then make its guesses as to where the atoms are located and again once it has finished, you will then need to click "Advance" to see the full game picture
31) Again you must click the "Advance" button on the "Full Game Picture" screen to advance but this time a end scoring screen will appear in which you will be able to see all statistics from the game