PAUL
User Manual

P.A.U.L. Development Team

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1   Introduction

Hello, and welcome to PAUL. Before we start, however, keep in mind that although fun and learning are the primary goals of all PAUL activities, serious injuries may occur. For your own safety and the safety of others, please refrain from provoking PAUL, as this causes PAUL to become angry. Even so, PAUL is very happy you took the time to check this sophomore project out. We had a lot of fun making this, and hope you have just as much fun playing PAUL!

1.1   Installation

Before you run the game, there's a couple things to take care of.
Windows instructions:

1. Make sure you have pip installed. For a guide on how to do so, go to https://github.com/pypa/get-pip/#readme for a tutorial.

2. In File Explorer, navigate to the directory where the PAUL folder is extracted.

3. Click the Start button and type "cmd". Alternatively, press Win+R and type "cmd".

4. Once you're in Terminal, type the command:

   ```
   pip install -r requirements.txt
   ```

This installs all libraries in the 'requirements' text file, ensuring that all necessary libraries are in place. Otherwise, you run the risk of PAUL not working to his full potential. Who would want that?

2   A foreword from PAUL

First of all, let me get something straight. This is a JOURNAL, not a diary.
-PAUL

3   PAUL Main Menu

After running the 'main.py' file a window will appear, this is the PAUL main menu. You use your mouse to navigate the PAUL main menu. There are buttons with the game names underneath, by clicking those buttons will launch

the game. There is also a next and previous page button that will allow you to navigate the many pages of the PAUL main menu. There is also a scoreboard button that will take you to our leaderboard website: HTTP://paulis.online.

3.1   Themes

Now, if you don't like the default PAUL menu, you can change it with the themes button! You have a few options: Dark, Light, or Midnight, however, we advise that you do not select light mode, as it tends to make PAUL angry. You can change the theme by clicking the settings button, and then clicking on the button that says dark (if this is your first time changing the theme) and picking from the previously stated themes. When you click on the new theme the dropdown will disappear and you can click the back button and you will find that the color of the main menu has changed!

3.2   Setting your name

Now as previously mentioned, there is a leaderboard. To use the leaderboard you will need to set your name to save your score and maybe even get a high score for a game onto our leaderboard. To do this you can you can click the setting button in you PAUL main menu in the right hand corner. When you click in there there is a empty box to the left where you can type in your name with your keyboard. Make sure to hit the save button and then you can hit the back button to head back to the PAUL main menu and for any highscores your name will be saved!

Now that you know how the PAUL main menu works, you can play some games!

4   Easy games

This is the section for the easy games. Games in this category took our development team one day or shorter to code. These games are for quick rounds of relaxed, competitive fun.

4.1   Tic-Tac-Toe

The object of the game is to get three X's, or O's, in a straight line vertically, horizontally, or diagonally. The player with the O's goes first, then turns alternate. For a turn, you must place exactly one of your chosen letters on the 3x3 board. The nuance lies in how to minimize your opponent's chances

of achieving three in a row, while also trying to maximize your own chances. The player to get three in a row first wins the game. If neither player gets three in a row, then the game ends in a tie. To play this game you use your mouse to click the location on the grid that you'd like to place either your X or O. Once the game is over it will declare who won (if it wasn't a tie) and will automatically take you back to the main menu.

In PAUL's words: I really wish that I had any motivation to write a description for tic-tac-toe. It's really not so hard, like, just get three in a row.

4.2   Rock Paper Scissors

The object of the game is to outsmart your opponent by choosing the correct rock, paper, or scissors. The different objects function as follows: scissors cuts paper, paper covers rock, and rock crushes scissors. For this you use your mouse to click one of the boxes, it will display whether you lost to PAUL or not and then you continue playing or press the "esc" button to exit the game and go back to the PAUL main menu.

In PAUL's words: I don't know if you've heard, but back in the day I was the Error: NAN-*time champ in my Rock-Paper-Scissors little league. Yeah, I can see you through the manual with your mouth agape. Happy losing, buddy.*

4.3   Pong

The object of the game is to reach 10 points before your opponent. The game begins by a ball traveling from the middle of the board to either side of the arena, where you and your opponent must move your paddles to block the ball from exiting the screen. The ball will occasionally speed up to increase difficulty. Pong is strictly two-player unless you like playing against yourself. For player one, you can use the 'W' key to move up and the 'S' key to move down. For player two you can use the up-arrow key to move up and the down arrow key to move down. Once someone reaches 10 it will declare who has won and you can press the "esc" button to exit the game and go back to the PAUL main menu.

In PAUL's words: Pong is so simple that even a lime cucumber Gatorade-addicted guy like me could play it with ease. So, if you're struggling to under-stand the rules, maybe it's time to put down NetBeans and brush up on your gaming skills.

4.4 Hangman

The object of the game is to guess the correct word. The game is played by guessing for letters of the alphabet that are potentially in the correct word. If a guess is incorrect, the player is penalized by a new part of the hangman being drawn. If the hangman is fully drawn before the word is correctly guessed, the game ends in a loss. For this game you just use your keyboard to press the letter you would like to guess, you get 5 wrong guesses and when you win or lose the game will automatically take you back to the PAUL menu, however, if at any point you wish to leave you can press the "esc" button.

In PAUL's words: The man in the gallows is innocent. His name is Freddie Warren and he was framed for murder. This is an urgent message, I have to get this out. HE'S INNOCENT YOU FASCIST _ _ _ _ _ ! Try and guess THAT word, you pigs. You disgust me.

4.5 Mad Libs

You will be provided several missing words or phrases. These will be used to fill a paragraph with random spaces. Each missing word or phrase corresponds to a part of speech, or other descriptor (ex. adjective, time of day). Fill in each phrase accordingly, and have fun reading back the whole story with your own details! For this game you can you your mouse to click play and to click the story and after that you can use your keyboard to type in the words into the textbox, once you finish you madlibs masterpiece you can simply hit the "QUIT" button or hit the "esc" key on your keyboard.

In PAUL's words: I really don't get what's so fun about this one. I just put the word "PAUL" for all of them. The stories usually turn out pretty PAUL, though.

4.6 Guess The Number

The object of the game is to guess the randomly selected number. After each guess you make, you will be shown "Higher", indicating the correct number is greater, or "Lower", indicating that the correct number is lower. When you guess the correct number, you win the game. To enter the number, use the numbers on your keyboard, and if you'd like to leave the game at any time you can press the "esc" button.

In PAUL's words: You mean to tell me the reader needed those rules for a game that has its GOAL in the NAME? Is the reader's JOB a librarian? It's like, throw the reader a bone, guys, right? I mean...

4.7   Connect 4

The object of the game is to have 4 of your pawns in a row vertically, horizontally, or diagonally. Play begins with the red pieces taking a turn, then turns alternate. The board takes shape as the pawns are stacked up, creating room for strategy and thinking ahead. If neither player achieves four pawns in a row, then the game ends in a tie. To play Connect 4, all you need is your mouse you can move your cursor across the screen and click on the row in which you want to drop the pawn. Once someone wins, a message will appear and you will be taken back to the PAUL main menu.

In PAUL's words: This game makes me think of back in the day, all the way in 1603. Man, that was a great year for the Quad Connectum Worlde Championshippe. I think the finals that year were between Elizabeth I and Carlos Maguire.

5   Medium games

This is the section for the medium games. Games in this category took our development team between 3 and 5 days to code. These games require a bit of brainpower, making their gameplay more involved.

5.1   Slide puzzle

The object of the game is to slide the tiles of the puzzle such that the picture is complete. Each tile can only move if it is adjacent to the empty spot on the board. you can play this game but using your mouse to click on the piece you want to move and it will move to the empty space, you continue to do this until the picture is complete. You can both pause and exit this game at any time. By hitting the pause button in the top right, a screen with the completed picture will appear and you can either select Resume or Quit. Resume will allow you to resume gameplay, while Quit will take you back to the main menu.

In PAUL's words: This one is actually really easy if you're a true PAUL fan. All you have to do is remember what I look like, and then make the pieces go to the right spots. If you ever need help, just hit the Pause button.

5.2   Snake

The object of the game is to beat the high score. You play as a snake, beginning as only a single tile long. The snake grows in length every time you eat an apple, adding to your score. If you exit the bounds of the screen or overlap

yourself, then the game ends. To play Snake you can use the arrow keys to navigate around the screen, with all the arrow keys directing you in the respective direction. Once you die, you will be given the option to play again(press the letter C on your keyboard) or to go back to the main menu(press the "esc" key on your keyboard).

In PAUL's words: I hate this game. Zero out of ten, not enough PAUL.

5.3 Asteroids

The object of the game is to beat the high score. Asteroids will cross the game field as the game progresses, and you must use your spaceship to blast them into pieces. Your score increases with every asteroid that you destroy. If your spaceship is hit by an asteroid, then the game ends. For this game you can use your space bar to send off bullets and some of the arrow keys to navigate and aim the bullets. You can use the up arrow to navigate up and the left and right keys to spin the cursor clockwise or counter-clockwise to fire your bullets in a new direction.

In PAUL's words: This game is cool, but it's kind of unrealistic. The one time I went to the asteroid belt it was nothing like this. Although maybe that's because I forgot my spaceship at home. Oh well, who knows.

5.4 Mancala

The object of the game is to end with the most stones. The board begins with each of the twelve center pits being filled with 4 stones, and the mancala pits on either side of the board staying empty. One player takes the stones from one of the pits on their side, and then, in counter-clockwise order, drops one stone in each of the next pits, with the exception of the opponent's mancala pit. If a stone ends up in a player's mancala pit, that will score that player one point. When none of one player's center pits have any more stones, the game ends, and stones are counted. If stones still remain in a player's pit when the game ends, then those are counted towards that player's final score. The player who ends with the most stones wins. To play this game you use your mouse to click the desired marble from its pit.

In PAUL's words: Yeah, I'm not reading all that. I'm just gonna guess which pile I should pick up. The "random move" strategy serves me well enough in the other games, right? Wait a second, you don't know about that part. You might not have read that part of the manual yet. Stop me if I'm going ahead of myself, alright? Geez.

6   Hard games

This is the section for the hard games. Games in this category took our development team a week or longer to code. These games have you launch a campaign against formidable opponents: PAUL, and yourself.

6.1   Tetris

The object of the game is to beat the high score. The game is played on a 10x20 grid, and 4-block pieces, called tetrominoes, fall from the top-middle of the board. You may rotate and move each piece as it falls. A row is cleared if all 10 squares are occupied by pieces. You can score more points if you clear multiple rows with one piece. Once the piece stack reaches the top of the board, the game ends. In this game you can use the arrow keys to move the block to your desired location. You can use the respective left and right arrow keys to move the block to the right or left. You can also use the up arrow to change direction of the block and the down arrow to increase speed of the blocks descent.

In PAUL's words: Once you get really good at this game, there are competitive techniques to learn, like T-Spins, offense vs. defense, 4-wide stacking, and so on. The nuance lies in timing your attacks and stacking efficiently and cleanly. In short, get good.

6.2   Checkers

The object of the game is to capture all of your opponent's pieces. The player with the black pieces goes first, then turns alternate. On your turn, you must move one of your pieces. You can move any the pieces by selecting the piece with your mouse and then clicking one of the move options that appears. Your move options are marked by a white circle in the center of the box. Pieces move according to these rules:

- **Pawn** - The pawn can move one space, or jump any number of opponent's pieces, while only moving forward. A pawn promotes to a king if it reaches the opponent's back rank.

- **King** - The king can move one space, or jump any number of opponent's pieces, in any direction.

The first player to capture all of their opponent's pieces wins.
In PAUL's words: As I've already mentioned, I pioneered the "random move" strategy. Check this out: if I don't know what I'm doing, then there is no way

my opponent knows what I'm doing. Unbeatable strategy right there. I actually DARE you to beat me.

6.3   Chess

The object of the game is to capture your opponent's king. The player with the white pieces goes first, then turns alternate. On your turn, you must move one of your pieces. You can move any the pieces by selecting the piece with your mouse and then clicking one of the move options that appears. Your move options are marked by a white circle in the center of the box. Each piece moves in a unique way, according to these rules:

- **Pawn** - The pawn moves straight forward, and captures diagonally. On a pawn's first move, it is allowed to move forward two spaces. Otherwise, the pawn only moves forward one space at a time. If a pawn reaches the opponent's back rank, then it may promote to a queen, rook, bishop, or knight.

- **Knight** - The knight moves in an L shape. This is achieved by moving two spaces vertically or horizontally, and then moving one space at a right angle to that. The knight is the only piece in the game that is said to "jump" over, or move through, other pieces.

- **Bishop** - The bishop moves any number of spaces in a diagonal line.

- **Rook** - The rook moves any number of spaces vertically or horizontally.

- **Queen** - The queen moves any number of spaces vertically, horizontally, or diagonally.

- **King** - The king moves one space vertically, horizontally, or diagonally.

Chess also has some special rules for certain circumstances. These rules are as follows:

- **En passant** - If you move a pawn one square forward, and your pawn ends diagonally adjacent to an opponent's pawn, then the opponent may capture your pawn. This is a normal capture. However, imagine you move the same pawn two squares forward, as is allowed with the pawn's first move. Then the opponent's pawn, now horizontally adjacent to your pawn, can capture your pawn, as if you had only moved your pawn one square forward. This special capture is only allowed on the very next turn after an initial two-square pawn move.

- **Castling** - If the king has not yet moved, it is allowed to travel two spaces towards either rook that also has not yet moved, with the rook moving to the other side of the king. For example, long castles (denoted as 0-0-0) starts with the rook on a1 and a king on e1, and ends with the king on c1 and the rook on d1. Short castles (denoted as 0-0) starts with the king on e1 and the rook on h1, and ends with the king in g1 and the rook on f1.

The first player to capture their opponent's king wins.

In PAUL's words: Yeah, about that "random move" strategy? Turns out, not the best plan in chess. Unfortunately, it's a little late for me to actually learn the nuance of chess, since whoever programmed me is only letting me play random moves. Ugh. Maybe I shouldn't have been so adamant on "unpredictable and unorthodox playstyle"...

6.4   PAULatformer

The object of the game is to reach the final level. You must traverse through each level, collecting coins, jumping on POOMBAs, and reading signs along the way.

- **Movement** - You can move the mini PAUL with the A and D keys, or with the left and right arrow keys.

- **Crouch** - You can crouch with the S key or the down arrow key. Crouching allows the mini PAUL to move slower, making certain areas easier to navigate.

- **Signs** - You can read signs in the world with the C key. Signs contain helpful information and fun tidbits about PAUL, his homeland, etc.

- **Coins** - There are PAUL coins strewn about all across the land, with each level having 3 coins to collect. The coins don't do anything, but you can brag to your friends about your high score!

As there are 15 games in PAUL, the PAULatformer offers 15 levels to test your reflexes and danger-avoiding abilities. Reach the end for a surprise...

In PAUL's words: Oh, this is cute. You think this is a "game" that people are gonna play for "fun"? Gimme a break. There's no way they'll reach the final level anyways, it's too hard. But now I'm thinking, if they do get to the final level...

7 P.A.U.L. Discord bot

Do you want to bring the PAUL leaderboards to your server? Well, you can! This week only you can challenge your friends to beat you in one of the 5 of our games that have a scoreboard, yeah we don't know why we have this feature either!!! Angel liked it a lot so we had to keep it, We're trapped!! Anyway, add the discord bot have a cool time, or join our official PAUL discord to join the PAUL community and report issues.