Project Documentation
Task 1

Contents

Introduction:

Simultaneous QUATRO-UNO is a Python implementation of a strategic card game where two players compete to outmaneuver each other. The game is designed with a graphical user interface (GUI) using the Tkinter library. It allows players to make selections, play the game, and view the results.

Game Rules:

- Each player receives four cards: "1", "2", "3", and "4".

- Players take turns revealing their leftmost card.

- The lower card is discarded, and the higher card remains.

- If both cards are identical, they are removed from play.

- Exception: If one card is a "1" and the other a "4", both cards are discarded.

- The player who empties their pile first loses the game.

Steps:

➢ Select your cards.

- o The program window will display four buttons labeled with the card values "1", "2", "3", and "4". These buttons represent the cards available for you to choose from.
- o Click on the buttons corresponding to the four cards you want to play in your secret selection.
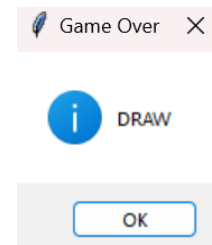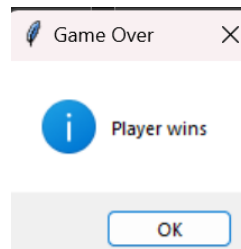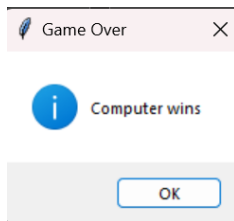
Your Selection:

| 1 | 2 | 3 | 4 |

Your Selection:

| 1 | 2 | 3 | 4 |

2, 3, 4, 1
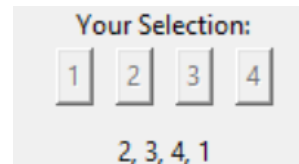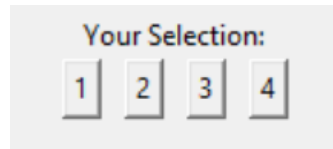
➤ Game play.
- o Upon clicking "Start Game," the program will perform the following actions:
- o It will randomly select four cards from the available deck ("1", "2", "3", and "4") to represent the computer's secret selection.
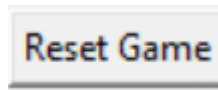- o The program will reveal the computer's chosen cards on the screen.

Computer's Selection:
3, 4, 2, 1
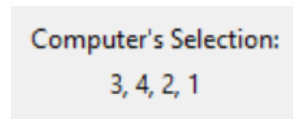
➤ Game loop (automatic).
- o The program will enter a loop that automatically resolves the round based on the chosen cards:
- o The first card from your selection and the first card from the computer's selection will be compared.
- o There are four possibilities:
- o If your card has a lower value than the computer's card, the computer wins two cards from your pile.
- o In the special case of "1" vs "4", both cards are removed from the piles
- o The loop repeats, comparing the next cards from each pile until:
- o One player's pile is empty (that player loses).
- o Both players' piles are empty (a draw).

➤ Game Over.
- o Once the game loop determines a winner (or a draw), a message box will pop up on the screen. The message will indicate:

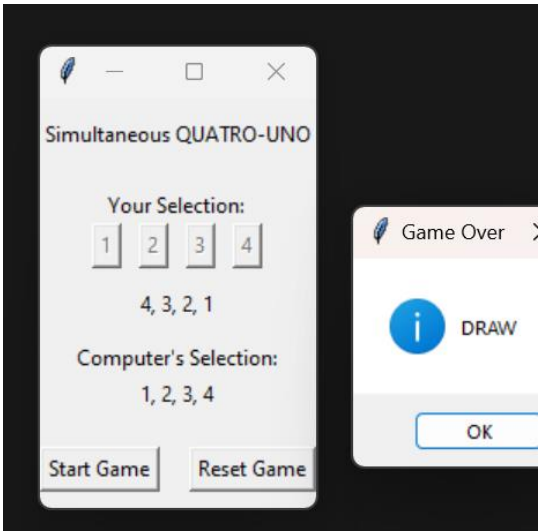- o "Player wins" if you emptied the computer's pile first.
- o "Computer wins" if the computer emptied your pile first.
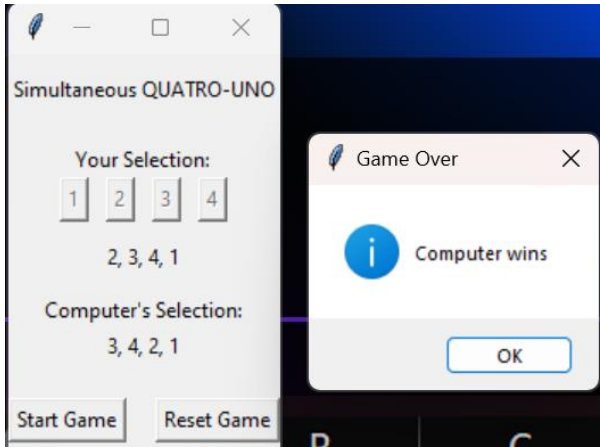- o "DRAW" if both players' piles are empty

- ➢ Reset the game (optional).
  - o The program window might provide a button labeled "Reset Game." Clicking this button will clear your previous selections and the computer's cards, allowing you to start a new round.
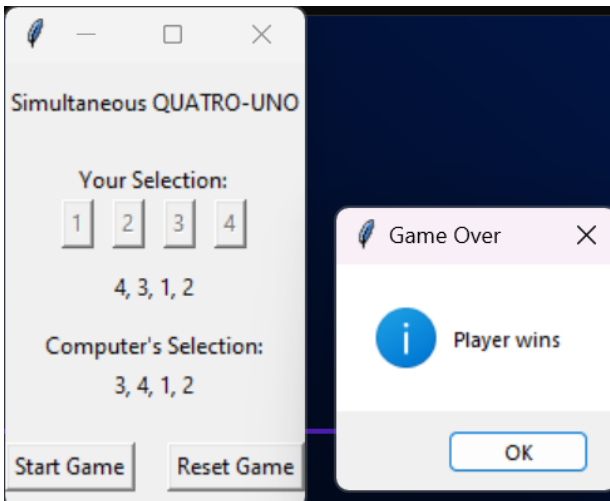

Screenshots for trying :

Simultaneous QUATRO-UNO

Your Selection: 1 2 3 4
4, 3, 2, 1

Computer's Selection: 1, 2, 3, 4

Game Over — DRAW

Start Game | Reset Game

	A	B	C	D	E
1		1	2	3	4
2	1	1,1	2,0	2,0	**1,1**
3	2	0,2	1,1	2,0	**2,0**
4	3	0,2	**0,2**	**1,1**	2,0
5	4	**1,1**	0,2	0,2	1,1
6					

Simultaneous QUATRO-UNO

Your Selection: 1 2 3 4
2, 3, 4, 1

Computer's Selection: 3, 4, 2, 1

Game Over — Computer wins

Start Game | Reset Game

	A	B	C	D	E
1		1	2	3	4
2	1	1,1	**2,0**	2,0	1,1
3	2	0,2	1,1	**2,0**	2,0
4	3	0,2	0,2	**1,1**	2,0
5	4	1,1	0,2	0,2	**1,1**

Simultaneous QUATRO-UNO

Your Selection: 1 2 3 4
4, 3, 1, 2

Computer's Selection: 3, 4, 1, 2

Game Over — Player wins

Start Game | Reset Game

	A	B	C	D	E
1		1	2	3	4
2	1	1,1	2,0	2,0	1,1
3	2	0,2	1,1	2,0	2,0
4	3	**0,2**	**0,2**	1,1	2,0
5	4	1,1	0,2	**0,2**	**1,1**