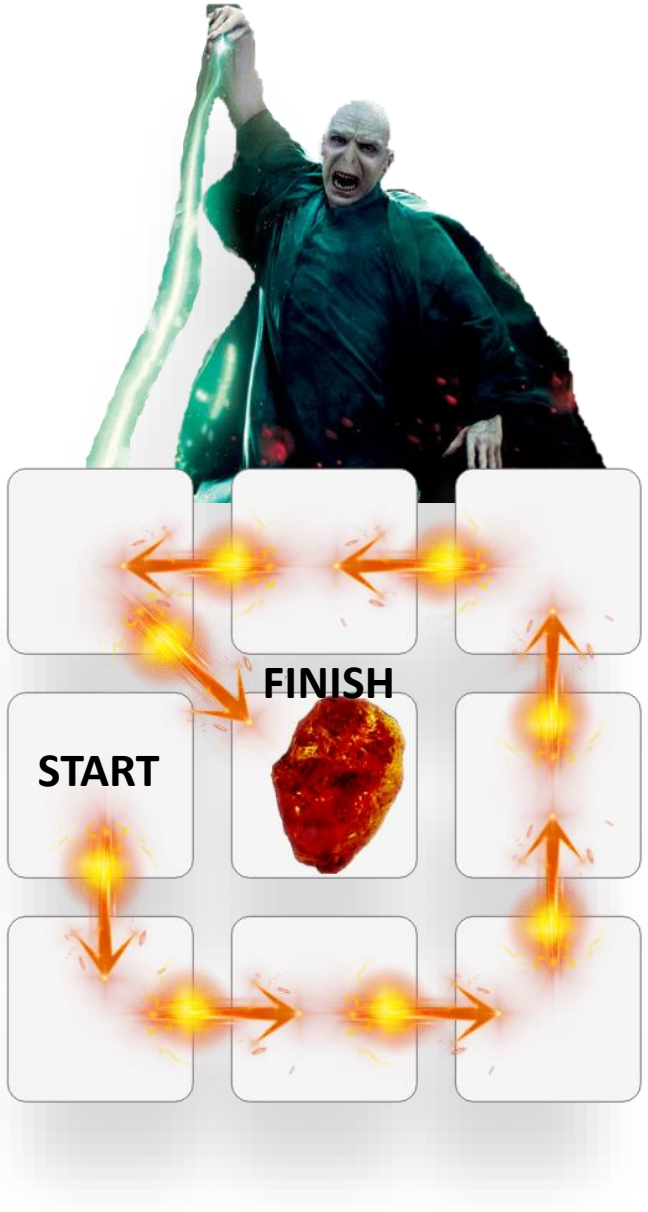
Group Project (Abas and Diana)

Board Game



Introduction

- **Dice:** Minimum value 1, Max value 3
- **Safespot**: Starting place is the only safe place where both players can co-exist
- **Outside of the Safespot** either player can kill the other if they land in their position.
- **When either player kills their opponent:**
  - Opponent goes back to the Safespot
- **When a player is at position:**
  - **6**: dice value is 3 that move will be skipped and given to opponent
  - **7**: dice value is 2,3 that move will be skipped and given to opponent

Team description

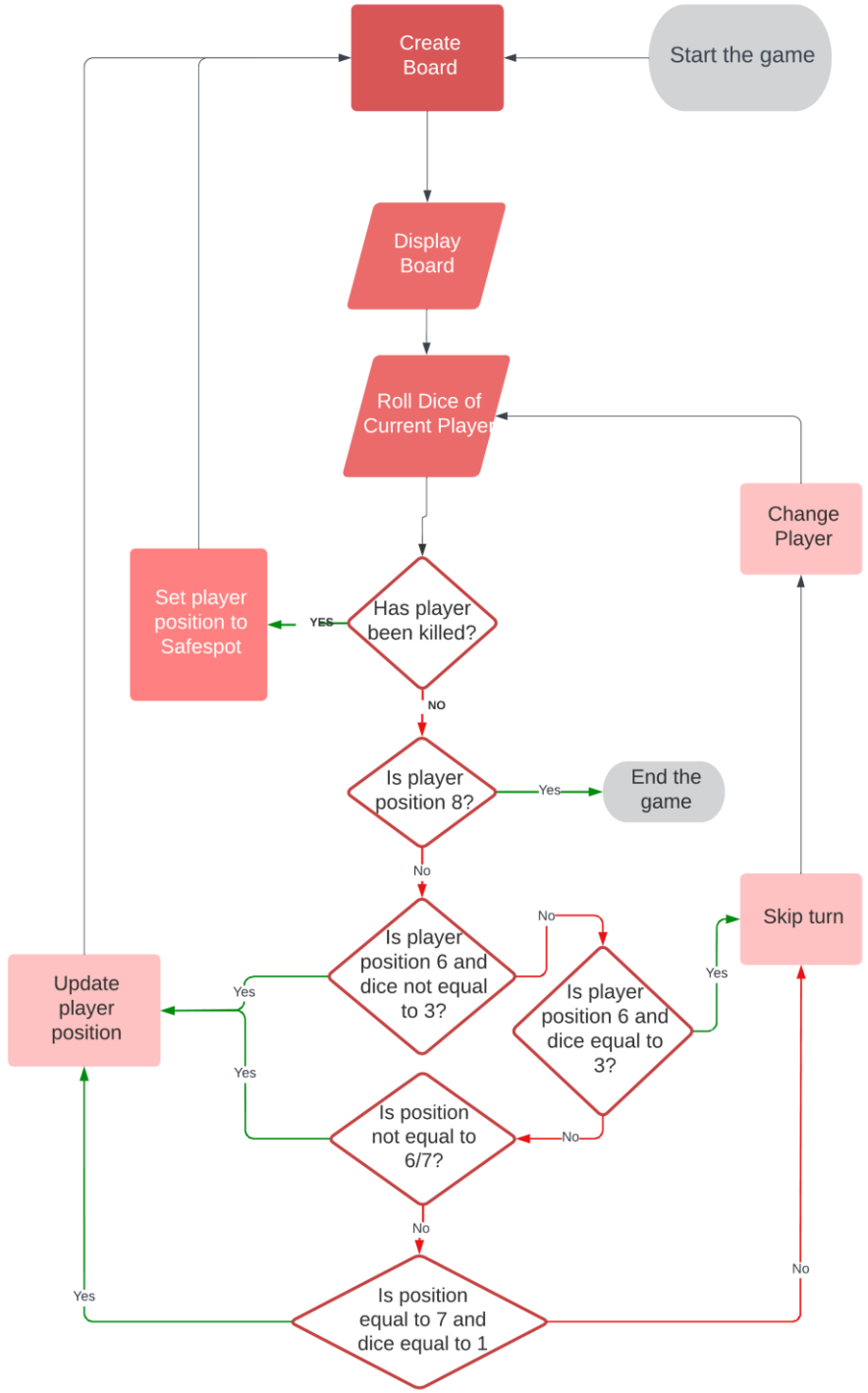
Abas Abdi

Worked on the game logic and the kill/skip features as well as code output, code snippet, team description, and conclusion.

Diana Percatkina

Worked on the board setup and the player functions as well as the Flow chart, Pseudocode, Introduction, documentation design, and conclusion.

Flowchart


Create Board
Start the game
Display Board
Roll Dice of Current Player
Change Player
Set player position to Safespot
YES
Has player been killed?
NO
Is player position 8?
Yes
End the game
No
Is player position 6 and dice not equal to 3?
No
Is player position 6 and dice equal to 3?
Yes
Skip turn
Update player position
Yes
Yes
Is position not equal to 6/7?
No
No
Yes
Is position equal to 7 and dice equal to 1
No

Pseudocode

- Generate a board with players on starting position = 0
- While players have not reached the finish position = 8:
  - For both Players , a random dice number is generated from 1 to 3
  - Player1 goes first by generated number
  - Update player position by adding the dice value
  - IF Player 1 or Player 2 position IS NOT equal to 8:
    - IF position is occupied by other player:
      - **Player** who rolled new position kills current **Occupant**
    - IF position is free:
      - **Player** moves to a new position
      - Next move going to other **Player**
  - IF Player 1 or Player 2 position IS equal to 8:
    - **Finish the GAME**
    - **Winner Output**

```
    action2 = ""
    action2 = input("Player 2: Hit enter to SPIN\n")
    dice2 = random.randint(1, 3)
    print("YOU ROLLED A", dice2, "\n")
    if pos2 != 8:
        pos2, kill1, moves2 = player2(name2,dice2, pos1, pos2, kill1, kill2,
        kill2 = False
    else:
        break
print("\nThe Game"); print(moves1, name1); print(moves2, name2)
if board[8] == name2[0]:
    return print(f"\nWinner: Player 2 {name2}!!")
elif board[8] == name1[0]:
    return print(f"\nWinner: Player 1 {name1}!!")
```

```
        pos1 = 0; board[pos1] = name1[0];moves1.append(0)
    if pos1 == 8:
        return pos
    elif (pos1 == 6 and dice != 3) or (pos1!= 6 and pos1 != 7):
        pos1 += dice; board[pos1] = name1[0];moves1.append(pos1)
    elif (pos1 == 7 and dice == 1):
        pos1 += dice; board[pos1] = name1[0]; moves1.append(pos1)
    else:
        print(f"\nEXPELLIARMUS!! {name1} skipped a turn!\n")
        return pos1, kill2, moves1
    if pos1 == pos2:
        kill2 = True
```

```
board=list(range(9))
# Board setup
def draw_board(board):
    print(board[7],'|',board[6],'|',board[5])
    print('__________')
    print(board[0],'|',board[8],'|',board[4])
    print('__________')
    print(board[1],'|',board[2],'|',board[3])
```

Code snippet

- Setting up the board
- Defining player functions
- Taking user inputs
- Enforcing game rules
- Recording game moves
- Calculating the winner

Output

```
7 | 6 | 5
----------
0 | 8 | 4
----------
1 | 2 | 3

Player 1 enter your name: Abas
Player 2 enter your name: Diana


Player 1: Hit enter to SPIN

YOU ROLLED A 1

Abas
7 | 6 | 5
----------
0 | 8 | 4
----------
A | 2 | 3
```

```
Player 2: Hit enter to SPIN

YOU ROLLED A 1

Diana
A | A | D
----------
D | A | D
----------
A | D | D

The Game
[0, 1, 4, 7, 0, 2, 4, 5, 6, 7, 8] Abas
[0, 2, 3, 4, 7, 0, 2, 4, 5] Diana

Winner: Player 1 Abas!!
```

```
Player 1: Hit enter to SPIN

YOU ROLLED A 2

Abas

AVADA KEDAVRA!! Abas has been killed!

D | 6 | 5
----------
A | 8 | D
----------
A | A | D
```

```
Player 2: Hit enter to SPIN

YOU ROLLED A 3

Diana

EXPELLIARMUS!! Diana skipped a turn!
```

Conclusion: What our team achieved

Board Game Creation with nice interface

Time management

Problem solving

Building the team relationship outside the office