Project Of Mid – Bano-Qabil 2.0

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Project : **Snake – Water – Gun (*Game-based project*)**

**Snake - Water – Gun**

Game-Based Project

**What is this?**

Snake, Water and Gun is a variation of the children's game "rock-paper-scissors" where players use hand gestures to represent a snake, water, or a gun.

**How it works?**

The gun beats the snake, the water beats the gun, and the snake beats the water

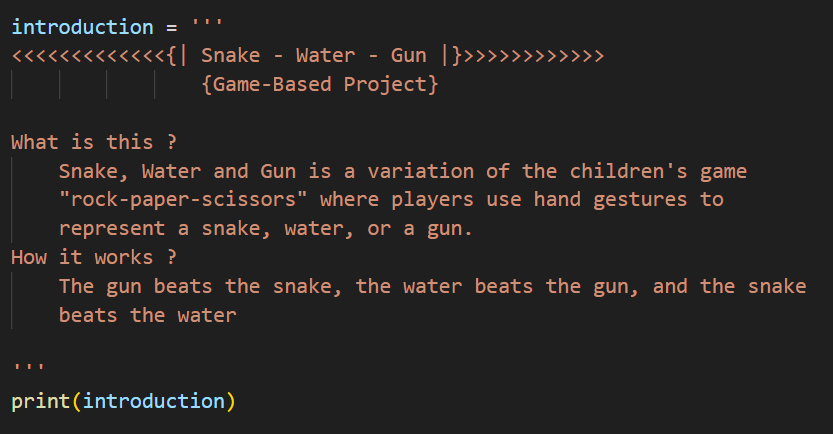
**Which Technology is used for development?**

Python programming language is used for development, it is a general-purpose programming language that is used in many areas. It is most popular programming language in the world!

Program Explanation

This program is started by a simple program ‘introduction’ of this game

Here Snippet of ‘introduction’:



Also we import built-in **random module’s** method **randint()**, it is used to generate computer choice when game is set as single-player mode



This game code has been break in 7 functions to simplify the program and easy to understand. These functions are listed below:

1. game\_mode\_selection
2. game\_round\_selection
3. game\_logic
4. players\_choice\_take\_and\_check
5. single\_player\_mode
6. multiplayer\_mode
7. Results

**1. game\_mode\_selection(single\_player\_mode, multiplayer\_mode)**

**Purpose:** Allows the user to select the game mode (Single Player or Multiplayer).

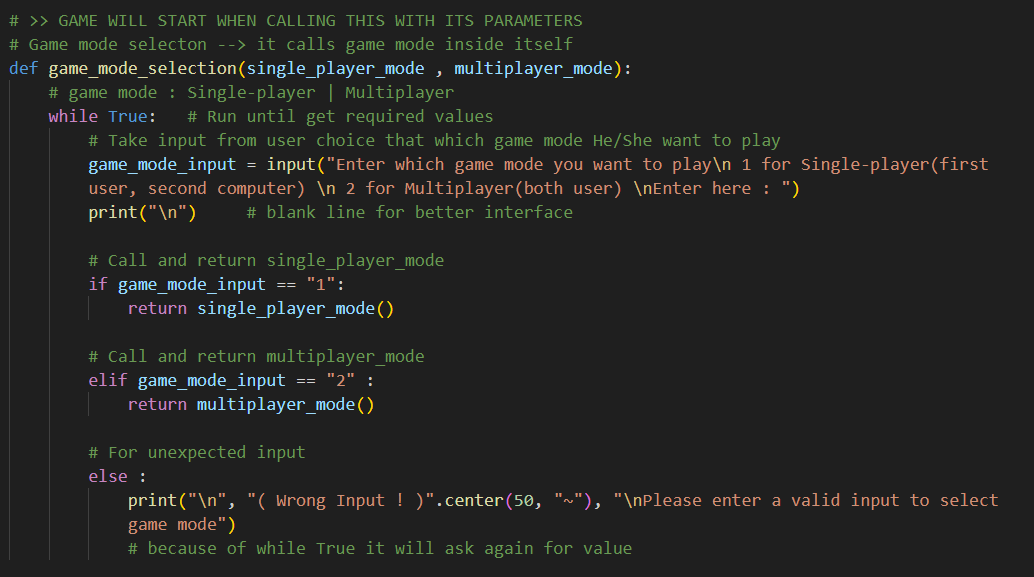
**Parameters:**

**single\_player\_mode:** Function representing the Single Player game mode.

**multiplayer\_mode:** Function representing the Multiplayer game mode.

**Usage:**

* Takes user input to select the game mode.
* Executes the chosen game mode function.



**2. game\_round\_selection()**

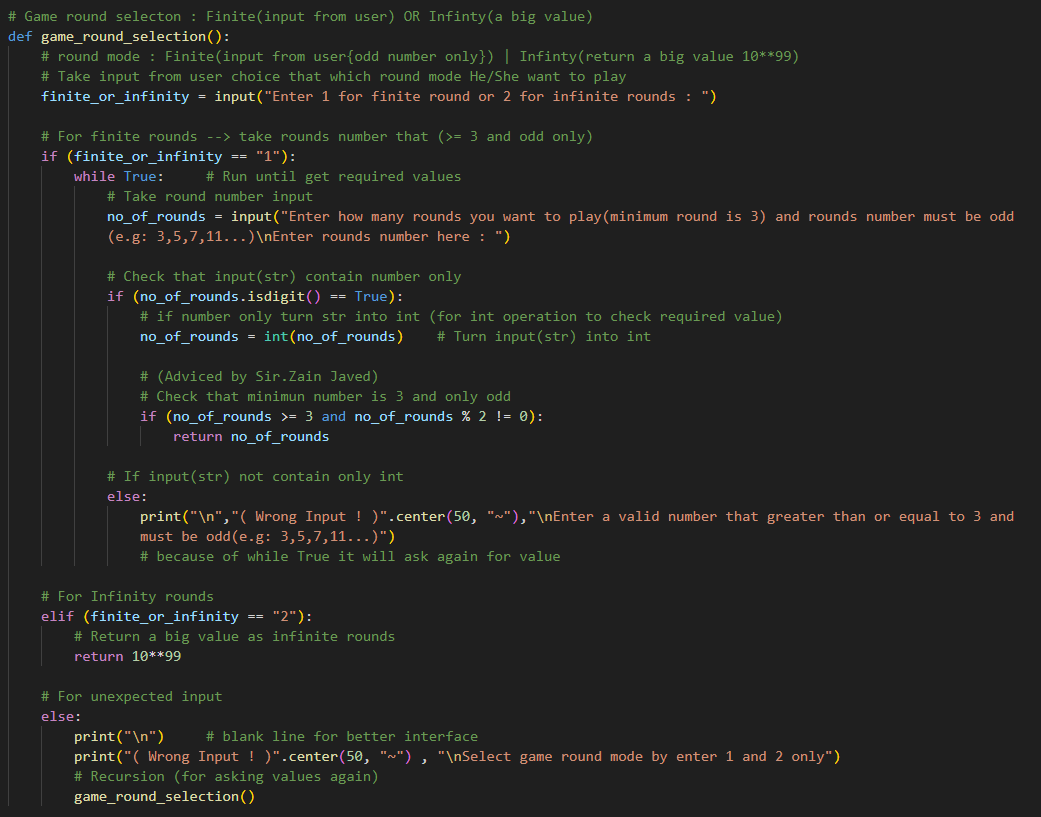
**Purpose**: Allows the user to select the number of rounds for the game (Finite or Infinite).

**Returns:**

* For Finite rounds, returns the number of rounds (must be odd and greater than or equal to 3).
* For Infinite rounds, returns a large value (10\*\*99).

**Usage:**

* Takes user input to determine the round mode.



c**3. game\_logic(player1\_name, player1\_ans, player2\_name, player2\_ans)**

**Purpose:** Implements the logic to determine the winner of each round based on player choices.

**Parameters:**

**player1\_name:** Name of the first player.

**player1\_ans:** Choice of the first player (1 for Snake, 2 for Water, 3 for Gun).

**player2\_name:** Name of the second player.

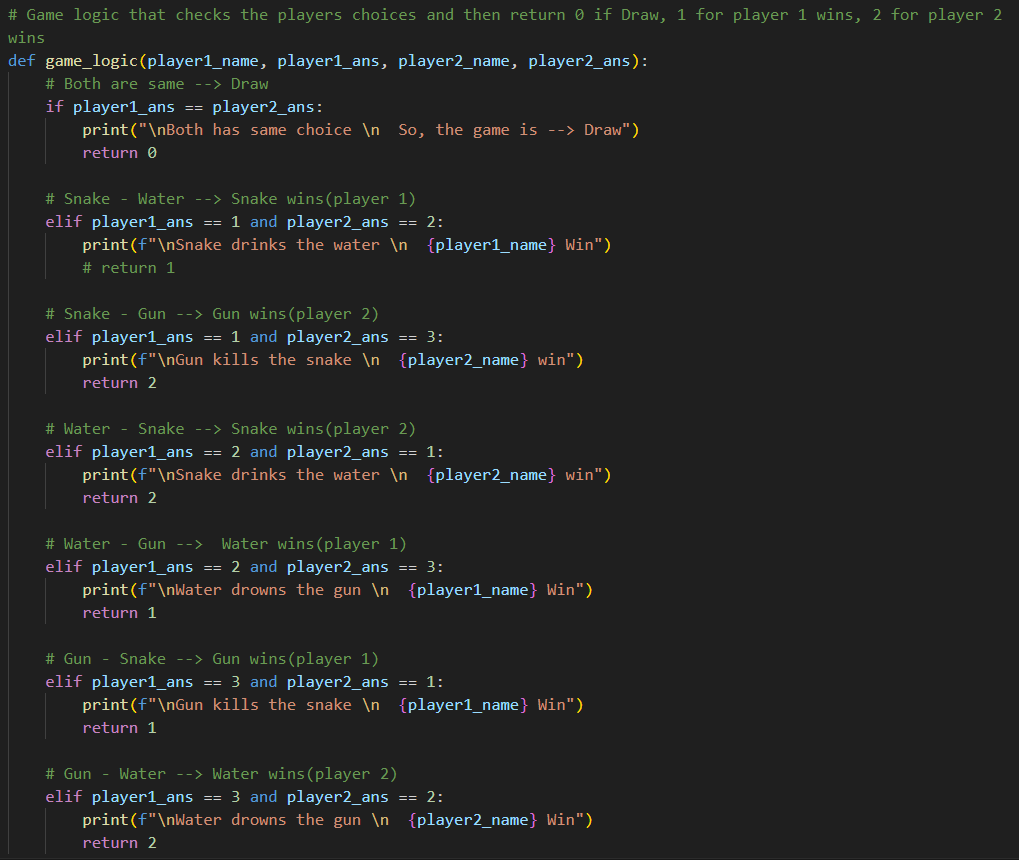
**player2\_ans:** Choice of the second player (1 for Snake, 2 for Water, 3for Gun).

**Returns:**

* 0 for a draw, 1 if player1 wins, and 2 if player2 wins.

**Usage:**

* Compares the choices and prints the result of each round.



**4. players\_choice\_take\_and\_check(player1\_name, player2\_name, game\_mode)**

**Purpose:** Takes player choices for each round based on the game mode.

**Parameters:**

**player1\_name:** Name of the first player.

**player2\_name:** Name of the second player.

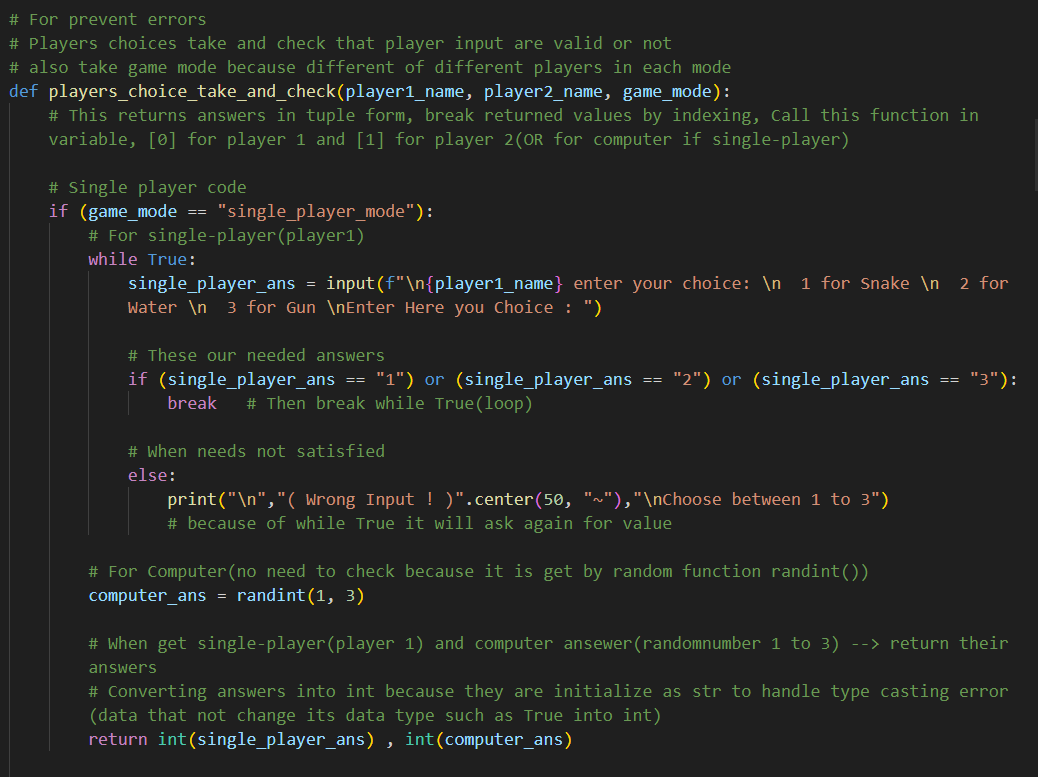
**game\_mode:** Indicates the game mode (Single Player or Multiplayer).

**Returns:**

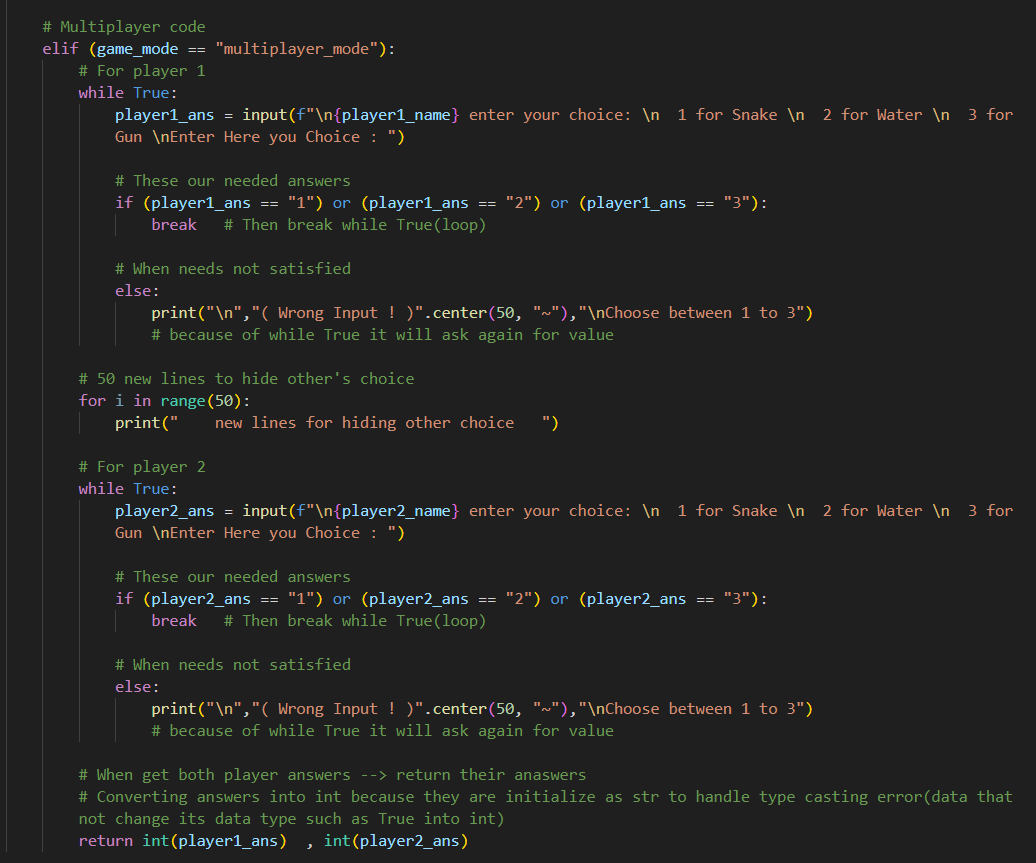
* For Single Player mode, returns the choices of the player and the computer.
* For Multiplayer mode, returns the choices of both players.

**Usage:**

* Takes user input for choices within specified ranges.

**Player’s choices take and check For Single-player** ­­

**Player’s choices take and check For Multiplayer-player**

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**\***Keep in mind that both above both code snippets are part of players\_choice\_take\_and\_check()

**5. single\_player\_mode()**

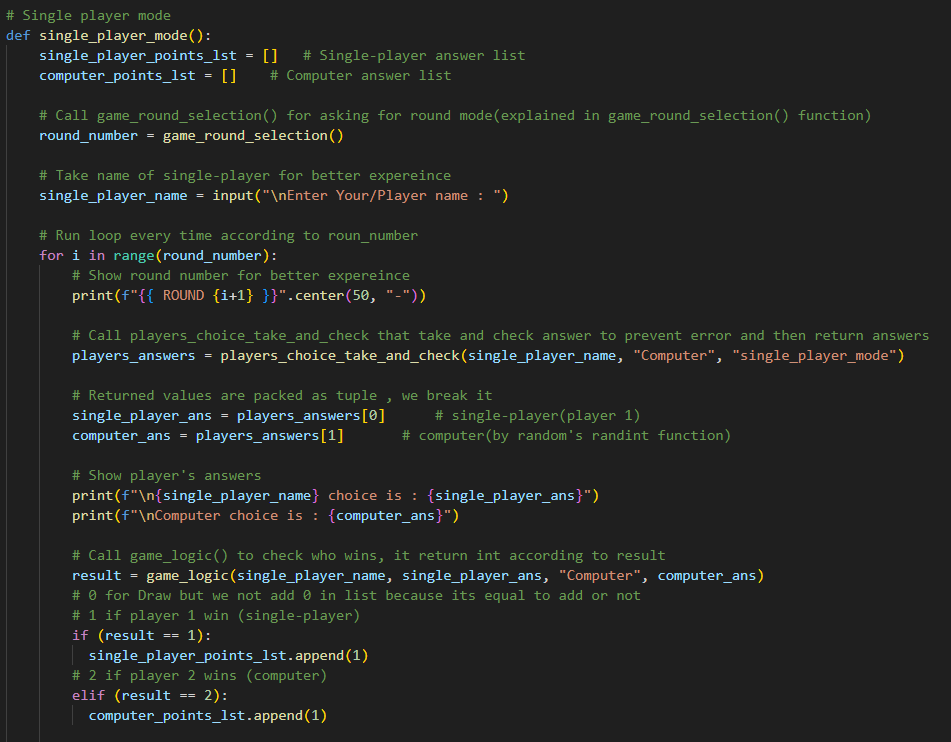
**Purpose:** Implements the Single Player game mode.

**Returns:**

* Calls the Results function to display the final result.

**Usage:**

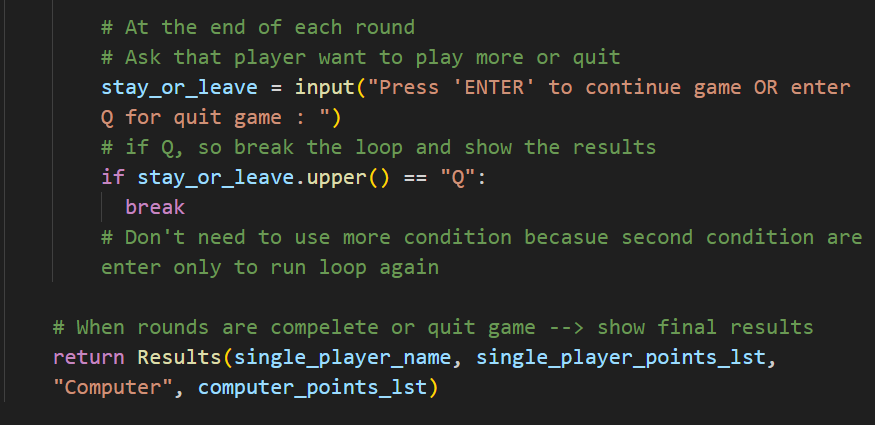
* Takes player and computer choices for each round.
* Calculates and accumulates points.
* Prints results after each round.



**\*Continued**

When each round complete asking for that player wants to continue game *or* want to **quit** game

If all rounds completed or player quit game then we **return Results** (7th function)



**\***This above *single-player code’s* snippets is also same for *multiplayer\_mode* but arguments of **Results** in *multiplayer\_mode* are different because variables names are different

**6. multiplayer\_mode()**

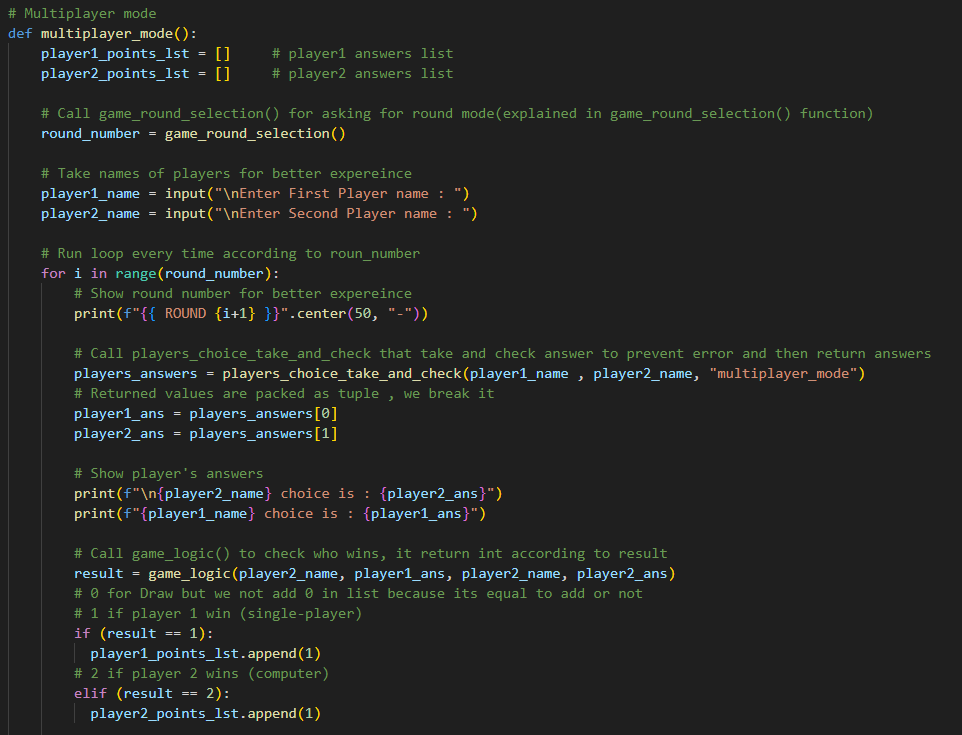
**Purpose:** Implements the Multiplayer game mode.

**Returns:**

* Calls the Results function to display the final result.

**Usage:**

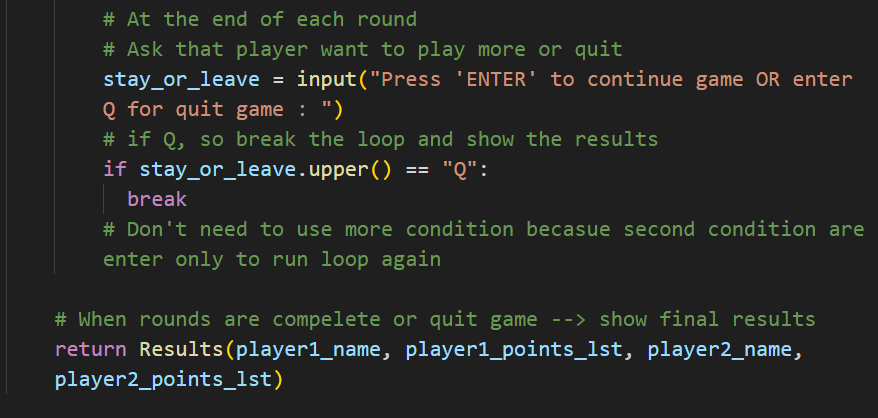
* Takes choices from both players for each round.
* Prints results after each round.



**\*Continued**

When each round complete asking for that player wants to continue game *or* want to **quit** game

If all rounds completed or player quit game then we **return Results** (7th function)

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**\***As above said this snippet of code is almost same as *single-player mode’s* code but arguments of **Result** are different !

**7. Results(player1\_name, player1\_ points\_lst, player2\_name, player2\_ points\_lst)**

**Purpose:** Displays the final result of the game.

**Parameters:**

**player1\_name:** Name of the first player.

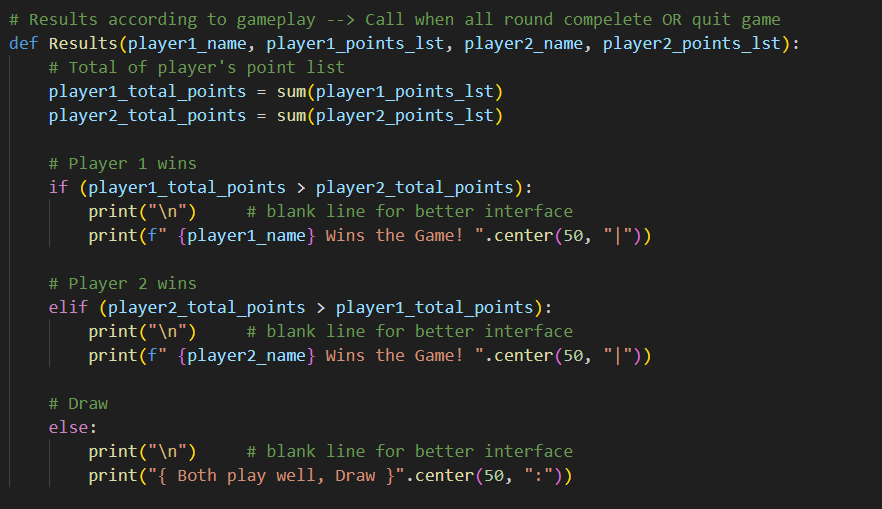
**player1\_points\_lst:** List of points scored by the first player.

**player2\_name:** Name of the second player.

**player2\_ points\_lst:** List of points scored by the second player.

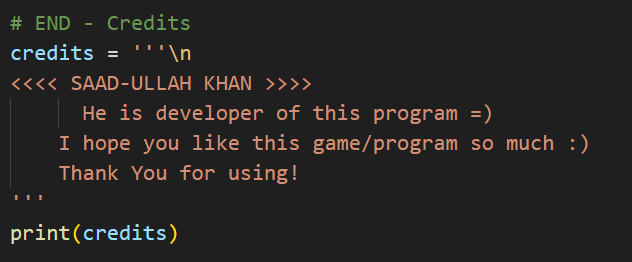
**Usage:**

* Calculates the total points for each player.
* Prints the winner or declares a draw.

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**END – Credits**

At the end of program displays credits for the developer and a thank-you message for the user



Printed at the end of the program.

*A beautiful ending ☺*

**XXX --- XXX --- XXX**