

# Game Name: Snake-Water-Gun

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This is a simple console-based implementation of the "Snake-Water-Gun" game, which is similar to the classic "Rock-Paper-Scissors" game. The game involves two players: you and the computer. The choices and rules are as follows:

- **Snake beats Water** (Snake drinks Water)
- **Water beats Gun** (Water rusts Gun)
- **Gun beats Snake** (Gun shoots Snake)

### Explanation of the Code

#### 1. Import the random Module:

Python

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```
import random
```

This module is used to generate random choices for the computer.

#### 2. Define Choices:

Python

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```
computer = random.choice([-1, 0, 1])
```

The computer makes a random choice between -1 (Water), 0 (Gun), and 1 (Snake).

#### 3. User Input:

Python

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```
youstr = input("Enter your choice (Snake/Water/Gun): ").lower()
```

The user is prompted to enter their choice. The input is converted to lowercase to match dictionary keys.

#### 4. Dictionaries for Mapping:

Python

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```
youDict = {"snake": 1, "water": -1, "gun": 0}  
reverseDict = {1: "Snake", -1: "Water", 0: "Gun"}
```

- `youDict` maps the user's input string to numerical values.
- `reverseDict` maps numerical values back to their string representations for display purposes.

#### 5. Validate User Input and Assign Values:

Python

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```
if youstr in youDict:
    you = youDict[youstr]
    print(f"You chose {reverseDict[you]}\nComputer chose {reverseDict[co
```

The code checks if the user's input is valid (present in `youDict`). If valid, it assigns the corresponding numerical value to `you` and prints the choices.

#### 6. Determine the Outcome:

Python

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```
if computer == you:
    print("It's a draw!")
else:
    if computer == -1 and you == 1:
        print("You win!")
    elif computer == -1 and you == 0:
        print("You lose!")
    elif computer == 1 and you == -1:
        print("You lose!")
    elif computer == 1 and you == 0:
        print("You win!")
    elif computer == 0 and you == -1:
        print("You win!")
    elif computer == 0 and you == 1:
        print("You lose!")
```

- If the choices are the same, it's a draw.
- Otherwise, the code uses a series of `if-elif` statements to determine if the user wins or loses based on the game's rules.

#### 7. Handle Invalid Input:

Python

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```
else:
    print("Invalid choice. Please enter Snake, Water, or Gun.")
```

If the user enters an invalid choice, the code prompts them to enter a valid one.

### How It Works:

- The computer makes a random choice.
- The user is prompted to input their choice.

- The user's input is validated and converted to a corresponding numerical value.
- The game compares the user's choice and the computer's choice to determine the outcome.
- The result (win, lose, draw) is printed based on the comparison.

This game is a fun way to practice programming concepts like dictionaries, conditional statements, and user input validation. Give it a try and enjoy the game! 😊