KPMG: CODE - ROCK, PAPER, SCISSORS GAME

Print - print outs your script
Example: print("Hello world")

Variables
Variables can be seen as containers for storing data values.
Variables should:

- Be a mix of letters, numbers and some special characters
- Start with a letter
- Be lowercase
- Use underscores instead of spaces

Example: name = "Alice", age = 28

Data Types
Strings - letters, numbers or phrases that are surrounded by quotes
Example: "cat", "65", "smelly cat"

Integer/Int - a whole number
Example: 1, 65, 100, -5

Float - a decimal number
Example: 1.6, 0.65, -0.455

Booleans - A data type that can either be True or False.
Syntax: boolean_variable = True, bolean_variable = False

Numerical Operators
+ adds numbers as well as concatenates strings
- subtracts numbers
* multiplies number
/ divides numbers
= assigns a value

Concatenate - merges strings.
Example: "Hello" + " " + "friend" will print "Hello friend" with the space in between

Input
Input allows a user to input data in the form of a string. This can be stored in a variable.
Example: name = input("What is your name")
print("Hello " + name)

Comparators
== equal to
!= not equal to
< less than
<= less than or equal to
> greater than
>= greater than or equal to

Conditional statements
If statements:
An if statement lets us decide what to do: if True, then do this, if False, then don't do this
Else statements:
If the first statement is False, you can use an else statement as a catch all statement. The else statement will be executed if the if statement is not satisfied.
Elif statements:
If you want to check more than two alternatives, you can use the elif statement. When using if, elif, else statements; the if statement is used first, then as many elif statements as required and then ends on an else statement.

Modules
A module contains reusable code. It allows you to make use of code others have created without having to reinvent it.
Random Module
import random - this imports a module that generates random numbers
random.choice(["rock","paper", "scissors"]) - generates a random choice from a specified list
random.randint(1,10) - generates a random number from a range.

Rock, Paper, Scissors Code

```
import random

print("Welcome to Rock, Paper, Scissors")

user_choice = input("What is your move? (rock, paper, scissors) ")
computer_choice = random.choice(["rock", "paper", "scissors"])

print("You picked " + user_choice)
print("The computer picked " + computer_choice)

if user_choice == "rock":
    if computer_choice == "scissors":
        print("You Win")
    elif computer_choice == "paper":
        print("You Lose")
    else:
        print("It's a draw")
elif user_choice == "paper":
    if computer_choice == "rock":
        print("You Win")
    elif computer_choice == "scissors":
        print("You Lose")
    else:
        print("It's a draw")
else:
    if computer_choice == "paper":
        print("You Win")
    elif computer_choice == "rock":
        print("You Lose")
    else:
        print("It's a draw")
```

What's Next?

- You can do our free 10 session Python course by going to: https://www.youtube.com/playlist?list=PLKDX-K07YbypJwG5BYv0doMrU44lYqa1X
- This course will teach you the basics of Python, show you how to code more games and many more things!
- At the end of this course, if you email all your repls to uk-dlihfcode@kpmg.co.uk (example: https://repl.it/@smirza3), we will give you a **KPMG:Code Certificate of Completion.**
- If you have any questions, please email at **uk-dlihfcode@kpmg.co.uk**

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