Python

Python is a programming language.

https://www.youtube.com/watch?v=bOvqYw1SZJg

What can Python do?

- For production-ready software development

- Python can be used on a server to create web applications

- Mathematics

- It can also read and modify files.

- Python platforms (Windows, Mac, Linux, Raspberry Pi, etc)

- Python relies on indentation, using whitespace, to define scope

Python Formatting

- Python uses indentation to indicate a block of code

Example
if 5 > 2:
  print("Five is greater than two!")

Python will give you an error if you skip the indentation:
Example
if 5 > 2:
print("Five is greater than two!")

Comments in Python:

```python
#This text is a comment.
print("Hello, World!")
```

Docstrings are also comments

```
"""This is a
multiline docstring."""
print("Hello, World!")
```

Function Definitions:

```python
# This function adds two numbers
def add(x, y):
    return x + y

# This function subtracts two numbers
def subtract(x, y):
    return x - y

# This function multiplies two numbers
def multiply(x, y):
    return x * y

# This function divides two numbers
def divide(x, y):
    return x / y

print("Select operation.")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")

# Take input from the user
```

User Events & Code:

```python
# Take input from the user
choice = input("Enter choice(1/2/3/4):")

num1 = int(input("Enter first number: "))
num2 = int(input("Enter second number: "))

if choice == '1':
    print(num1,"+",num2,"=", add(num1,num2))

elif choice == '2':
    print(num1,"-",num2,"=", subtract(num1,num2))

elif choice == '3':
    print(num1,"*",num2,"=", multiply(num1,num2))

elif choice == '4':
    print(num1,"/",num2,"=", divide(num1,num2))
else:
    print("Invalid input")
```

Results Screen Shot:

Output

```
Select operation.
1.Add
2.Subtract
3.Multiply
4.Divide
Enter choice(1/2/3/4): 3
Enter first number: 15
Enter second number: 14
15 * 14 = 210
```

Demo using IDLE or AppJar Graphic Objects

- Simple Calc

- Calc with Loop

- Graphic interface, AppJar Event based Calc