Intro to python

**Functions and variables**

Print text-print("hello, world")

Run file manually- python file.py

Function- actions

Argument-input

Side effect- result of function and arguments

Bug-mistakes

Get input from user-print("What is your name ")

input() or input("Whats your name ")

Return values-user data to be used by programmer

Variables-creation that stores value

Using variable to store user data-print("What is your name ")

A=input() print using variable-print("Hello " + A)

Comments-notes #new line of code or """

hello world cooments are very useful

"""

Pseudocode- coding skeleton/outline

str= string

Parameters- what is allowed in function

End- print ("Hello", end="") Changing value of end stops new line from forming

Print str w/quotes-print('hello "friend"')

F-string-tells python to format string-print(f"hello, {A}")- prints hello jesus

A.title()-capitilize first letter

INT=number

%=returns remainder

int = 4

print(22%int)

Calculations using user input

def sum(a, b):

return (a + b)

a = int(input('Enter 1st number: '))

b = int(input('Enter 2nd number: '))

print(f'Sum of {a} and {b} is {a+b}')

FLOAT= number can be decimal or whole

Divide using user input-a= int(input("Number 1 "))

b= int(input('Number 2 '))

print(f'{a/b}')

DEF=define a function

#Create Function that displays name

def Hello(to="World"):

print("Hello", to)

Hello()

name=input("What is your name ")

Hello(name)

Return=Returns value #Use when using multiple functions

def main():

x=int(input("Please chose a number: "))

print(mult(x))

#n is placeholder for x

def mult(n):

return n\*6

main()

#Parameter and def exersise

def Hello(to="Bitch"):

print("Hello", to)

Hello()

name=input("What is your name: ")

Hello(name)

**CONDITIONALS**

**If-**

x=int(input("Whats x: "))

y=int(input("Whats y:"))

if x < y:

print("X is less than y")

x=int(input("Whats x: "))

y=int(input("Whats y:"))

# == is used to distingush matmatical equality

if x == y:

print("X is equal to y")

**ELIF**

x=int(input("Whats x: "))

y=int(input("Whats y:"))

if x == y:

print("X is equal to y")

elif x < y:

print("X is less than Y")

elif x > y:

print("X is greater than Y")

**ELSE**

x=int(input("Whats x: "))

y=int(input("Whats y:"))

if x == y:

print("X is equal to y")

elif x < y:

print("X is less than Y")

else:

print("X is greater than Y")

**OR**

x=int(input("Whats x: "))

y=int(input("Whats y:"))

if x > y or x < y:

print("x is not equal to y")

else:

print("x is equal to y")

**AND**

x=int(input("Whats x: "))

if x >= 90 and x < 100:

print("The grade is and A ")

else:

print("The grade is not an A")

**Combing operators**

x=int(input("Whats x: "))

if 90 <= x < 100:

print("The grade is and A ")

else:

print("The grade is not an A")

**MODULO**

x=int(input("Whats x: "))

if x%2==0:

print("X is even ")

else:

print(x%2)

print("X is odd")

**BOOLEAN**

def main():

x=int(input("What is x: "))

if mod(x)==True:

print("Even")

else:

print("Odd")

def mod(n):

return True if n%2==0 else False

main()

**CASE**

name = input("Enter Team name:")

match name:

case "Arsenal" | "Liverpool" | "Everton":

print ("Premeir League")

case "Munich" | "Dortmund"| "Berlin":

print("Bundesliga")

case "Juventus" | "Milan" | "Empoli":

print(" Seria A")

case "PSG"|"Lens"|"Monaco":

print("Ligue 1")

case "Madrid"|"Barcelona"|"Bilbao":

print("La Liga")

case \_:

print("Not Found")

**Conditionals problem #1**

text= input("Enter the number of life")

#convert to lower case, remove hyphen, no space either side

name = text.replace("-"," ").lower().strip()

#Use elif to distingush string else always will print out wrong answer

#if string matches print response else print default.

if name == "42":

print("That is the number of life")

elif name =="forty two":

print("That is the number of life")

elif name =="Forty two":

print("That is the number of life")

else:

print("That is not the number of life")

**Conditionals problem #2**

text=input("Insert Greating")

name=text.lower().strip()

#check if str starts with certain charaters

if name.startswith('hello'):

print("0")

elif name.startswith("h"):

print("20")

else:

print("100")

**Conditionals problem #3**

text=input("Insert media type")

name=text.lower().strip()

#check if str contains substring

if 'gif' in name:

print("Image/gif")

elif 'jpg' in name:

print("Image/jpeg")

elif 'jpeg' in name:

print("Image/jpeg")

elif 'png' in name:

print("Image/png")

elif 'pdf' in name:

print("application/pdf")

elif 'txt' in name:

print("text/plain")

elif 'zip' in name:

print("application/zip")

else:

print("application/octet-stream")

**Conditionals problem #4**

**#Split function**

def main():

text = input("Expression: ")

x, y, z = text.split(" ")

x = float(x)

z = float(z)

if y == "+":

print(add(x, z))

elif y == "-":

print(sub(x,z))

elif y == "\*":

print(mult(x,z))

elif y == "/":

print(div(x,z)

def add(x, z):

return x + z

def sub(x,z):

return x - z

def mult(x,z):

return round(x \* z)

def div(x,z):

return round(x / z)

main()

**Conditionals problem #5**

#Splitting time

def main():

time = input("What time is it? ")

hours, minutes = time.split(":")

#Parameter of split is separation method

timeCheck = float(convert(hours, minutes))

if timeCheck >= 7.0 and timeCheck <= 8.0:

print("breakfast time")

elif timeCheck >= 12.0 and timeCheck <= 13.0:

print("lunch time")

elif timeCheck >= 18.0 and timeCheck <= 19.0:

print("dinner time")

#Add , 2 to convert into decimal

def convert(hours, minutes):

hours = float(hours)

minutes = round(float(minutes) / 60, 2)

return float(hours) + float(minutes)

main()

**Exercise #1**

**def main():**

**numb= input("Enter complex expression:")**

**# space after comma acts as seprater**

**x, y, z=numb.split(" ")**

**x=float(x)**

**z=float(x)**

**if y == "%":**

**print(mod(x,z))**

**elif y=="\*":**

**print(square(x,z))**

**else:**

**print("Enter valid Expression")**

**def square(x,z):**

**return x\*z**

**def mod(x,z):**

**return x%z**

**main()**