Luyon, James Matthew P.

201815069

Reyes, Carl Vincent

201813184

Maningat, Jhon Oliver

201814302

Welcome to Python Fundamentals

In this module, we are going to establish or review our skills in Python programming. In this notebook we are going to cover:

- Variables and Data Types
- Operations
- Input and Output Operations
- Logic Control
- Iterables
- Functions

Variable and Data Types

```
a, b = 5, 5.0
c, d = "Hi", 'Hello'
e = "Happy Birthday!"
f = False
```

```
type(a)
```

```
int
```

```
type(b)
```

```
float
```

```
type(c)
```

```
str
```

```
type(d)
```

```
str
```

```
type(f)
```

```
bool
```

```
e[6] + e[1] + e[-2]
```

```
'Bay'
```

```
s,t,u = "0", '1', 'one'
type(s)
```

```
str
```

```
P = 99.9
[str(P), type(x)]
```

```
['99.9', float]
```

```
Q = [1,2,"Pogi si James Luyon"]
type(Q)
```

```
list
```

```
R = (1,2, "Petmalu Lode")
type(R)
```

```
tuple
```

Operations

Arithmetic

```
z,x,y,w = 11.0, -0.78, 0, -64
v = 15
```

```
### Addition
```

```
A = z+x
A
```

```
     10.22
```

```
### Subtraction
S = x-w
S
```

```
     63.22
```

```
### Multiplication
M = z*w
M
```

```
     -704.0
```

```
### Division
D = y/z
D
```

```
     0.0
```

```
### Floor Division
FD = v//z
FD
```

```
     1.0
```

```
### Exponentiation
Ex = z**v
Ex
```

```
     4177248169415651.0
```

```
### Modulo
MD = w%z
MD
```

```
     2.0
```

Assignment Operations

```
L, M, N, O = 6, 78, 4, 4
```

```
L += z
```

```
L
```

```
     17.0
```

```
M -= z
M
```

```
     67.0
```

```
N *= 5
N
```

```
     20
```

```
O **= 5
O
```

```
     1024
```

```
3/2
```

```
     1.5
```

```
3//2
```

```
     1
```

Comparators

```
## Equality
1==1
```

```
     True
```

```
1==2
```

```
     False
```

```
## Non-equality
1!=2
```

```
     True
```

```
## Oh the great there's no error here lols
Luyon = "Pogi"
```

```
Luyon == "Pogi"
```

```
True
```

```
# Is 2 greater than 3?
2 > 3
```

```
False
```

```
# Is 2 less than 3?
2 < 3
```

```
True
```

```
# Is 1 greater than or equal to 2?
1 >= 2
```

```
False
```

```
# Is 2 less than or equal to 2?
2 <= 2
```

```
True
```

Logical

```
Luyon = "Pogi"
Katotohanan = "Pogi"
Pangit = "Pangit"
```

```
Luyon == Katotohanan
```

```
True
```

```
Luyon is Pangit
## HAHAHAHAHA
```

```
False
```

```
Luyon is not Pangit
```

```
True
```

```
p, q = True, False
conj = p and q
conj
```

```
False
```

```
p, q = True, False
disj = p or q
disj
```

```
True
```

```
p, q = True, False
nand = not(p and q)
nand
```

```
True
```

```
p, q = True, False
xor = (not p and q) or (p and not q)
xor
```

```
True
```

I/O

```
name = input()
print("Hello Mars!")
print("Ano kasunod ng Mars?")
print("Syempre Jupiter HAHAHAHA Hi",name , "!")
```

```
Matt
Hello Mars!
Kasunod ng Mars
Syempre Jupiter HAHAHAHA Hi Matt !
```

```
cnt = 1
```

```
string = "Hello Mars"
print(string, ", Current run count is:", cnt)
cnt += 1
```

```
Hello Mars , Current run count is: 2
```

```
print(f"{string}, Current count is: {cnt}")
```

```
     Hello Mars, Current count is: 3
```

```
pogi_points = 99.99
sex_epal = 99.99
name = "James Matthew Luyon"
print("Hello {}, your pogi points is: {}".format(name, pogi_points))
print("And your sex appeal is: {}".format(sex_epal), "Wow HAHAHAAHAHA")
```

```
     Hello James Matthew Luyon, your pogi points is: 99.99
     And your sex appeal is: 99.99 Wow HAHAHAAHAHA
```

```
trial_1, trial_2, trial_3 = 0.21, 0.5, 1.01
print("Mga chance na maging kayo ng crush mo:\
\n\t{:.2%} if lagi kayong magka-usap\
\n\t{:.2%} kapag umamin ka sa kanya, and\
\n\t{:.2%} kapag type ka din niya.".format(trial_1, trial_2, trial_3))
```

```
     Mga chance na maging kayo ng crush mo:
             21.00% if lagi kayong magka-usap
             50.00% kapag umamin ka sa kanya, and
             101.00% kapag type ka din niya.
```

```
Input = input("enter a character/string: ")
Input
```

```
     enter a character/string: Wag susuko kaya natin to future inhinheyo
     'Wag susuko kaya natin to future inhinheyo'
```

```
name = input("Enter your Nickname: ")
pg = float(input("Enter prelim grade: "))
mg = float(input("Enter midterm grade: "))
fg = float(input("Enter finals grade: "))
sem_grade = ((pg*0.3)+(mg*0.3)+(fg*0.4))
print("Hello Koya{}, your semestral grade is: {}".format(name, sem_grade))
```

```
     Enter your Nickname: Matt
     Enter prelim grade: 92
     Enter midterm grade: 89
     Enter finals grade: 95
     Hello KoyaMatt, your semestral grade is: 92.3
```

Looping Statements

While

```
## while loops
```

```
i = int(input("Input integer:"))
while i >0:
    print("$"*i)
    i-=1
```

```
 Input integer:5
 $$$$$
 $$$$
 $$$
 $$
 $
```

```
i = 0
while i==0:
    x = int(input("Quiz: What is 10 times 4: "))
    if x == 40:
        i+=1
    else:
        print("Wrong! Try Again!")
print("Tumpak! at Dahil dyan meron kang Jacket!!!!")
```

```
 Quiz: What is 10 times 4: 2
 Wrong! Try Again!
 Quiz: What is 10 times 4: 5
 Wrong! Try Again!
 Quiz: What is 10 times 4: 40
 Correct!
```

For

```
# for(int i=0; i<10; i++){
# printf(i)
# }

Pre_advice = ["LCD","CNS","AIDA","Intro to HDL","CW","Rizal","PE4"]

for i in Pre_advice:
    print(i)
```

```
 LCD
 CNS
 AIDA
 Intro to HDL
 CW
 Rizal
 PE4
```

```
for i in "Hello World":
    print(i)
```

```
H
e
l
l
o

W
o
r
l
d
```

```
list(range(1,5))
```

```
[1, 2, 3, 4]
```

```
num = int(input("Input: "))
for i in range(1,11):
    print(num, "*", i, "=", num*i)
```

```
Input: 5
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
```

Flow Control

Condition Statements

```
Grade = float(input("Input Grade: "))

if(Grade >= 90):
    print("A")
elif(Grade >=80):
    print("B")
elif(Grade >=70):
    print("C")
elif(Grade >=60):
    print("D")
```

```
else:
    print("F")
```

```
 Input Grade: 69
 D
```

```
answer = int(input("Input any number:"))
text=""

if answer > 10:
    text = "greater than"
elif answer < 10:
    text = "less than"

print(answer,"is",text,"10.")
```

```
 Input any number:5
 5 is less than 10.
```

Functions

```
# creating basic functions in python
def inhinyero(future, job):
    print("I am future {}, and my field of expertise is in {}".format(future,job))

inhinyero("Computer Engineer","Artificial Intelligence")
```

```
 I am future Computer Engineer, and my field of expertise is in Artificial Intelligence
```

```
def addition(*var_args):
    answer = 0
    for i in var_args:
        answer +=i
    return answer

addition(5,3)
```

```
 8
```

Lambda Functions

```
xx = 4
```

```
lf1 = lambda xx: xx + 2
lf(6)
```

```
8
```

```
lf2 = lambda xx,yy: xx + yy
lf2(5,6)
```

```
11
```

```
'''
Create a grade calculator that computes for the semestral grade of a course.
Students could type their names, the name of the course, then their prelim,
midterm, and final grade.
The program should print the semestral grade in 2 decimal points and should
display the following emojis depending on the situation:
happy - when grade is greater than 70.00
laughing - when grade is exactly 70.00
sad - when grade is below 70.00
'''
happy, lol, sad = "\U0001F600","\U0001F923","\U0001F619"

#Alright lets to this

student_name = input("Enter your Name: ")
course = input("Enter your course: ")
prelim_g = float(input("Enter your Prelim Grade: "))
midterm_g = float(input("Enter your Midterm Grade: "))
finals_g = float(input("Enter your Final Grade: "))
sem_g = ((prelim_g*0.3)+(midterm_g*0.3)+(finals_g*0.4))
print("Hello Klasmeyt {}, your semestral grade is: {}".format(student_name, sem_g))
if(sem_g > 70):
    print("My grade is greater than 70 yey!")
    print("\U0001F600")
elif(sem_g == 70):
    print("My grade is exactly 70 great!")
    print("\U0001F923")
else:
    print("My grade is lower than 70 aw!")
    print("\U0001F619")
```

```
 Enter your Name: Mat
 Enter your course: BS Computer Engineering
 Enter your Prelim Grade: 58
 Enter your Midterm Grade: 69
 Enter your Final Grade: 68
 Hello Klasmeyt Mat, your semestral grade is: 65.3
 My grade is lower than 70 aw!
 😙
```

Thank you for joining and reading my jupyter notebook ^_^