



Introduction to Python

Week-2

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Review:

- Start working on : Module website for learning python
- Learn from <https://www.tutorialspoint.com/python3>
- Installing anaconda from: <https://www.anaconda.com/distribution/>
 - Topic1: Introduction to programming
 - Topic2: Print statement
 - Topic3: python as a calculator
 - Topic4: Variable concept
 - Topic5: Data type
 - Topic6: logical operation
 - Topic7: If..then..else (conditional statement)
 - Topic8: Create simple application
- Challenge:



This Week:

- More practice on decision making statement.
- More practice on print statement
- Create simple application.

Read The user input in python:

Example 1:

```
name=input("What's your name?:")
print("Hi "+name+" how do you do.")
age=input("How old are you "+name+" ?:")
print("Great "+name," I'm ",age+" years old too.")
city=input("Which city do you come from "+name+" ?:")
print("What a coincidence, I am from "+city+" too.")
print(name+", here is your record //")
print(name+" "+age+" "+" "+city)
```

```
What's your name?:zilani
Hi zilani how do you do.
How old are you zilani ?:35
Great zilani I'm 35 years old too.
Which city do you come from zilani ?:sydney
What a coincidence, I am from sydney too.
zilani, here is your record //
zilani 35 sydney
```

Example 2:

```
age = input("What is your age? ")
print ("Your age is: " , age)
type(age)
```

```
What is your age? 23
Your age is: 23
```

Read The user input in python:

Example 3: read the input as integer

```
age = int(input("What is your age? "))  
print ("Your age is: " , age)  
type(age)
```

What is your age? 25

Your age is: 25

int

Challenge 1:

Read your name from the keyboard input and , display it. Mention the data type: hints the data type can be int/string/double/list/dictionary.

Which one do u think?

decision making on python:

if else statement

```
score1 = 40
score2 = 45
if(score1 + score2 > 100):
    print("Invalid score. Please check the input.")

else:
    print("not greater")
```

not greater

Example 4:

Challenge 2:

Follow the example in this page: but get the two score values from the user input. Write your program.

decision making on python:

More on if else

Example 5:

```
score_a = 50
score_b = 55
if(score_a + score_b >= 100):
    print("Invalid score. Please check the input.")
```

Invalid score. Please check the input.

Challenge 3:

Follow the example in this page: but get the two score values from the user input. Write your program.

decision making on python:

more on if else

Example 6:

Challenge 4:

```
coursework = "English"
score_theory = 53
score_practical = 35

if(coursework == "Science" or coursework == "science"):
    if(score_theory > 50):
        print("Please check the input score for 'Science: Theory'.")
    elif(score_practical > 50):
        print("Please check the input score for 'Science: Practical'.")
    else:
        print("Score validated for Science. Your total is: ",score_theory + score_practical)
elif(coursework == "English" or coursework == "english"):
    if(score_theory > 60):
        print("Please check the input score for 'English: Theory'.")
    elif(score_practical > 40):
        print("Please check the input score for 'English: Practical'.")
    else:
        print("Score validated for English. Your total is: ",score_theory + score_practical)
else: print("Coursework not recognised. Please enter score for either Science or English.")
```

Score validated for English. Your total is: 88

Follow the example in this page: but get the two score values from the user input. Write your program.

decision making on python:

if else

Example 7:

```
# Write a small program to ask for a name and an age.  
# When both values have been entered, check if the person  
# is the right age to go on an 18-30 holiday (they must be  
# over 18 and under 31).  
# If they are, welcome them to the holiday, otherwise print  
# a (polite) message refusing them entry.  
  
name = input("Please enter your name: ")  
age = int(input("How old are you, {0}? ".format(name)))  
  
# if 18 <= age < 31:  
if age >=18 and age <31:  
    print("Welcome to club 18-30 holidays, {0}".format(name))  
else:  
    print("I'm sorry, our holidays are only for seriously cool people")
```

```
Please enter your name: zz  
How old are you, zz? 55  
I'm sorry, our holidays are only for seriously cool people
```

decision making on python:

Challenge 5:

```
# Write a small program to ask for exam mark  
# when value is over 84 print HD  
# when mark below 85 but over 74 print D  
# when mark below 75 but over 65 print CR  
  
mark = int(input("Please enter your marks: "))  
  
if .....  
.....  
.....  
.....  
enter your code here
```



if else in python:

Challenge 6:

- Assign num to an integer value.
- Write an if else combination that will print "Your integer is even" if the integer is even. Otherwise, print "Your integer is odd".

Challenge 7:

Calculate and display cost of printing a book; given that each page costs 10 cents, back cover costs \$10.00 and front cover costs \$15.00. Allow user to enter number of pages to print.



if else in python:

Challenge 8:

Calculate and display the bill amount when user buys petrol @ 1.10 per litre. Allow user to enter quantity of petrol purchased. Add GST as 10% of total cost. Bill amount is total cost + GST.

Challenge 9:

- write a program,
To check if the number is positive or
negative or zero and
display an appropriate message



if else in python:

Challenge 10:

- Allow the user to enter year number, check if it a leap year or not and display an appropriate message.

Challenge 11:

Write a series of if, elif, else statements that will print the num you assigned. But for multiples of three print "Fizz" instead of the number and for the multiples of five print "Buzz". For numbers which are multiples of both three and five print "FizzBuzz".

Random Number is python:

Example 8:

```
# seed the pseudorandom number generator
from random import seed
from random import random
# seed random number generator

# generate some random numbers
print(random())
# reset the seed
seed(1)
# generate some random numbers
print(random(), random(), random())
```

0.2550690257394217
0.13436424411240122 0.8474337369372327 0.763774618976614

Example 9:

```
import random

# using choice() to generate a random number from a
# given list of numbers.
print ("A random number from list is : ",end="")
print (random.choice([1, 4, 8, 10, 3]))

# using randrange() to generate in range from 20
# to 50.

print ("A random number from range is : ",end="")
print (random.randrange(20, 50))
```

A random number from list is : 10
A random number from range is : 47



if else in python:

Challenge 12:

- using random() function
generate a random number between 0 and 1

Challenge 13:

- Firstly let computer to generate a number from 0 to 100
- You guess a number
- If your number is less write “my guess is less”
- Finally let computer to display its number



Thank You