Day 3 notes

Python functions

1. function parameters which do not have default values are called as compulsory parameters.
2. function parameters which has default value are called as optional parameters.
   def f2(x,y=12,z=34):   # x is compulsory parameter and y and z are optional parameter
3. Once you assign default value to a parameter the all on the right side should have default parameter
   def f1(x=34,y):   #error
   def f2(a=23,b,c=45) #error
   def f3(a,b=12,c=34) #ok
   def f3(a=10,b=12,c=34) #ok

4. Every function has 2 scopes global and local, but nested functions has 3 scopes
   global, local, nonlocal (parent's scope)
5. Global variable is accessible inside the function till you do not change its value, if you try to change the value of any variable inside function then it will become local variable
6. To modify value of global variable inside function use global keyword, to modify value of nonlocal variable use keyword nonlocal

```
def f1():
    x=34
    print(x)
    def f2():
        #global x
        nonlocal x
        x=45
        print(x)

    print(x)
    f2()
    print(x)

x=10
print(x)
f1()
print(x)
```

Build in functions

Number functions

are available math

String functions

T	H	I	S		I	S		S	T	R	I	N	G
0	1	2	3	4	5	6	7	8	9	10	11	12	13
-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1

```
Print(s[-3:3,-1])

Print(s[1::2])

print(S[-1])

print(s[3:10])   #s is st

print(s[2:])  # 2 nd character to end

print(s[:6]) #start to 5 th index

print(s[2:10:2])

print(s[::-1]) #reverse the string

print(s[0::-1])
```

S1.find(substr, [start,end])	It will find the position of the first occurrence of the substr if it finds, otherwise it will return -1	
S1.rfind(substr, [start,end])	It will find the position of the last occurrence of the substr if it finds, otherwise it will return -1	
S1.index(substr, [start,end])	It will find the position of the first occurrence of the substr if it finds, otherwise it throws exception	
S1.rindex(substr, [start,end])	It will find the position of the last occurrence of the substr if it finds, otherwise it throws exception	
S1.split(delimeter)	It will break the string into parts at delimiter character and it store it in the list	
Delimiter.join(lst)	It will join the words from the list by given delimiter and converts into string	
S1.strip(str)	To remove all occurrences of the given characters in the str from both sides of the string	
S1.lstrip(str)	To remove all occurrences of the given characters in the str from left sides of the string	
S1.rstrip(str)	To remove all occurrences of	

	the given characters in the str from right sides of the string	
S1.upper()	To convert string in to upper case	
S1.lower()	To convert string in to lower case	
S1.isalpha()	To check whether the string contains all alphabets	
S1.isnumeric(), s1.isdecimal(),s1.isdigit()	It will check whether the string contains only digits	
S1.isalnum()	It will check whether the string contains only alphabets or digits	

String Type	Example	Python `.isdecimal()`	Python `.isdigit()`	Python `.isnumeric()`
Base 10 Numbers	`'0123'`	True	True	True
Fractions and Superscripts	`'⅔', '2²'`	False	True	True
Roman Numerals	`'Ð'`	False	False	True