In [2]:
```
how_many_snakes = 5
snake_string = """
Welcome to Python3!

____
/ . .\\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python
"""
print(snake_string * how_many_snakes)
```

```
Welcome to Python3!

____
/ . .\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python

Welcome to Python3!

____
/ . .\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python

Welcome to Python3!

____
/ . .\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python

Welcome to Python3!

____
/ . .\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python

Welcome to Python3!

____
/ . .\
\ ---<
\ /
__________/ /
-=:___________/
<3, Python
```

In [ ]:
```
#A 2.1
```

In [3]:
```
Name = input("Enter your name")
Greatings = 'Stay Home Stay Safe ' +  ' ' + Name
print(Greatings)
```

```
Stay Home Stay Safe  Malik
```

In [4]:
```
T_F_str = input('Enter Fahrenheit Temperature:')
T_F = float(T_F_str)
T_C = (T_F - 32.0) * 5.0 / 9.0
print (T_C)
```

```
36.666666666666664
```

In [7]:
```
try:
    T_F_str = input('Enter Fahrenheit Temperature:')
    T_F = float(T_F_str)
    T_C = (T_F - 32.0) * 5.0 / 9_0
    print (T_C)
except:
    print ('Only numeric input please')
```

```
Only numeric input please
```

In [8]:
```
import math
degrees = float(input('Enter Angle in Degrees:'))
radians = degrees / 360.0 * 2 * math.pi
print(radians)
print(math.sin(radians))
```

```
3.141592653589793
1.2246467991473532e-16
```

In [ ]:
```
#A 3.1
```

In [9]:
```
for Counter in range(5):
    print(Counter)
```

```
0
1
2
3
4
```

In [10]:
```
for Counter in range(5,10):
    print(Counter)
```

```
5
6
7
8
9
```

In [11]:
```
for Counter in range(5,20,3):
    print(Counter)
```

```
5
8
11
14
17
```

In [12]:
```
for Counter in range(10,0,-2):
    print(Counter)
```

```
10
8
6
4
2
```

In [14]:
```
counter=7
while counter >=0:
    print(counter)
    counter-=2
print('Got it?')
```

```
7
5
3
1
Got it?
```

In [17]:
```
def IP(N):
    if (N < 2) or (N > 2 and N % 2 == 0):
        return False
    for D in range(3,N - 1):
        if N % D == 0:
            return False
    return True
```

In [18]:
```
for n in range(2, 50):
    if IP(n) == True:
        print(n)
```

```
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
```

In [ ]:
```
#P 1.1
```

In [19]:
```
#Exercise 1
def checkPalindrome(num):
    return str(num)==str(num)[::-1]
```

In [21]:
```
print(checkPalindrome(121))
print(checkPalindrome(1211))
```

```
True
False
```

In [34]:
```
#Exercise 2
for i in range(5,0,-1):
    print(list(range(i,0,-1)))
#OR
for i in range(5,0,-1):
    for j in range(i,0,-1):
        print(j,end=' ')
    print()
```

```
[5, 4, 3, 2, 1]
[4, 3, 2, 1]
[3, 2, 1]
[2, 1]
[1]
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

In [86]:
```
#Exercise 3
def factorial(num):
    if num==0: return 1
    fac=1
    for i in range(abs(num),1,-1):
        fac*=i
    return fac*(abs(num)/num)
```

In [87]:
```
print(factorial(5))
print(factorial(-5))
```

```
120.0
-120.0
```

In [ ]:
```
#P 1.2
```

In [93]:
```
#Exercise 1
i=0
while i<=10:
    print(i,end=' ')
    i+=1
```

```
0 1 2 3 4 5 6 7 8 9 10
```

In [94]:
```
#Exercise 2
list1 = [12, 15, 32, 42, 55, 75, 122, 132, 150, 180, 200]
divider=5

for x in list1:
    if x%divider==0: print(x,end=' ')
    if x>=150: break
```

```
15 55 75 150
```

In [99]:
```
#Exercise 3
list1 = [10, 20, 30, 40, 50]
reverse=[]

#reverse = list[::-1]
#OR
for i in range(len(list1)-1,-1,-1):
    reverse.append(list1[i])
print(reverse)
```

```
[50, 40, 30, 20, 10]
```

In [117]:
```
#Exercise 4
start = 25
end = 50

isPrime = lambda num: all( num%i != 0 for i in range(2, int(num**.5)+1))
#OR
# def isPrime(num):
#     if num > 1:
#         for i in range(2, int(num**.5)+1):
#             if (num % i) == 0: return False
#         return True
#     return False

for i in range(start,end):
    if isPrime(i): print(i)
```

```
29
31
37
41
43
47
```

In [119]:
```
#Exercise 5
numReverse = lambda num:int(str(num)[::-1])

print(numReverse(12315))
print(numReverse(53469))
```

```
51321
```

In [121]:
```
#Exercise 6
my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

for i in range(len(my_list)):
    if (i+1)%2==0: print(my_list[i])
```

```
20
40
60
80
100
```

In [ ]: