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**Exercise 9**

**(1)Write your own iterator class and iterate through it (without generator function)**

**(2)Write your iterator by using generator function**

**(3) Write a function that calculates simple interest. Now decorate the output of this function by returning the modified amount.**

**CODE**

1. class number:

def \_\_init\_\_(self, num):

self.num=num

def \_\_iter\_\_(self):

self.current=0

return self

def \_\_next\_\_(self):

if self.current < self.num:

self.current += 1

return self.current\*3

else:

raise StopIteration

number = number(10)

for x in number:

print(x)

2. def MyGenerator():

x=0

while x<10:

yield x

x +=1

l= list(MyGenerator())

print(type(l))

for y in l:

print(y)

3. def amount(func):

def inner(P, R, T):

interest = func(P, R, T)

amount = P + interest

return amount

return inner

def SI(P, R, T):

interest = (P \* R \* T)/100

return interest

ref = amount(SI)

P = int(input("Enter Amount:"))

R = int(input("Enter Rate:"))

T = int(input("Enter Time:"))

print(ref(P, R, T))