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**Exercise 8**

**(1)Write a class named Rectangle. Take length and breadth as attributes and area as methods. Create a subclass Square with the only attribute as side and override the area method. Create Rectangle and Square objects statically and dynamically and make use of area methods.**

**(2)Overload the + (addition) operator to restrict the addition of two integers to modulo 8.**

**(3) Implement a Stack class using a list type. Provide push() and pop() operations. Demonstrate the usage.**

**CODE**

1.   
class rectangle:

l=5

b=7

def calculate\_area\_rect(self):

return self.l \* self.b

class square:

side=8

def calculate\_area\_sq(self):

return self.side \* self.side

rect= rectangle()

sq= square()

print("Area of Rectangle: ", rect.calculate\_area\_rect())

Area of Rectangle: 35

print("Area of square: ", sq.calculate\_area\_sq())

Area of square: 64

2. class A:

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

self.a = a

def \_\_add\_\_(self, o):

return self.a + o.a

ob1 = A(12)

ob2 = A(14)

ob3 = (ob1 + ob2)%8

print(ob3)

3. class Stack:

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

self.items = []

def isEmpty(self):

return self.items == []

def push(self, item):

self.items.append(item)

def pop(self):

return self.items.pop()

>>>s = Stack()

>>> s.push('INITIAL NAME')

>>> s.push('SIRNAME')

>>> print(s.pop())