Assignment 3

Date : Feb 23 2023

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Question 1:

In [19]:
```
def mul(num1,num2):
    num1 = 5
    num2 = 6
    return num1*num2

mul(num1,num2)
```

Out[19]:
```
30
```

Question 2:

In [27]:
```
import math

def area_of_circle(radius):
    area = math.pi * radius ** 2
    return area
radius = 10
area = area_of_circle(radius)
print(area)
```

```
314.1592653589793
```

Question 3:

In [45]:
```
def calculator(num1, num2, operation):
    if operation == 'p':
        return num1 + num2
    elif operation == 's':
        return num1 - num2
    elif operation == 'm':
        return num1 * num2
    elif operation == 'd':
        return num1 / num2
    else:
        print("Invalid operation")
        return None
```

In [47]:
```
result = calculator(2, 5, 'd')
print(result)
```

```
0.4
```

Question 4:

In [48]:
```
class Rectangle:
    def __init__(self, length, width):
        self.length = length
        self.width = width

    def area(self):
        return self.length * self.width
```

In [49]:
```
r = Rectangle(5, 10)
area = r.area()
print(area)
```

```
50
```

Question 5:

In [58]:
```
class Shape:
    def __init__(self, name, length):
        self.name = name
        self.length = length

    def area(self):
        return 0


class Square(Shape):
    def __init__(self, name, length):
        super().__init__(name, length)

    def area(self):
        return self.length ** 2

    def describe(self):
        return f"This is a: {self.name}"
```

In [62]:
```
s = Square('square', 5)
print(f"The area is: {s.area()}")
print(s.describe())
```

```
The area is: 25
This is a: square
```