Question 1

In [1]:
```
class DataType:
    def __init__(self,name,value):
        self.name = name
        self.value = value

data_type1 = DataType('Integer', 1234)
print(data_type1.name)
print(data_type1.value)
print('====================')
data_type2 = DataType('String', 'Hello')
print(data_type2.name)
print(data_type2.value)
print('====================')
data_type3 = DataType('Float', 4.0)
print(data_type3.name)
print(data_type3.value)
```

```
Integer
1234
====================
String
Hello
====================
Float
4.0
```

Question 2

In [2]:
```
class Flower:
    def __init__(self):
        self.name = 'Sun flower'
        self.color = 'Yellow'
        self.num_of_petal = 5

flower1 = Flower()
flower1.name="Rose"
flower1.color="Red"
flower1.num_of_petal=6
print("Name of this flower:", flower1.name)
print("Color of this flower:",flower1.color)
print("Number of petal:",flower1.num_of_petal)
print('====================')
flower2 = Flower()
flower2.name="Orchid"
flower2.color="Purple"
flower2.num_of_petal=4
print("Name of this flower:",flower2.name)
print("Color of this flower:",flower2.color)
print ("Number of petal:",flower2. num_of_petal)
a1 = print('Address of flower1 = ',flower1)
a2 = print('Address of flower2 = ',flower2)
a3 = flower1
a4 = flower2

if a3 == a4:
    print("they are same")
else:
    print('they are different')
```

```
Name of this flower: Rose
Color of this flower: Red
Number of petal: 6
====================
Name of this flower: Orchid
Color of this flower: Purple
Number of petal: 4
Address of flower1 =  <__main__.Flower object at 0x000000000571C9C8>
Address of flower2 =  <__main__.Flower object at 0x00000000056DF508>
they are different
```

Question 3

In [3]:
```
class Wadiya():
    def __init__(self):
        self.name = 'Aladeen'
        self.designation = 'President Prime Minister Admiral General'
        self.num_of_wife = 100
        self.dictator = True


wadiya = Wadiya()
print('Part 1 :')
print('Name of President:',wadiya.name)
print('Designation:',wadiya.designation)
print('Number of wife:',wadiya.num_of_wife)
print('Is he/she a dictator:',wadiya.dictator)
print('Part 2 :')
wadiya.name = 'Donald Trump'
wadiya.designation = 'President'
wadiya.num_of_wife = 1
wadiya.dictator = False
print('Name of President:',wadiya.name)
print('Designation:',wadiya.designation)
print('Number of wife:',wadiya.num_of_wife)
print('Is he/she a dictator:',wadiya.dictator)
```

```
Part 1 :
Name of President: Aladeen
Designation: President Prime Minister Admiral General
Number of wife: 100
Is he/she a dictator: True
Part 2 :
Name of President: Donald Trump
Designation: President
Number of wife: 1
Is he/she a dictator: False
```

Question 4

In [4]:
```
class Joker():
    def __init__(self,name,power,is_he_psycho):
        self.name = name
        self.power = power
        self.is_he_psycho = is_he_psycho


j1 = Joker('Heath Ledger', 'Mind Game', False)
print(j1.name)
print(j1.power)
print(j1.is_he_psycho)
print('====================')

j2 = Joker('Joaquin Phoenix', 'Laughing out Loud', True)
print(j2.name)
print(j2.power)
print(j2.is_he_psycho)
print('====================')

if j1 == j2:
    print('same')
else:
    print('different')

j2.name = 'Heath Ledger'
if j1.name == j2.name:
    print('same')
else:
    print('different')

print("The first if/else block prints the output as ‘different’ because the name in 'j1' object is not equal to

print("The first if/else block prints the output as ‘same’ because we change the name in 'j2' object and now the
```

```
Heath Ledger
Mind Game
False
====================
Joaquin Phoenix
Laughing out Loud
True
```

```
====================
different
same
The first if/else block prints the output as ‘different’ because the name in 'j1' object is not equal to the
name in 'j2' object.
The first if/else block prints the output as ‘same’ because we change the name in 'j2' object and now the na
me in 'j1' object is equal to the name in 'j2' object.
```

Question 5

In [5]:
```
class Pokemon():
    def __init__(self,pokemon1_name, pokemon2_name, pokemon1_power, pokemon2_power, damage_rate):
        self.pokemon1_name = pokemon1_name
        self.pokemon2_name = pokemon2_name
        self.pokemon1_power = pokemon1_power
        self.pokemon2_power = pokemon2_power
        self.damage_rate = damage_rate

team_pika = Pokemon('pikachu', 'charmander', 90, 60, 10)
print('=======Team 1=======')
print('Pokemon 1:',team_pika.pokemon1_name, team_pika.pokemon1_power)
print('Pokemon 2:',team_pika.pokemon2_name, team_pika.pokemon2_power)
pika_combined_power = (team_pika.pokemon1_power + team_pika.pokemon2_power) * team_pika.damage_rate
print('Combined Power:', pika_combined_power)

print('=======Team 2=======')
team_bulb = Pokemon('bulbasaur', 'squirtle', 80, 70, 9)
print('Pokemon 1:',team_bulb.pokemon1_name, team_bulb.pokemon1_power)
print('Pokemon 2:',team_bulb.pokemon2_name, team_bulb.pokemon2_power)
bulb_combined_power = (team_bulb.pokemon1_power + team_bulb.pokemon2_power) * team_bulb.damage_rate
print('Combined Power:', bulb_combined_power)
```

```
=======Team 1=======
Pokemon 1: pikachu 90
Pokemon 2: charmander 60
Combined Power: 1500
=======Team 2=======
Pokemon 1: bulbasaur 80
Pokemon 2: squirtle 70
Combined Power: 1350
```

Question 6

In [6]:
```
class Player():
    def __init__(self):
        self.name = 'Messi'
        self.jersy_number = 10
        self.position = 'Forward'

player1 = Player()
player1.name = "Ronaldo"
player1.jersy_number = 9
player1.position = "Striker"
print("Name of the Player:", player1.name)
print("Jersey Number of player:", player1.jersy_number)
print("Position of player:", player1.position)
print('==========================')
player2 = Player()
player2.name = "Neuer"
player2.jersy_number = 1
player2.position = "Goal Keeper"
print("Name of the player:", player2.name)
print("Jersey Number of player:", player2.jersy_number)
print("Position of player:", player2.position)
```

```
Name of the Player: Ronaldo
Jersey Number of player: 9
Position of player: Striker
==========================
Name of the player: Neuer
Jersey Number of player: 1
Position of player: Goal Keeper
```

Question 7

In [7]:
```
class Country():
    def __init__(self):
        self.name = 'Bangladesh'
        self.continent = 'Asia'
        self.capital = 'Dhaka'
        self.fifa_ranking = 187

country = Country()
print('Name:',country.name)
print('Continent:',country.continent)
print('Capital:',country.capital)
print('Fifa Ranking:',country.fifa_ranking)
print('==================')
country.name = 'Belgium'
country.continent = 'Europe'
country.capital = 'Brussels'
country.fifa_ranking = 1
print('Name:',country.name)
print('Continent:',country.continent)
print('Capital:',country.capital)
print('Fifa Ranking:',country.fifa_ranking)
```

```
Name: Bangladesh
Continent: Asia
Capital: Dhaka
Fifa Ranking: 187
==================
Name: Belgium
Continent: Europe
Capital: Brussels
Fifa Ranking: 1
```

Question 8

In [8]:
```
class DemonSlayer():
    def __init__(self,name,style,number_of_technique,kill):
        self.name = name
        self.style = style
        self.number_of_technique = number_of_technique
        self.kill = kill

tanjiro = DemonSlayer("Tanjiro", "Water Breathing", 10, 10)
print('Name:',tanjiro.name)
print('Fighting Style:',tanjiro.style)
print(f'Knows {tanjiro.number_of_technique} technique(s) and has killed {tanjiro.kill} demon(s)')
print('====================')
zenitsu = DemonSlayer("Zenitsu", "Thunder Breathing", 1, 4)
print('Name:',zenitsu.name)
print('Fighting Style:',zenitsu.style)
print(f'Knows {zenitsu.number_of_technique} technique(s) and has killed {zenitsu.kill} demon(s)')
print('====================')
inosuke = DemonSlayer("Inosuke", "Beast Breathing", 5, 7)
print('Name:',inosuke.name)
print('Fighting Style:',inosuke.style)
print(f'Knows {inosuke.number_of_technique} technique(s) and has killed {inosuke.kill} demon(s)')
print('====================')
print(f'{tanjiro.name}, {zenitsu.name}, {inosuke.name} knows total {tanjiro.number_of_technique + zenitsu.number
print(f'They have killed total {tanjiro.kill + zenitsu.kill + inosuke.kill} demons')
```

```
Name: Tanjiro
Fighting Style: Water Breathing
Knows 10 technique(s) and has killed 10 demon(s)
====================
Name: Zenitsu
Fighting Style: Thunder Breathing
Knows 1 technique(s) and has killed 4 demon(s)
====================
Name: Inosuke
Fighting Style: Beast Breathing
Knows 5 technique(s) and has killed 7 demon(s)
====================
Tanjiro, Zenitsu, Inosuke knows total 16 techniques
They have killed total 21 demons
```

In [ ]: