In [1]:

```
#Name- Sumit Kamble
#Roll No- 47
#Q1. Create and print following sets:
#a. Set1 containing values physics,chemistry,maths.
#b. Set2 containing values physics,chemistry, computer_science,electronics.
set1={'physics','chemistry','maths'}
set2={'physics','chemistry','computer_science','electronics'}
print(set1)
print(set2)
```

```
{'chemistry', 'physics', 'maths'}
{'chemistry', 'physics', 'electronics', 'computer_science'}
```

In [2]:

```
#Q2. Add element 'biology' to set1
set1.add('biology')
print(set1)
print(set2)
```

```
{'chemistry', 'physics', 'biology', 'maths'}
{'chemistry', 'physics', 'electronics', 'computer_science'}
```

In [3]:

```
#Q3. Add elements 'IT', 'Aero' to Set2
set2.add('IT')
set2.add('aero')
print(set1)
print(set2)
```

```
{'chemistry', 'physics', 'biology', 'maths'}
{'IT', 'physics', 'aero', 'computer_science', 'chemistry', 'electronics'}
```

In [5]:

```
#Q4. Perform union,intersection and difference of set1 and set2.
print('union',set1|set2)
print('intersection',set1&set2)
print('difference',set1-set2)
```

```
union {'physics', 'IT', 'maths', 'aero', 'electronics', 'computer_science',
'chemistry', 'biology'}
intersection {'chemistry', 'physics'}
difference {'maths', 'biology'}
```

In [6]:

```
#Q5. Apply all the comparison opertors and comaprison methods on set1 and set2
set3=set1.union(set2)
print(set3)
```

```
{'physics', 'IT', 'maths', 'aero', 'electronics', 'computer_science', 'chemi
stry', 'biology'}
```

In [7]:

```
#Q6. Delete element 'maths' from set1
set1.remove('maths')
print(set1)
```

```
{'chemistry', 'physics', 'biology'}
```

In [8]:

```
#Q7. Delete a random element from set2.
set2.remove('IT')
print(set1)
print(set2)
```

```
{'chemistry', 'physics', 'biology'}
{'physics', 'aero', 'computer_science', 'chemistry', 'electronics'}
```

In [9]:

```
#Q8. Delete all the elements from set1.
set1.clear()
print(set1)
```

```
set()
```

In [10]:

```
#Q9. Delete Set2.
set2.clear()
print(set2)
```

```
set()
```

In [12]:

```
#Q10. Implement a python program to prove that mutable elements cannot be added in
set1= set()
print("initial blank set: ")
print(set1)
set1= set("SumitKamble")
print("\nset with the use of string: ")
print(set1)
string= 'SumitKamble'
set1= set(string)
print("\nset with the use of object: ")
print(set1)
set1=set(["Sumit","Kamble"])
print("\nset with the use of list: ")
print(set1)
```

```
initial blank set:
set()

set with the use of string:
{'i', 'b', 't', 'S', 'u', 'a', 'l', 'K', 'e', 'm'}

set with the use of object:
{'i', 'b', 't', 'S', 'u', 'a', 'l', 'K', 'e', 'm'}

set with the use of list:
{'Kamble', 'Sumit'}
```

In [13]:

```
#Q11. Implement a python program to create an empty set.
s={}
print(s)
```

```
{}
```

In [14]:

```
#Q12. Implement a python program to create a dictionary and it to the frozenset
dict1={1,2,3,4,5,6}
fset=frozenset(dict1)
print(fset)
```

```
frozenset({1, 2, 3, 4, 5, 6})
```

In [ ]:

```

```