In [1]:

```
A=set([2,3,4,5,9])
B=set([4,9,16,25,81])
print(A)
print(B)
```

```
{2, 3, 4, 5, 9}
{4, 9, 16, 81, 25}
```

In [2]:

```
type(A)
type(B)
```

Out[2]:

```
set
```

In [3]:

```
print("Union of A and B (without union function):",A|B)
```

```
Union of A and B (without union function): {2, 3, 4, 5, 9, 16, 81, 25}
```

In [4]:

```
#union function on A
print("Union of A and B (using union function):",A.union(B))
#union function on B
print("Union of A and B (using union function):",B.union(A))
```

```
Union of A and B (using union function): {2, 3, 4, 5, 9, 16, 81, 25}
Union of A and B (using union function): {2, 3, 4, 5, 9, 16, 81, 25}
```

In [5]:

```
print("Intersection of A and B (without intersection function):",A&B)
```

```
Intersection of A and B (without intersection function): {9, 4}
```

In [6]:

```
#intersection function on A
print("Union of A and B (using union function):",A.intersection(B))
#intersection function on B
print("Union of A and B (using union function):",B.intersection(A))
```

```
Union of A and B (using union function): {9, 4}
Union of A and B (using union function): {9, 4}
```

In [7]:

```
#elements present in A and not in B
print("Set difference between set A and set B (without using difference function):"
#elements present in B and not in A
print("Set difference between set B and set A (without using difference function):"
```

```
Set difference between set A and set B (without using difference functio
n): {2, 3, 5}
Set difference between set B and set A (without using difference functio
n): {16, 81, 25}
```

In [8]:

```
#difference funtion on A
print("Set difference between set A and set B (using difference function):",A.diffe
#difference function on B
print("Set difference between set B and set A (using difference function):",B.diffe
```

```
Set difference between set A and set B (using difference function): {2, 3,
5}
Set difference between set B and set A (using difference function): {16, 8
1, 25}
```

In [9]:

```
print("Symmetric difference between set A and set B (without using symmetric_differ
```

```
Symmetric difference between set A and set B (without using symmetric_diff
erence funtion): {16, 81, 2, 3, 5, 25}
```

In [10]:

```
#symmetric_difference function on A
print("Symmetric difference between set A and set B (using symmetric_difference fun
#symmetric_difference function on B
print("Symmetric difference between set A and set B (using symmetric_difference fun
```

```
Symmetric difference between set A and set B (using symmetric_difference f
untion): {16, 81, 2, 3, 5, 25}
Symmetric difference between set A and set B (using symmetric_difference f
untion): {16, 81, 2, 3, 5, 25}
```