

## CODE :-

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exp_6_attribute_closure.py ×
1 def find_closure(X, F):
2     closure = set(X)
3     while True:
4         prev_closure = set(closure)
5         for u, v in F:
6             if set(u).issubset(closure):
7                 closure = closure.union(set(v))
8         if closure == prev_closure:
9             break
10    return closure
11 F = [({'A'}, {'B', 'C'}), ({'B'}, {'D'}), ({'E'}, {'A'}), ({'C', 'D'}, {'E'})]
12
13 # Attribute closure of BC
14 X = {'B', 'C'}
15 closure = find_closure(X, F)
16 print(closure)
17
18 #Attribute closure of B
19 Y = {'B'}
20 closure = find_closure(Y, F)
21 print(closure)
22
23
24 #Attribute closure of A
25 Z = {'A'}
26 closure = find_closure(Z, F)
27 print(closure)
28
29
```

## OUTPUT :-

```
Shell ×
>>> %Run exp_6_attribute_closure.py
{'D', 'A', 'E', 'B', 'C'}
{'D', 'B'}
{'D', 'A', 'E', 'C', 'B'}
>>>
```