insertion.py

1. Start a new program by declaring a function to receive a list reference as input and begin a loop to store the current element's value

```
def insertion_sort( array ) :

    for index in range( 1 , len( array ) ) :
        value = array[ index ]

        # Algorithm sequence to be added here.

        print( '\tResolving element[' , index , '] to ' , array )
```

2. Next, add the algorithm sequence to repeatedly insert the current value if smaller than that in the current element

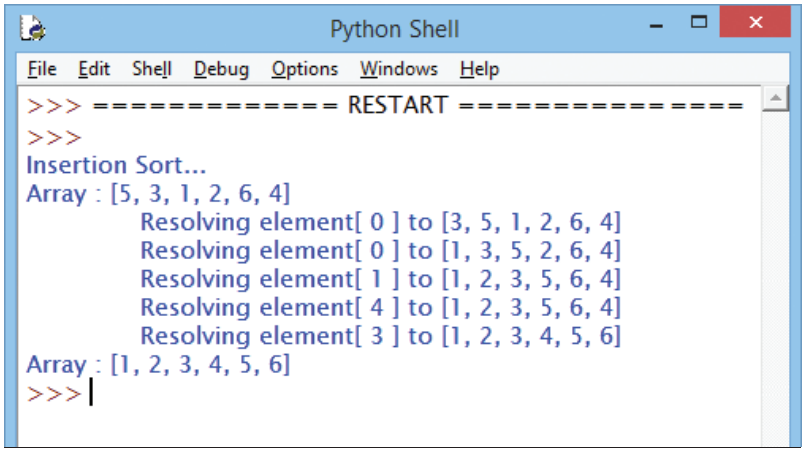
```
        while array[ index-1 ] > value and index >= 1 :
            array[ index ] = array[ index-1 ]
            index -=1
            array[ index ] = value
```

3. Now, add statements to create and display an unsorted list

```
array = [ 5 , 3 , 1 , 2 , 6 , 4 ]
print( 'Insertion Sort...\nArray :' , array )
```

4. Finally, add statements to call the algorithm function and display the list once more – to see the list sorted in place

```
insertion_sort( array )
print( 'Array :' , array )
```



On some iterations this algorithm recognizes that elements in the "unsorted" part are already sorted following earlier insertions.