In [1]:
```
    for i in range(1, 10):
    print(i, end=" ")
```

```
  File "C:\Users\PRATIK~1\AppData\Local\Temp/ipykernel_4784/1821807043.py", line 2
    print(i, end=" ")
    ^
IndentationError: expected an indented block
```

In [2]:
```
for i in range(1, 10):
    print(i, end=" ")
```

```
1 2 3 4 5 6 7 8 9
```

In [3]:
```
for i in range(1, 10, 2):
    print(i, end=" ")
```

```
1 3 5 7 9
```

In [4]:
```
for i in range(10, 0, -1):
    print(i, end=" ")
```

```
10 9 8 7 6 5 4 3 2 1
```

In [11]:
```
#bubble sort
def bubble_sort(arr):
    for i in range(len(arr)-1, 0, -1):
        for j in range(i):
            if(arr[j] > arr[j+1]):
                temp = arr[j]
                arr[j] = arr[j+1]
                arr[j+1] = temp
arr = [2, 5, 1, 6, 3, 8, 7, 4]
bubble_sort(arr)
print(arr)
```

```
[1, 2, 3, 4, 5, 6, 7, 8]
```

In [12]:
```
#merge sort
def merge_sort(arr):
    if(len(arr)>1):
        left_arr = arr[:len(arr)//2]
        right_arr = arr[len(arr)//2:]

        merge_sort(left_arr)
        merge_sort(right_arr)

        l = 0
        r = 0
        k = 0

        while(l<len(left_arr) and r<len(right_arr)):
            if(left_arr[l]<right_arr[r]):
                arr[k] = left_arr[l]
                l+=1
            else:
                arr[k] = right_arr[r]
                r+=1
            k+=1

        while(l<len(left_arr)):
            arr[k] = left_arr[l]
            l+=1
            k+=1

        while(r<len(right_arr)):
            arr[k] = right_arr[r]
            r+=1
            k+=1

arr = [2, 5, 3, 1, 6, 4]
merge_sort(arr)
print(arr)
```

```
[1, 2, 3, 4, 5, 6]
```

In [13]:
```
#insertion sort
def insertion_sort(arr):
    for idx in range(1, len(arr)):
        j = arr[idx]
        i = idx - 1
        while(i>=0):
            if(j < arr[i]):
                arr[i+1] = arr[i]
                arr[i] = j
                i = i -1
            else:
```

```
            break
arr = [2, 6, 5, 1, 3, 4]
insertion_sort(arr)
print(arr)
```

```
[1, 2, 3, 4, 5, 6]
```

In [14]:
```
#Linear search
pos = -1
def linear_search(arr, n):
    i = 0
    for i in range(0, len(arr)):
        if(arr[i] == num):
            globals()['pos'] = i
            return True
    return False
arr = [2, 3, 6, 4, 5, 8, 1]
num = 2

if(linear_search(arr, num)):
    print('Your number is at index', pos)
else:
    print('Not found here!')
```

```
Your number is at index 0
```

In [ ]: