Assignment

1. Read marks of 10 students, store in an array and print it.?

```python
import array as arr

marks = arr.array('i',[])

print("Enter marks for 10 students:")
for i in range(0,9):
    mark = int(input("Enter mark: "))
    marks.append(mark)

for i in range(0,9):
    print(marks[i],end=" ")
```

Output -
PS D:\Programs> python .\DSA\assignment1.py
Enter marks for 10 students:
Enter mark: 1
Enter mark: 2
Enter mark: 3
Enter mark: 4
Enter mark: 5
Enter mark: 6
Enter mark: 7
Enter mark: 8
Enter mark: 9
1 2 3 4 5 6 7 8 9

2. Display the total number of students that have same mark.?

```python
print("\nMarks and how many students got them:")
for i in range(len(marks)):
    mark = marks[i]
    count = 0
    for j in range(len(marks)):
        if marks[j] == mark:
            count += 1
    if i == marks.index(mark):
        if count > 1:
            print(f"{count} students got {mark} mark")
```

Output:
PS D:\Programs> python .\DSA\assignment1.py
Enter marks for 10 students:
Enter mark: 1
Enter mark: 2
Enter mark: 3
Enter mark: 4
Enter mark: 5
Enter mark: 5
Enter mark: 4
Enter mark: 3
Enter mark: 2
1 2 3 4 5 5 4 3 2
Marks and how many students got them:
2 students got 2 mark
2 students got 3 mark
2 students got 4 mark
2 students got 5 mark

3. Use search function to find the a particular score in the mark list.?

```python
count = 0
for i in range(0,9):
    if marks[i] == n:
        print(f"the {n} is found at {i}th position")
        count = 1
        break

if count == 0:
    print("Item not found")
```

Output:
Enter mark: 1
PS D:\Programs> python .\DSA\assignment1.py
Enter marks for 10 students:
Enter mark: 1
Enter mark: 2
Enter mark: 3
Enter mark: 4
Enter mark: 5
Enter mark: 6
Enter mark: 7
Enter mark: 8
Enter mark: 9
1 2 3 4 5 6 7 8 9

Marks and how many students got them:
Enter the item to be searched: 5
the 5 is found at 4th postition
PS D:\Programs> python .\DSA\assignment1.py
Enter marks for 10 students:
Enter mark: 1
Enter mark: 2
Enter mark: 3
Enter mark: 4
Enter mark: 5
Enter mark: 7
Enter mark: 8
Enter mark: 9
Enter mark: 0
1 2 3 4 5 7 8 9 0
Marks and how many students got them:
Enter the item to be searched: 6
Item not found

Program:

```python
import array as arr

marks = arr.array('i',[])

print("Enter marks for 10 students:")
for i in range(0,9):
    mark = int(input("Enter mark: "))
    marks.append(mark)

for i in range(0,9):
    print(marks[i],end=" ")

print("\nMarks and how many students got them:")
for i in range(len(marks)):
    mark = marks[i]
    count = 0
    for j in range(len(marks)):
        if marks[j] == mark:
            count += 1
    if i == marks.index(mark):
        if count > 1:
            print(f"{count} students got {mark} mark")

n= int(input("Enter the item to be searched:   "))
```

```python
count = 0
for i in range(0,9):
    if marks[i] == n:
        print(f"the {n} is found at {i}th position")
        count = 1
        break

if count == 0:
    print("Item not found")
```