```
# DSL - ASSIGNMENT 1 - A2
class Test:
   def __init__(self):
       self.fds = []
        self.n = 0
    def getdata(self):
        self.n = int(input('\nEnter the class strength of SE Comp A: '))
        print('\n(Note: Enter -1 for absent students)\n')
        print('Enter the marks scored in Fundamental of Data Structure: ')
        print('---
        for i in range(self.n):
            self.fds.append(int(input(f'Enter marks of roll no {i + 1}: ')))
    def putdata(self):
        print('\n\nTest Marks of Fundamental of Data Structure are as follows ... \n')
        print('**********************************
        print('| Roll No | DSA Marks |')
        for i in range(self.n):
            print(f' \mid t\{i + 1\} \mid t\{self.fds[i]\} \mid t\})
        print('—
    def avg(self):
        total = 0
        present = ∅
        for i in self.fds:
                total += i
                present += 1
        print(f'Average marks of the class: {round(total / present, 3)}n')
    def absstud(self):
        print('Students absent for Fundamental of Data Structure test are: n')
        absent = 0
        for i in range(self.n):
            if self.fds[i] = -1:
                print(f'Roll No: {i + 1} absent')
                absent += 1
        print(f' \setminus nTotal absent students are: {absent} \setminus n \setminus n')
```

```
def maxmin(self):
    maxi, max_rollno, mini, min_rollno = 0, [], 10, []
    for i, val in enumerate(self.fds):
        if val \neq -1:
             if maxi = val:
                 max_rollno.append(i + 1)
             elif maxi < val:</pre>
                 max_rollno = [i + 1]
                 maxi = val
             if mini = val:
                 min_rollno.append(i + 1)
             elif mini ≥ val:
                 min rollno = [i + 1]
                 mini = val
    max_rollno, min_rollno = ', '.join(map(str, max_rollno)), ', '.join(map(str, min_rollno))
    print(f'Highest Test Score : Roll No : (\{\max \text{ rollno}\}\) with Marks = \{\max i\}\setminus n'\}
    print(f'Lowest\ Test\ Score\ :\ Roll\ No\ :\ (\{min\_rollno\})\ with\ Marks\ =\ \{mini\}\setminus n\setminus n')
def frequency(self):
    max marks = 10
    freq = [\emptyset] * (max_marks + 1)
    stud, marks, index = \emptyset, \emptyset, []
    for val in self.fds:
        if val \neq -1:
             freq[val] += 1
    for i, val in enumerate(freq):
        if stud ≤ val:
            marks = i
             stud = val
    for i, val in enumerate(self.fds):
        if val = marks:
             index.append(i + 1)
    index = ', '.join(map(str, index))
    print(f'Maximum of {marks} marks are scored by {stud} students with Roll No: ({index})')
```

```
def main():
    test = Test()
    test.getdata()
    test.putdata()
    test.avg()
    test.absstud()
    test.maxmin()
    test.frequency()
if __name__ = "__main__":
    main()
```

------ OUTPUT -----

Enter the class strength of SE Comp A: 10

(Note: Enter -1 for absent students)

Enter the marks scored in Fundamental of Data Structure:

Enter marks of roll no 1: 2
Enter marks of roll no 2: 5
Enter marks of roll no 3: -1
Enter marks of roll no 4: 4
Enter marks of roll no 5: 2
Enter marks of roll no 6: 10
Enter marks of roll no 7: 6
Enter marks of roll no 8: 4
Enter marks of roll no 9: 10

Enter marks of roll no 10: 4

Test Marks of Fundamental of Data Structure are as follows...

Roll No	DSA Marks
*****	*****
1	2
2	5
3	-1
4	4
5	2
6	10
7	6
8	4
9	10
10	4

Average marks of the class: 5.222

Students absent for Fundamental of Data Structure test are:

Roll No: 3 absent

Total absent students are: 1

Highest Test Score: Roll No: (6, 9) with Marks = 10

Lowest Test Score: Roll No: (1, 5) with Marks = 2

Maximum of 4 marks are scored by 3 students with Roll No: (4, 8, 10)