

4. Write a program that prints the roll number and the marks of the student scoring the highest marks among all students in a college, and the roll number, the marks and the department of the student scoring highest marks among the undergraduate (UG) students in that college. Your program should define two types - **Student** and its subtype **UGStudent**. It should accept the roll number and total marks of 3 students, of type **Student**, and the roll number, total marks, and department of 3 UG students, of type **UGStudent**.
- The class **StudentList** contains a generic array which can store instances of **Student/UGStudent** type. It also provides the iterator to traverse through that array which is implemented using an inner class named **Iter**. Assume that the total marks for each student is unique. Implement the following to complete the program and obtain the specified output.
 - In the class **UGStudent**
 - Complete the definition of constructor.
 - In the class **FClass**
 - Define the generic function **printTopper()** that uses an iterator of **StudentIterator** type to find the **Student** (or **UGstudent**) who obtained the highest total marks, and prints the details by calling the **print()** method.
 - In the class **Iter**
 - Complete the definition of **has_next()** method.

Sample input 1:

10 78

11 67

12 98

101 56 EE

102 87 ME

103 33 CE

Output:

12 : 98

102 : 87 : ME

Sample input 2:

1 87

2 67

3 9

1101 56 CSE

1012 76 CSE

1033 78 CSE

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Output:

1 : 87

1033 : 78 : CSE