


```

In [5]: #TASK 2
class Author:
    totalBooks = 0
    def __init__(self,name=""):
        print("=====")
        self.name = name
        if self.name == "":
            print("A book can not be added without author name")
    def addBook(self,book1,book2=""):
        Author.totalBooks += 1
        self.book1 = book1
        self.book2 = book2
    def setName(self,name):
        self.name = name
    def printDetail(self):
        print("Number of Book(s): ",Author.totalBooks)
        print("Author Name: ",self.name)
        print("Science Fiction: ",self.book1)
        print("Horror: ", self.book2)
print("Total Books: ", Author.totalBooks)
print("=====")
a1 = Author()
print("=====")
a1.addBook("Ice", "Science Fiction")
print("=====")
a1.setName("Anna Kavan")
a1.addBook("Ice", "Science Fiction")
a1.printDetail()
print("=====")
a2 = Author("Humayun Ahmed")
a2.addBook("Onnobhubon", "Science Fiction")
a2.addBook("Megher Upor Bari", "Horror")
print("=====")
a2.printDetail()
a2.addBook("reena", "Science Fiction")
print("=====")
a2.printDetail()
print("=====")
print("Total Books: ", Author.totalBooks)

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Total Books: 0
=====
=====
A book can not be added without author name
=====
=====
Number of Book(s): 2
Author Name: Anna Kavan
Science Fiction: Ice
Horror: Science Fiction
=====
=====
=====
Number of Book(s): 4
Author Name: Humayun Ahmed
Science Fiction: Megher Upor Bari

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Horror: Horror
=====
Number of Book(s): 5
Author Name: Humayun Ahmed
Science Fiction: reena
Horror: Science Fiction
=====
Total Books: 5
```

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In [2]: #TASK 1
inp = input("Enter a string: ").split()
ans = {}
for x in inp:
    if x in ans:
        ans[x] = ans[x] + 1
    else:
        ans[x] = 1
dupl = []
for d in ans:
    if ans[d] == 2:
        dupl.append(d)
dupl.sort()
if len(dupl) == 0:
    print(-1)
else:
    print(dupl[0])
```

```
Enter a string: I CAN'T REALLY REMEMBER WHAT WAS THERE
-1
```

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In [3]: #TASK 3
class CSEDepartment:
    total_student = 0

    def __init__(self, name, credit):
        self.name = name
        self.credit = credit

    def __str__(self):
        s = "Program: " + self.name + ", Credit hours: " + str(self.credit)
        return s

class CSEProgram(CSEDepartment):
    def __init__(self, name, credit=136):
        super().__init__(name, credit)
        print("CSE students need to complete " + str(self.credit) + " credits")

    def __str__(self):
        return super().__str__() + "\n" + "Total Students(s): " + str(CSEDepartment.total_student)

    def addStudentWithCredits(self, s1, c1, s2, c2, s3, c3):
        CSEDepartment.total_student += 1
        self.s1 = s1
        self.c1 = c1
        self.s2 = s2
        self.c2 = c2
        self.s3 = s3
        self.c3 = c3
        print("Student details: ")
        print("Name: " + str(self.s1) + ", " + " Credit remaining: " + str(self.c1))
        print("Name: " + str(self.s2) + ", " + " Credit remaining: " + str(self.c2))
        print("Name: " + str(self.s3) + ", " + " Credit remaining: " + str(self.c3))

class CSPProgram(CSEDepartment):
    def __init__(self, name, credit=124):
        super().__init__(name, credit)
        print("CS students need to complete " + str(self.credit) + " credits")
    def addStudentWithCredits(self, s1, c1, s2, c2):
        CSEDepartment.total_student += 1
        self.s1 = s1
        self.c1 = c1
        self.s2 = s2
        self.c2 = c2
        print("Name: " + str(self.s1) + ", " + " Credit remaining: " + str(self.c1))
        print("Name: " + str(self.s2) + ", " + " Credit remaining: " + str(self.c2))
        CSEDepartment.total_student += self.total_student
    def __str__(self):
        return super().__str__() + "\n" + "Total Students(s): " + str(CSEDepartment.total_student)

p1 = CSEProgram("CSE", 136)
print("=====")
p1.addStudentWithCredits("Bob", 12, "Carol", 18, "Mike", 15)
print("=====")

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print(p1)
print("=====")
p2 = CSProgram("CS", 124)
print("=====")
p2.addStudentWithCredits("David", 12, "Simon", 18)
print("=====")
print(p2)
print("=====")
print("Total Students in CSE Department: ", CSEDepartment.total_student)
```

CSE students need to complete 136 credits

=====

Student details:

Name: Bob, Credit remaining: 124

Name: Carol, Credit remaining: 118

Name: Mike, Credit remaining: 121

=====

Program: CSE, Credit hours: 136

Total Students(s): 1

=====

CS students need to complete 124 credits

=====

Name: David, Credit remaining: 112

Name: Simon, Credit remaining: 106

=====

Program: CS, Credit hours: 124

Total Students(s): 4

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Total Students in CSE Department: 4

In []: