

# Competitive Programming Assignment

Q1.

```
1 N = int(input())
2
3 arr = list(map(int, input().split()))
4
5 first = {}
6
7 max_dist = -1
8
9 for i in range(N):
10     num = arr[i]
11     if num in first:
12         first_idx = first[num]
13         distance = i - first_idx - 1
14         max_dist = max(max_dist, distance)
15     else:
16         first[num] = i
17
18 print(max_dist)
```

Output:

```
C:\Users\manan\PycharmProjects\python1\.venv\Scripts\python.exe C:\Users\manan\PycharmProjects\python1\Comp.py
12
1 5 3 6 3 3 8 5 2 5 2 10
7

Process finished with exit code 0
```

Q2.

```
1 text = input().strip()
2 broken = input().strip()
3
4 broken_set = set(broken)
5
6 words = text.split()
7
8 count = 0
9 for word in words:
10     can_type = True
11     for char in word:
12         if char in broken_set:
13             can_type = False
14             break
15     if can_type:
16         count += 1
17
18 print(count)
```

Output:

```
C:\Users\manan\PycharmProjects\python1\.venv\Scripts\python.exe C:\Users\manan\PycharmProjects\python1\Comp.py
hello world
ad
1
Process finished with exit code 0
```

Q3.

```
1  s1 = input().strip()
2  s2 = input().strip()
3
4  words1 = s1.split()
5  words2 = s2.split()
6
7  freq1 = {}
8  freq2 = {}
9
10 for word in words1:
11     freq1[word] = freq1.get(word, 0) + 1
12
13 for word in words2:
14     freq2[word] = freq2.get(word, 0) + 1
15
16 uncommon_s1 = []
17 for word in words1:
18     if freq1.get(word, 0) == 1 and freq2.get(word, 0) == 0:
19         if word not in uncommon_s1:
20             uncommon_s1.append(word)
21
22 uncommon_s2 = []
23 for word in words2:
24     if freq2.get(word, 0) == 1 and freq1.get(word, 0) == 0:
25         if word not in uncommon_s2:
26             uncommon_s2.append(word)
27
28 result = uncommon_s1 + uncommon_s2
29
30 if not result:
31     print(-1)
32 else:
33     print(" ".join(result))
```

## Output:

```
C:\Users\manan\PycharmProjects\python1\.venv\Scripts\python.exe C:\Users\manan\PycharmProjects\python1\Comp.py  
this apple is sweet  
this apple is sour  
sweet sour  
  
Process finished with exit code 0
```