

AP ASSIGNMENT – SHIVAM GAUTAM – 22BCS12184

1. Maximum Units on a truck –

The screenshot shows the LeetCode interface for the problem "Maximum Units on a Truck". The user "Greedy" has submitted a solution in Java. The submission is marked as "Accepted". The performance metrics are: 45.60 MB memory and 8.15% of solutions beat the user's runtime. The runtime graph shows a single bar at 13ms. The code in the editor is as follows:

```
26     return totalUnits;
27 }
28 }
29
```

The test case section shows the following input:

```
boxTypes =
[[1,3],[2,2],[3,1]]
truckSize =
```

The bottom of the screen shows the Windows taskbar with the date 10-04-2025 and time 23:11.

2. Minimum Operations to make the array increasing –

The screenshot shows the LeetCode interface for the problem "Minimum Operations to make the array increasing". The user "Greedy" has submitted a solution in Java. The submission is marked as "Accepted". The performance metrics are: 4 ms runtime (73.53% of solutions beat the user's runtime) and 44.90 MB memory (91.43% of solutions beat the user's runtime). The runtime graph shows a single bar at 4ms. The code in the editor is as follows:

```
11     }
12     }
13     }
14     return operations;
15 }
16 }
17
```

The test case section shows the following input:

```
nums =
[1,1,1]
```

The bottom of the screen shows the Windows taskbar with the date 10-04-2025 and time 23:14.

3. Minimum Operations to make a subsequence –

This screenshot shows a LeetCode submission for the problem "Minimum Operations to make a subsequence". The submission is in Java and has been accepted, passing all 82 test cases. The runtime is 89 ms, which beats 31.19% of other submissions. The memory usage is 54.91 MB, which beats 99.08% of other submissions. A bar chart at the bottom of the performance section shows the user's performance relative to other users. The code on the right is a Java solution that uses a list to store the subsequence and returns its size. The test result section shows that the submission passed Case 1 with the input target = [5, 1, 3].

Accepted 82 / 82 testcases passed
shivam 791 submitted at Apr 10, 2025 23:18

Runtime: 89 ms | Beats 31.19%
Memory: 54.91 MB | Beats 99.08%

Code (Java):

```
29     lis.set(idx, num);  
30 }  
31 }  
32 return lis.size();  
33 }  
34 }  
35 }
```

Testcase: Case 1
Input: target = [5, 1, 3]
Output: Accepted Runtime: 0 ms

4. Maximum number of tasks you can assign-

This screenshot shows a LeetCode submission for the problem "Maximum number of tasks you can assign". The submission is in Java and has been accepted, passing all 3 test cases. The runtime is 0 ms. The code on the right is a Java solution that uses a deque to store the tasks and returns the maximum number of tasks that can be assigned. The test result section shows that the submission passed Case 1 with the input tasks = [3, 2, 1].

Accepted Runtime: 0 ms
Case 1 Case 2 Case 3

Input: tasks = [3, 2, 1]
Output: Accepted Runtime: 0 ms

Code (Java):

```
27     workerDeque.addLast(workers[i]);  
28 }  
29  
30 int i = k - 1; // Start from the hardest task  
31 int pillsLeft = pills;  
32  
33 for (; i >= 0; i--) {  
34     int task = tasks[i];
```