

Quiz 2: ECS 342/442/642 Competitive Programming

2 pm to 2:55 pm on 24th Jan, 2025

Instructions

- Suppose your enrollment number is 20001.
 - Open Linux and create folder `quiz-02-20001`.
 - The folder should contain files `quiz-21-20001.cpp`, `quiz-22-20001.cpp`, and `quiz-23-20001.cpp` corresponding to the following three questions.
 - Zip the folder and upload it at <http://172.28.153.64:5000/>
- Your output should use the following line of code.

```
1 int main()
2 {
3     int final_output; // or other relevant declaration
4     cout << "20001\t" << "Donald Knuth\t" << final_output << endl;
5     //Replace '20001' by your roll number and 'Donald Knuth' by your name.
6 }
```

Questions

1. (10 pts) Maximum Subarray Sum

Input: There are t test cases. In each test case, you are given n numbers which form an array. Your task is to find maximum subarray sum. The first input line contains an integer t and the following t lines contains values of array.

Output: Print the sum of maximum subarray sum in each of arrays.

2. (10 pts) Distinct Numbers

Input: There are t test cases. In each test case, you are given n numbers which form an array. Your task is to find the number of distinct values in the list.

Output: Print the sum of number of distinct values in each list.

3. (10 pts) Trailing Zeros Your task is to calculate the number of trailing zeros in the factorial $n!$. For example, $20! = 2432902008176640000$ and it has 4 trailing zeros.

Input: An integer t followed by t many integers.

Output: Print the sum of number of trailing zeros in $n!$ for each input.