Exp 1.1

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BRANCH – B.TECH (CSE)	SEC/GROUP – 26(B)
SEMESTER – 2ND	D.O.P – 3 MAY 2021
SUBJECT – COMPUTER WORKSHOP	

TOPIC - In a parallel universe, there are not just two charges like positive and negative, but there are 26 charges represented by lower English alphabets.
Charges have a property of killing each other or in other words neutralizing each other if they are of same charge and next to each other.
You are given a string s where each si represents a charge, where 0<=i<=|s|-1.
You need to output size of final string followed by string after which no neutralizing is possible.

SOLUTION :

In a parallel universe, there are not just two charges like positive and negative, but there are 26 charges represented by lower english
alphabets.

Charges have a property of killing each other or in other words neutralizing each other if they are of same charge and next to each other.

You are given a string s where each si represents a charge, where $0 \le i \le |s|-1$.

You need to output size of final string followed by string after which no neutralizing is possible.

12
Aaacccbbcccd

2
AD
Explanation
aaacccbbcccd -> accd -> ad

CODE IN TEXT FORM

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int n;
    cin>>n;
    vector<char> v;
    char ch; cin>>ch;
    v.push_back(ch);
    for(int i=1; i<n; i++){
        cin>>ch;
        if(ch==v[v.size()-1]){
            v.erase(v.begin()+v.size()-1);
        }
        else v.push_back(ch);
    }
    cout<<v.size()<<endl;
    for(auto i: v){
        cout<<i;
    }

}
```

CODE IN COMPILER :

```cpp
main.cpp
1  #include <bits/stdc++.h>
2  using namespace std;
3
4  int main()
5  {
6      int n;
7      cin>>n;
8      vector<char> v;
9      char ch; cin>>ch;
10     v.push_back(ch);
11     for(int i=1; i<n; i++){
12         cin>>ch;
13         if(ch==v[v.size()-1]){
14             v.erase(v.begin()+v.size()-1);
15         }
16         else v.push_back(ch);
17     }
18     cout<<v.size()<<endl;
19     for(auto i: v){
20         cout<<i;
21     }
22
23  }
```

OUTPUT:

```
                                    input
12
AAACCCBBCCCD
2
AD


...Program finished with exit code 0
Press ENTER to exit console.
```

LEARNING OUTCOMES
1. Apply coding skills to solve application based problems on competitive platforms such as Hacker Rank/ Hacker Earth/Code Chef.
2. Understand the basic concept and structure of computer hardware
3. Identify the existing configuration of the computers and peripherals.
4. Installing and uninstalling multiple operating systems on a machine.
5. Apply their knowledge about computer peripherals to identify /rectify problems on-board.

EVALUATION COLUMN (To be filled by concerned faculty only)

Sr. No.	Parameters	Maximum Marks	Marks Obtained
1.	Worksheet Completion including writing learning objective/ Outcome	10	
2.	Post Lab Quiz Result	5	
3.	Student engagement in Simulation/ Performance/ Pre Lab Questions	5	
4.	Total Marks	20	