2005839
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OOP LAB 11
FILE

Q1.wap to display content of a file using character output function

```
#include <stdio.h>
#include <stdlib.h>
int main()
{

    FILE * fPtr;
    char ch;
    fPtr = fopen("data/file1.txt", "r");
    if(fPtr == NULL)
    {

        printf("Unable to open file.\n");
        printf("Please check whether file exists or not.\n");
        exit(EXIT_FAILURE);
    }

    printf("File opened successfully. Reading file contents
character by character. \n\n");
    do
    {
        ch = fgetc(fPtr);

        putchar(ch);
    } while(ch != EOF);
    fclose(fPtr);
    return 0;
}
```

Output
File opened successfully. Reading file contents character by character.

hello hey !!!!!

Q3wap to write 10 strings into a file and display them from file

```
#include<iostream>
#include<fstream>
#include<string>
using namespace std;

int main()
{
    ofstream file("file2.txt", ios::out);
    file << "This is first sentence.\n";
    file << "This is the second sentence.\n";
```

```
    file << "This is the third sentence.\n";
    file << "This is the fourth sentence.\n";
    file << "This is the fifth sentence.\n";
    file << "This is the sixth sentence.\n";
    file << "This is the seventh sentence.\n";
    file << "This is the eigth sentence.\n";
    file << "This is the ninth sentence.\n";
    file << "This is the tenth sentence.\n";
    file.close();

    ifstream in;
    char data[100];
    in.open("file2.txt");
    while(in)
    {
        in.getline(data,40);
        cout << data << endl;
    }
    in.close();
    return 0;
}
```

Output:
This is first sentence.
This is the second sentence.
This is the third sentence.
This is the fourth sentence.
This is the fifth sentence.
This is the sixth sentence.
This is the seventh sentence.
This is the eigth sentence.
This is the ninth sentence.
This is the tenth sentence.

```
Q5//wap to count :1.no. of characters  2. no. of words 3.no. of
lines
//4.no. of upper case lower case digit with special symbol
#include<iostream>
#include<fstream>
using namespace std;

int main()
{
    char ch;
    int word = 1;// First word is not counted as it not counting
spaces
    int line = 1;
    int upc = 0, lwc = 0, dig = 0, ss = 0;
    ifstream in("data/file1.txt");
    in.seekg(0,ios::end);
    int len = in.tellg();
    cout << "No. of characters in file: " << len << endl;
```

```
    in.seekg(0, ios::beg);
    while(in)
    {
        in.get(ch);
        if(ch == ' ' || ch == '\n')
            word++;
        if(ch == '\n')
            line++;
        if(isupper(ch))
            upc++;
        if(islower(ch))
            lwc++;
        if(isdigit(ch))
            dig++;
    }
    cout << "No. of words: " << word << endl;
    cout << "No. of lines: " << line << endl;
    cout << "No. of Uppercase Characters: " << upc << endl;
    cout << "No. of lowercase Characters: " << lwc << endl;
    cout << "No. of digits: " << dig << endl;
    ss = len - (word - 1) - upc - lwc - dig;
    cout << "No. of special characters: " << ss << endl;
    in.close();
}
```

File contain
ABCD.
daef
srb
nrb

Output:
No. of characters in file: 23
No. of words: 6
No. of lines: 6
No. of Uppercase Characters: 4
No. of lowercase Characters: 10
No. of digits: 0
No. of special characters: 4

Q7.wap to read and write objects to a file using read and write functions

```
#include <iostream>
#include <fstream>

using namespace std;
 class student
{
    private:
        char name[30];
        int age;
```

```
    public:
        void getData(void)
        { cout<<"Enter name:"; cin.getline(name,30);
          cout<<"Enter age:"; cin>>age;
        }

        void showData(void)
        {
        cout<<"Name:"<<name<<",Age:"<<age<<endl;
        }
};

int main()
{
    student s;

    ofstream file;

       file.open("data/file1.txt",ios::out);
    if(!file)
    {
      cout<<"Error in creating file.."<<endl;
      return 0;
    }
    cout<<"\nFile created successfully."<<endl;

     s.getData();
    file.write((char*)&s,sizeof(s));

    file.close();
    cout<<"\nFile saved and closed succesfully."<<endl;

    ifstream file1;
    file1.open("data/file1.txt",ios::in);
    if(!file1){
        cout<<"Error in opening file..";
        return 0;
    }
    file1.read((char*)&s,sizeof(s));

    s.showData();
    file1.close();

    return 0;
}
```

Output:
File created successfully.
Enter name:DAMAN
Enter age:19

File saved and closed succesfully.
Name:DAMAN,Age:19