

CSC 240
Data Structures with C++
Program 4

Create a List data structure. The list will be capable of holding characters. This is the class structure you will use:

```
class List
{
public:
    List();
    void makeEmpty();
    bool isFull() const;
    int getLength() const;
    char retrieveItem(char item);
    void insertItem(char item);
    void deleteItem(char item);
    void showList();
    char getNext();
private:
    int length;
    char info[100];
    int currentPos;
};
```

Use the code below for **main()**.

```
main()
{   int x, i;
    char z;
    List C;
    ifstream in;
    in.open("char.txt");
    for (i = 0; i < 100; i++)
    {
        in >> z;
        C.insertItem(z);
    }
    cout << "Here is...the list: " << endl;
    C.showList();
    C.deleteItem('P');
    C.deleteItem('V');
    C.deleteItem('O');
    cout << endl << "Now here is the list: " << endl;
    C.showList();
    C.makeEmpty();
    cout << endl << "Now the list is empty: " << endl;
    C.showList();
    in.close();
}
```

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