Jaypee University of Engineering and Technology, Guna

Department of Computer Science and Engineering

Object Oriented Programming (18B11CI211)

LAB-9

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Questions:

1. Write a program that creates a text file “TEXT.txt”on the disk. Write text on this file. Read this

file and display the following information on the screen in two columns:

• Number of lines

• Number of words

• Number of characters

Strings should be left-justified and numbers should be right-justified in a suitable field

width.Also handle the error by displaying suitable error message.

2. Two file named ‘Source1’ and ‘Source2’ contain sorted list of integers. Write a program that

reads the contents of both the files and stores the merged list in sorted form in a new file

named ‘Target’. Also handle the error by displaying suitable error message

3. In a loop, prompt the user to enter name data consisting of a first name, middle initial, last

name, and employee number (type unsigned long). Then, using formatted I/O with the

insertion (<<) operator, write these four data items to an ofstream object. Don’t forget that

strings must be terminated with a space or other whitespace character. When the user indicates

that no more name data will be entered, close the ofstream object, open an ifstream object, read and display all the data in the file, and terminate the program.

4. Write a program to read the file and store the lines into an array. Also handle the error by displaying suitable error message

5. Write a program to copy a file in another name. Also handle the error by displaying suitable error message

6. Write a program to merge two files and write it in a new file. Also handle the error by displaying suitable error message

7. Write a program to encrypt and decrypt a text file. Also handle the error by displaying suitable error message

Solution1:

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

int main()
{
    int line = 0, ch = 0, word = 0, res = 1;
    char li[80], c, wor[20];
    ofstream ofile("TEXT.txt", ios::out | ios::app);
    while (1)
    {
        cout << "Enter the line" << endl;
        gets(li);
        ofile << li << endl;
        cout << "Do you want to continue (0,1)" << endl;
        cin >> res;
        cin.ignore();
        if (res == 1)
            continue;
        else
            break;
    }
    ofile.close();
    ifstream file("TEXT.txt", ios::in);
    while (!file.eof())
    {
        if (file.eof())
            break;
        file >> wor;
        word++;
    }
    file.close();
    ifstream infile("TEXT.txt", ios::in);
    while (!infile.eof())
    {

        infile.getline(li, 80);
        if (infile.eof())
            break;
        line++;
    }
    infile.close();
    ifstream ifile("TEXT.txt", ios::in);
    while (!ifile.eof())
    {
        if (ifile.eof())
            break;
        ifile.get(c);
        ch++;
    }
```

```
    ifile.close();
    cout << "\nNUMBER OF LINES: " << setw(30) << line << endl;
    cout << "\nNUMBER OF words: " << setw(30) << word - 1 << endl;
    cout << "\nNUMBER OF CHARACTERS: " << setw(25) << ch - 1;

    return 0;
}
```

Solution2:

```
#include <iostream>
#include <fstream>
using namespace std;
int main()
{
    int ARR_1[] = {1, 2, 3, 4, 5}, ARR_2[] = {6, 7, 8, 9, 10}, ARR_3[10];
    ofstream fout1, fout2, fout3;
    ifstream fin1, fin2, fin3;
    fout1.open("Source1");
    for (int i = 0; i < 5; i++)
    {
        fout1.write((char *)&ARR_1[i], (sizeof(ARR_1[i])));
    }
    fout1.close();
    fout1.open("Source2");
    for (int i = 0; i < 5; i++)
    {
        fout1.write((char *)&ARR_2[i], (sizeof(ARR_2[i])));
    }
    fout1.close();
    fin1.open("Source1");
    fout1.open("Target");
    for (int i = 0; i < 5; i++)
    {
        fin1.read((char *)&ARR_1[i], (sizeof(ARR_1[i])));
        fout1.write((char *)&ARR_1[i], (sizeof(ARR_1[i])));
    }
    fin1.close();
    fin1.open("Source2");
    for (int i = 0; i < 5; i++)
    {
        fin1.read((char *)&ARR_2[i], (sizeof(ARR_2[i])));
        fout1.write((char *)&ARR_2[i], (sizeof(ARR_2[i])));
    }
    fin1.close();
    fout1.close();
    fin1.open("Target", ios::in);
    for (int i = 0; i < 10; i++)
    {
        fin1.read((char *)&ARR_3[i], (sizeof(ARR_3[i])));
        cout << ARR_3[i] << endl;
```

```
    }
    fin1.close();
    return 0;
}
```

Solution3:

```
#include <iostream>
#include <fstream>
using namespace std;
int main()
{
    string firstname[3];
    string middlename[3];
    string lastname[3];
    unsigned long empno[3];
    char ch = 'y';
    int count = 0, temp;
    ifstream inif;
    ofstream outf;
    outf.open("myfile.dat");
    for (int i = 0; i < 3; i++)
    {
        cout << "first name : "
             << " ";
        cin >> firstname[i];
        outf << firstname[i] << '\n';
        cout << "middlename : ";
        cin >> middlename[i];
        outf << middlename[i] << '\n';
        cout << "Lastname : ";
        cin >> lastname[i];
        outf << lastname[i] << '\n';
        cout << "Employee no. : "
             << " ";
        cin >> empno[i];
        outf << empno[i] << '\n';
        count++;
        cout << "Enter more names (y/n)... ";
        cin >> ch;
        if (ch == 'n')
        {
            break;
        }
    }
    outf.close();
    inif.open("myfile.dat");
    temp = count;
    for (int i = 0; i < temp; i++)
    {
        inif >> firstname[i];
```

```
        cout << "First Name = " << firstname[i] << endl;
        inif >> middlename[i];
        cout << "Middle Name = " << middlename[i] << endl;
        inif >> lastname[i];
        cout << "Last name = " << lastname[i] << endl;
        inif >> empno[i];
        cout << "Employee number = " << empno[i] << endl;
    }
    inif.close();
    return 0;
}
```

Solution4:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main()
{
    string str1, str2[4];
    int count = 0, k;
    char ch, chr = 'y';
    ofstream outf;
    ifstream inif;
    outf.open("filestr.dat");
    while (chr != 'n')
    {
        cout << "Sentence : ";
        getline(cin >> ws, str1);
        outf.write((char *)&str1, (sizeof(str1)));
        count++;
        cout << "Enter more(y/n):";
        cin >> chr;
    }
    outf.close();
    k = count;
    inif.open("filestr.dat");
    for (int i = 0; i < k; i++)
    {
        inif.read((char *)&str1, (sizeof(str1)));
        str2[i] = str1;
    }
    inif.close();
    for (int i = 0; i < k; i++)
    {
        cout << str2[i] << endl;
    }
    return 0;
}
```

Solution5:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main()
{
    string str1, str2[4];
    int count = 0, k;
    char ch, chr = 'y';
    ofstream outf;
    ifstream inif;
    outf.open("filestr.dat");
    while (chr != 'n')
    {
        cout << "Sentence : ";
        getline(cin >> ws, str1);
        outf.write((char *)&str1, (sizeof(str1)));
        count++;
        cout << "Enter more(y/n):";
        cin >> chr;
    }
    outf.close();
    k = count;
    inif.open("filestr.dat");
    for (int i = 0; i < k; i++)
    {
        inif.read((char *)&str1, (sizeof(str1)));
        str2[i] = str1;
    }
    inif.close();
    for (int i = 0; i < k; i++)
    {
        cout << str2[i] << endl;
    }
    return 0;
}
```

Solution6:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main()
{
    string str1, str2[4];
```

```
    int count = 0, k;
    char ch, chr = 'y';
    ofstream outf;
    ifstream inif;
    outf.open("filestr.dat");
    while (chr != 'n')
    {
        cout << "Sentence : ";
        getline(cin >> ws, str1);
        outf.write((char *)&str1, (sizeof(str1)));
        count++;
        cout << "Enter more(y/n):";
        cin >> chr;
    }
    outf.close();
    k = count;
    inif.open("filestr.dat");
    for (int i = 0; i < k; i++)
    {
        inif.read((char *)&str1, (sizeof(str1)));
        str2[i] = str1;
    }
    inif.close();
    for (int i = 0; i < k; i++)
    {
        cout << str2[i] << endl;
    }
    return 0;
}
```

Solution7:

```
#include <iostream>
#include <fstream>
#include <string>
using namespace std;
int main()
{
    string str1, str2[4];
    int count = 0, k;
    char ch, chr = 'y';
    ofstream outf;
    ifstream inif;
    outf.open("filestr.dat");
    while (chr != 'n')
    {
        cout << "Sentence : ";
        getline(cin >> ws, str1);
        outf.write((char *)&str1, (sizeof(str1)));
        count++;
        cout << "Enter more(y/n):";
```

```
        cin >> chr;
    }
    outf.close();
    k = count;
    inif.open("filestr.dat");
    for (int i = 0; i < k; i++)
    {
        inif.read((char *)&str1, (sizeof(str1)));
        str2[i] = str1;
    }
    inif.close();
    for (int i = 0; i < k; i++)
    {
        cout << str2[i] << endl;
    }
    return 0;
}
```