

Assignment 4

Q.1. Retrieving Data from file

Allen started working with I/O in java. Allan's mam has written some contents in the log.txt file. Help Allen to write a java code to display the contents of the file in the console.

Q.2. # Visitors Details

VIP group of companies introduce a new shopping mall "Le". To promote the mall they had approached "6th Event" a famous commercial event organizer to organize an event of lucky draw. The organizer has to collect name, phone and email id of all the visitors during promotion time and give it to the company.

The organizer needs an automated application and wants to store records in a text file called "visitors.txt".

Records should be stored in the following structure

Name1,phonenumber1,emailId1;Name2,phonenumber2,emailId2;

In a record, each attributes should be separated using comma (,) and records should be separated using semi colon (;).

Create a Java Application which has two classes called Main.java and FileManager.java

In FileManager class implement the following methods [method skeletons are given]

- `static public File createFile()` " This method should create the file and return it.
- `static public void writeFile(File f, String record)` " In the method, first parameter is the file reference in which records to be added and second parameter is a record, This record should append in the file. [Record should be as per the given format]

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- `static public String[] readFile(File f)` " This method accept file to be read, returns all records in the file.

In Main class use the following Input and Output statements and call the needed methods from FileManager class to manipulate files.

> Sample Input Output:

Enter Name

John

Enter Phone Number

1234567

Enter Email

johnpeter@abc.com

Do you want to enter another record(yes/no)

yes

Enter Name

Grace

Enter Phone Number

98765412

Enter Email

gracepaul@xyz.com

Do you want to enter another record(yes/no)

no

John,1234567,johnpeter@abc.com

Grace,98765412,gracepaul@xyz.com

Q.3. # Persist Employee

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John is planning to conduct performance appraisal for all the employees who reports to him. For that he plans to conduct the appraisal and store the details in a file. Help him to do this by writing a java program.

As he needs to preserve the details in File, use Streams in java. To make the work easy, he needs to store all the data of employee as an employee object and also retrieve the details from the file as employee object. So use the serialization concept to store and deserialization concept to retrieve the details.

To do this, you are provided with a class, Employee with private attributes

- int employeeId
- String name
- float appraisalRating

Getters, setters and the parameterized constructor are also provided.

Create another public class EmployeeUtility which has the following methods :

- `public boolean addEmployee(String fileName, ArrayList<Employee> employeeList)` - This method should store all the employee objects in the list. Store them in a file with the name provided as parameter. Use serialization concept to preserve the employee details. Please ensure that you write the ArrayList directly in the file and not as individual objects
- `public Employee viewEmployeeById(String fileName, int employeeId)` - Use deserialization concept and read the employee objects from the file. Return the employee with the Id provided as parameter.

Write a public class Main with the main method. Use the main method to check the correctness of the above methods.

Q.4. # Find and Replace

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Polymens a famous news editor, has daily responsibility of deciding which news stories are printed in the paper. Before that he wants to verify all the words are spelled in a right way. Incase of any misspelled word found, he has to replace it throughout the document without any fail. Polymens needs an application to make his find and replace job easier.

Implement the given scenario and code accordingly. Refer the samples for read and display the data.

[Search and replace should be case sensitive. Input can contain words separated by space and full stop.]

> Sample Input 1:

Enter the string:

Have a good day

Enter the word to be searched:

good

Enter the word to be replaced:

nice

> Sample Output 1:

Have a nice day

> Sample Input 2:

Enter the string:

Have a good day

Enter the word to be searched:

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nice

Enter the word to be replaced:

nice

> Sample Output 2:

The word nice not found

> Sample Input 3:

Enter the string:

Google PlayStore is a digital distribution service operated and developed by Google.

Enter the word to be searched:

Google

Enter the word to be replaced:

Yahoo

> Sample Output 3:

Yahoo PlayStore is a digital distribution service operated and developed by Yahoo.

Q.5. Write a Java program to compare two strings lexicographically. Two strings are lexicographically equal if they are the same length and contain the same characters in the same positions

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Q.6. Write a Java program to counts occurrences of a certain character in a given string

Q.7. Write a Java program to concatenate a given string with itself of a given number of times.
