ASSESSMENT-5 (Fiserv)

TOPIC: Java Collections, Multi threading and JDBC
Trainer: Sagar

Points: -/11

1. Name:
   Email Id:
   Batch:1

   Enter your answer

2. Name:
   Email Id:
   Batch:2
   *

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Will be reviewed

3. a) Retrieve the numbers from the below String and keep it in a Integer Array

   String str="Hello5FI1Serv9Batch@2Java7";

b) Convert this Integer Array to ArrayList

c) Pass some value '9' on to this ArrayList, if '9' values exists in ArrayList, remove that data from array List. If not presents, Print a message as given element is not found

d) Get a String without Numbers and special characters and preserve the spaces in place of numbers and special characters like below

str= "Hello FI Serv Batch Java"

e) Replace the "Java" word with "Trainees"

str= "Hello FI Serv Batch Trainees"

f) Using HashMap, print the most repeated character the from the above String

Enter your answer

Will be reviewed

4. a) Write a Java Program to Print the Length of each character in Ascending Order String str="java learning is very easy and It is awesome experience" O/P: a-> 6, e -> 9, etc.,

   b) Remove the less repeated character from the String and replace the highest repeated character with 'z' character and print the String

   Enter your answer

Will be reviewed

5. Employee table should consist of EmpName, EmpCity, EmpSalary, EmpId.

   a) Using JDBC, write a Java program to Insert the 5 sets of employee data into

MySQL database dynamically [Use Scanner Class]

b) Using JDBC, find the max salary of employee Name in that table

```
package Assessment5_0904_Self;

public class Question5 {

    public static void main(String[] args) {
        String dbURL="jdbc:mysql://localhost:3306/fi_serv_training";
        String dbUSERNAME = "root";
        String dbPASSWORD = "P@ssword";

        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the SQL Query");
        String query = sc.nextLine();
        System.out.println(query);

        Connection con = DriverManager.getConnection(dbURL, dbUSERNAME,
dbPASSWORD);
        Statement st = con.createStatement()

        int i=st.executeUpdte(query);
        System.out.println("Data Insertion is completed for" + i);

        ResultSet rs = st.executeQuery("select ename from employee where salary =
(select max(salary) from employee)");
        System.out.println("Employee name of the maximum salary" + rs);
    }
}
```

Will be reviewed

6. Write down the Implementation classes of collection Interface

ArrayList, LinkedList, Vector, HashSet, LinkedHashSet, TreeSet, PriorityQueue

Will be reviewed

7. Write down the Implementation classes of Map Interface

HashMap, LinkedHashMap, SortedMap, TreeMap

Will be reviewed

8. Write a Sample program to convert the LinkedList to HashSet, Print both the LinkedList and HashSet values

```
package Assessment5_0904_Self;

import java.util.HashSet;
import java.util.LinkedList;

public class Question8 {
    public static void main(String[] args) {
        LinkedList l1 = new LinkedList();
        l1.add(true);
        l1.add("Indore");
        l1.add(25);
        l1.add(false);
        System.out.println("LinkedList - " +l1);
        HashSet h1 = new HashSet(l1);
        System.out.println("HashSet - "+h1);
    }
}
```

Will be reviewed

9. What is the Difference between ArrayList and LinkedList

ArrayList -
1. ArrayList is the best choice if our frequent operation is retrieval.
2. ArrayList if the worst choice if our frequent operation is insertion (or) deletion
3. Underlying data structure is Growable array (or) resizable array
4. Default Initial capacity is 10

LinkedList -
1. LinkedList is the best choice if our frequent operation is insertion (or) deletion
2. LinkedList is the worst choice if our frequent operation is retrieval
3. Underlying data structure is double linked list
4. Default Initial capacity is Empty

Will be reviewed

10. What is the Difference between List and Set

List - duplicates are allowed and insertion order is preserved.
Set - duplicates are not allowed and insertion order is not preserved.

Will be reviewed

11. What are the differences between Enumerator, Iterator and List Iterator

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Enter your answer

Will be reviewed

12. Write a Program to implement the missing parts of the below code

public class Student {

```
    private String studentName;

    private int studentClass;

    private String studentSection;



    // Initialize all Instance Variables in below constructor

    public Student(String studentName, int studentClass, String studentSection) {



    }



   public static void main(String[] args) {

        List<Student> school = new ArrayList<>();



        // Add some students to the 'school' list for demonstration (Assume that
‘school’ variable has all the students in a given school)



        // Create a sub-list of 'school' with students who belong to class 5 and
section 'B'



        // Print the filtered students (who belongs to class5 and section B)



    // Getter Methods
```

}

Enter your answer

Will be reviewed

13. Please Implement the Multi Threading program for below requirements

    a) Create '4' classes like Person, Teacher, Student and Employee Classes

    b) Implement the Inheritance --> Extend these '4' classes with Thread Class

    c) Implement public void run() method --> write different logics of all these '4' methods -- try to maintain a huge data and perform some logic

    d) Create a Demo class and write a main thread

    e) Create Objects for all the above '4' classes and call start() method

    f) Observe the '5' multiple threads should execute in parallel

Enter your answer