

ASSIGNMENT 13

1. program to display current date and time in java.

```
Ans: import java.time.LocalDate;
import java.time.LocalDateTime;
import java.util.Date;
public class DateAndTime {
    public static void main(String[] args) {
        LocalDate date=LocalDate.now();
        System.out.println(date);
        LocalDateTime time=LocalTime.now();
        System.out.println(time);
    }
}
```

Output: 2023-08-02
21:19:03.923094700

2. Write a program to convert a date to a string in the format "MM/dd/yyyy".

```
Ans: package DateTimePrac;
import java.time.LocalDate;
import java.util.Date;
public class Date1 {
    public static void main(String[] args) {
        LocalDate date = LocalDate.now();
        int day = date.getDayOfMonth();
        int month = date.getMonthValue();
        int year = date.getYear();
        System.out.println(month+"/"+day+"/"+year);
    }
}
```

Output: 8/2/2023

3. What is the difference between collections and streams? Explain with an Example.

Ans: Collections:

1. It is used for storing and manipulating group of data
2. All the classes and interfaces of this API is in the Java.util package
3. All the elements in the collections are computed in the beginning.
4. In collections, we can remove or add elements.
5. Collections perform iteration over the collection.

Streams:

1. Stream API is only used for processing group of data
2. All the classes and interfaces of this API is in the java.util.stream package
3. In streams, intermediate operations are lazy.
4. We can't modify streams.
5. Stream perform iteration internally.

Ex.collections

```
import java.util.*;
import java.util.Collections;

public class CollecEx {
    public static void main(String[] args) {
        ArrayList al = new ArrayList();
        al.add(90);
        al.add(78);
        al.add(85);
        al.add(60);
        System.out.println(al);
        Collections.sort(al);
        System.out.println(al);
    }
}
```

Output: [90, 78, 85, 60]
[60, 78, 85, 90]

Ex. Streams

```
import java.util.Arrays;
import java.util.*;
import java.util.stream.*;
public class StreamEx {
    public static void main(String[] args) {

        List<Integer> list = Arrays.asList(8,5,1,3,4,2);
        Stream<Integer> streamData=list.stream();
        Stream<Integer> finalStream= streamData.filter(n->n%2==0).sorted().map(n->n*2);
        finalStream.forEach(n-> System.out.println(n));

    }
}
```

Output: 4

8

16

4. What is enums in java? explain with an example.

Ans: We can use enum to define a group of named constants. An enum type is a special data type that enables for a variable to be a set of predefined constants. The variable must be equal to one of the values that have been predefined for it. Common examples include compass directions (values of NORTH, SOUTH, EAST, and WEST) and the days of the week.

Example: `enum Week`

```
{
    MON, TUE, WED, THU;
}
public class EnumEx {
    public static void main(String[] args) {
        Week w=Week.MON;
        System.out.println(w);
    }
}
```

Output: MON

5. What are in built annotations in java?

Ans: Built in annotations in java are:

@Override

@FunctionalInterface

@Deprecated

@SafevarArgs

@SupressWarnings