SESSION 13 PROGRAMS(Lambda Expressions)

Use Of Lambda Expression

1. To provide the implementation of Functional interface without creating child class.
2. Less coding.

Functional Interface

An interface which has only one abstract method is called functional interface.

Java provides an anotation *@FunctionalInterface*, which is used to declare an interface as functional interface.

```
//Functional Interface
@FunctionalInterface
public interface Drawable {

        public int draw(String shape);  //Only 1 method
        //public void draw1(String shape);

    }
//Child Class
    public class DrawImpl implements Drawable {
        int width=10;
        public int draw(String shape) {
            System.out.println("Drawing "+shape+"width is"+width);
        return width;
        }

}
```

Class to Demonstrate use of Lambda Expression

```
import java.util.ArrayList;
import java.util.Iterator;
import java.util.List;
//Class to Demonstrate use of Lambda Expression
public class Main {
	 public static void main(String[] args) {
	int width=10;

	//without lambda, Drawable implementation using anonymous class
	Drawable d=new Drawable(){
	   public int draw(String name)
	   {
	        System.out.println("Drawing "+name+"width is"+width);
	        return width;
	   }

	};
	d.draw("square");

	//with lambda
	Drawable d2=(String shape)-> {
	 System.out.println("Drawing "+shape+"width is "+width);
	 return width;
	};

	d2.draw("rectangle");

    //Lambda Used to iterate List
	List<String> list=new ArrayList<String>();
	list.add("ankit");
	list.add("mayank");
	list.add("irfan");

	list.forEach(
```

```
            (n)->System.out.println(n)  //Lambda Use to iterate List
        );

         //Traversing list through Iterator
                Iterator itr=list.iterator();
                while(itr.hasNext()){
                        System.out.println(itr.next());
                }

    }

}
```

SESSION 13 ASSIGNMENTS

1. Create a Functional Interface vehicle . Create 1 method void drive(). Create a Main Class . Use Lambda Expression to implement drive() method in the Main Class. Print the output by calling the above implemented method .

2. Write a Java program to create a new array list, add some colors (string) and print out the collection using Lambda Expression

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