Lab 2 – Assignment

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Class: AID-G semester 1
Course: Object oriented Programming

Q.1 Local Variable:

Code:

```java
class LocalVariableDemo{
  void show(){
    int x=10;
    System.out.print("Value of x:"+x);
  }
  public static void main(String[] args){
    LocalVariableDemo obj=new LocalVariableDemo();
    obj.show();
  }
}
```

OUTPUT:

```
/usr/java/jdk-17-oracle-x64/bin/java
Value of x:10
Process finished with exit code 0
```

Q2. Instance Variable

Code:

```java
class InstanceVariableDemo{
  int count=0; // instance variable
  void increment(){
    count++;
    System.out.println("Count:"+count);
  }
  public static void main(String[] args){
    InstanceVariableDemo obj1=new InstanceVariableDemo();
    InstanceVariableDemo obj2=new InstanceVariableDemo();
    obj1.increment();
    obj1.increment();
    obj2.increment();
  }
}
```

Output:

```
/usr/java/jdk-17-oracle-x64/bin/java
Count:1
Count:2
Count:1


Process finished with exit code 0
```

Q3. Static variable
Code:

```java
class StaticVariableDemo{
    static int count=0; // static variable
    void increment(){
        count++;
        System.out.println("Count : "+count);
    }
    public static void main(String[] args){
        StaticVariableDemo obj1= new StaticVariableDemo();
        StaticVariableDemo obj2= new StaticVariableDemo();
        obj1.increment();
        obj1.increment();
        obj2.increment();
    }
}
```

Output:

```
/usr/java/jdk-17-oracle-x64/bin/java
Count : 1
Count : 2
Count : 3


Process finished with exit code 0
```

Q4. Variable comparison

Code:

```java
class VariableComparison {
  int instanceVar=0;
  static int staticVar=0;
  void increment(){
    int localVar=0;
    localVar++;
    instanceVar++;
    staticVar++;
    System.out.println("Local: "+localVar);
    System.out.println("Instance: "+instanceVar);
    System.out.println("Static : "+staticVar);
    System.out.println("---------");
  }
  public static void main(String[] args){
    VariableComparison obj1=new VariableComparison();
    VariableComparison obj2=new VariableComparison();
    obj1.increment();
    obj1.increment();
    obj2.increment();

  }
}
```

Output:

```
/usr/java/jdk-17-oracle-x64/bin/java -javaager
Local: 1
Instance: 1
Static : 1
- - - - - - - - -
Local: 1
Instance: 2
Static : 2
- - - - - - - - -
Local: 1
Instance: 1
Static : 3
- - - - - - - - -


Process finished with exit code 0
```