1)Demo Program: -

```java
public class welcome {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        System.out.println("Hello, World!");
    }

}
```

2)
```java
int a;
String b;
a=10;
b="bhavna";
System.out.println(a);
System.out.println(b);
System.out.println("Hello, World!");
```

3)
```java
int myNum = 5;
float myFloatNum = 5.99f;
char myLetter = 'D';
boolean myBool = true;
String b;
b="bhavna";
```

```java
        System.out.println(b);

        System.out.println(myNum);

        System.out.println(myFloatNum);

        System.out.println(myLetter);

        System.out.println(myBool);
```

4) Type casting

```java
    int num = 10;
    System.out.println("The integer value: " + num);

    double data = num;

    System.out.println("The double value: " + data);

    double a = 10.99;

    System.out.println("The double value: " + a);

    int b = (int)a;

    System.out.println("The integer value: " + b);
```

5) <u>Welcome.java</u>

```java
    public class welcome {
        public static void main(String[] args) {
            // TODO Auto-generated method stub
            int num = 10;
    System.out.println("The integer value: " + num);
            double data = num;
```

```java
        System.out.println("The double value: " + data);
            double a = 10.99;
            System.out.println("The double value: " + a);
            int b = (int)a;
            System.out.println("The integer value: " + b);
            Lamp led = new Lamp();
            Lamp halogen = new Lamp();
            led.turnOn();
            halogen.turnOff();
        }

    }
```

Lamp.java
```java
class Lamp {
  boolean isOn;
  void turnOn() {
    isOn = true;
    System.out.println("Light on? " + isOn);
  }
  void turnOff() {
    isOn = false;
    System.out.println("Light on? " + isOn);
  }
}
```

6) Constructors:-
Lamp.java

```java
class Lamp {

  boolean isOn;
  Lamp(boolean i){
      isOn = i;
      }
  void turnOn() {
    isOn = true;
    System.out.println("Light on? " + isOn);


  }
  void turnOff() {
    isOn = false;
    System.out.println("Light on? " + isOn);
  }
}
```

Welcome.java

```java
public class welcome {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        int num = 10;
System.out.println("The integer value: " + num);
        double data = num;
System.out.println("The double value: " + data);
        double a = 10.99;
```

```java
            System.out.println("The double value: " + a);
            int b = (int)a;
          System.out.println("The integer value: " + b);
            Lamp led = new Lamp(true);
            System.out.println("from Led"+led.isOn);
            Lamp halogen = new Lamp(false);
      System.out.println("from halogen"+halogen.isOn);
            led.turnOn();
            halogen.turnOff();
        }

    }
```

7)