PHASE 4

SMART WATER FOUNTAIN

SUNMATHI.E

PPG INSTITUTE OF TECHNOLOGY

COIMBATORE

PROGRAM:

```
Public class SmartWaterFountain
{
   Private boolean isOn;
   Private int waterLevel;
 Public SmartWaterFountain()
 {
  isOn = false;
     waterLevel = 0;
   }
```

```
Public void turnOn()
{
        isOn = true;
        System.out.println("Fountain is now on.");
    }
  Public void turnOff()
 {
    isOn = false;
    System.out.println("Fountain is now off.");
    }
 Public void fillWater(int amount)
 {
  If (isOn)
 {
    waterLevel += amount;
     System.out.println("Water level increased by " + amount+
liters.");
        }
Else
{
```

```
  System.out.println("Cannot fill water when the fountain is off.");
      }
   }
 Public void dispenseWater(int amount)
{
      If (isOn)
 {
     If (waterLevel >= amount)
 {
    waterLevel -= amount;
     System.out.println("Dispensing " + amount + " liters of water.");
         }
 Else
 {
  System.out.println("Insufficient water for dispensing.");
         }
      }
Else
 {
```

```
  System.out.println("Cannot dispense water when the fountain is off.");
        }
 Else
  Public int getWaterLevel()
{
    Return waterLevel;
    }
  Public boolean isOn()
 {
       Return isOn;
    }
 Public static void main(String[] args)
 {
   SmartWaterFountain fountain = new SmartWaterFountain();
Fountain.turnOn();
   Fountain.fillWater(20);
    Fountain.dispenseWater(10);
   System.out.println("Current water level: "
+fountain.getWaterLevel());
     Fountain.turnOff();
```

```
    }
}
```

OUTPUT:

Fountain is now on.

Water level increased by 20 liters

Dispensing 10 liters of water

Current water level: 10

Fountain is now off.

CONCLUSION:

1. *You can turn it on or off using the turnOn and `turnoff' methods.*

2. *The `fillWater method allows adding Water if it's on.*
3. *The dispenseWater ` method Dispenses water if there's enough.*
4. *It provides access to the current water Level and on/off status.*
5. *The constructor initializes the fountain As off with no water.*
6. *It includes error messages for improper Actions.*
7. *Demonstrated in the 'main' method With on/off, filling, and dispensing.*
8. *Demonstrated in the 'main method With on/off, filling, and dispensing*
9. *A simple, encapsulated representation*

Of a smart water fountain.

10. Offers essential functionality for Managing water levels.