```java
package topic3_3;
/**
 *
 * The Bomb class represents a bomb weapon
 *
 */

public class Bomb implements WeaponInterface {

	/**
	 *
	 * Fires the bomb with the specified power.
	 *
	 * @param power, The power of the bomb.
	 *
	 */

	@Override
	public void fireWeapon(int power)
	{
		System.out.println("In Bomb.fireWeapon() with a power of " + power);
	}

	/**
	 *
	 * Fires the bomb without specifying power.
	 *
	 */
	@Override
	public void fireWeapon()
	{
		System.out.println("In Bomb.fireWeapon()");
	}

	/**
	 *
	 * Activates or Deactivates the bomb.
	 *
	 * @param enable {@code true} to enable the bomb, {@code false} to disable it.
	 */
	@Override
	public void activate(boolean enable)
	{
		System.out.println("In the Bomb.activate() with an enable of " +
enable);
	}

}
```

```java
package topic3_3;
/**
 *
```

```java
 * The Gun class represents a gun weapon.
 *
 */
public class Gun implements WeaponInterface {

	/**
	 * Fires the gun with the specified power.
	 *
	 * @param power, The power of the gun.
	 *
	 */

	@Override
	public void fireWeapon(int power)
	{
		System.out.println("In Gun.fireWeapon() with a power of " + power);
	}

	/**
	 *
	 * Fires the gun without specifying power
	 */

	@Override
	public void fireWeapon()
	{
		System.out.println("In Gun.fireWeapon()");
	}

	/**
	 *
	 * Activates or deactivates the gun.
	 *
	 * @param enable {@code true} to enable the gun, {@code false} to disable it.
	 *
	 */

	@Override
	public void activate(boolean enable)
	{
		System.out.println("In the gun.activate() with an enable of " + enable);
	}
}
```

```java
package topic3_3;
/**
 * The game class represents a game that involves firing different weapons.
 *
 */
public class Game {
 /**
  * Fires the provided weapon
  *
```

```
  * @param weapon , The weapon to be fired.
  *
  */

	private static void fireWeapon(WeaponInterface weapon)
	{

		if(weapon instanceof Bomb)
			System.out.println("---------> I am  a Bomb");

		weapon.activate(true);
		weapon.fireWeapon(5);
	}
	/**
	 * The entry point of the game
	 *
	 *
	 * @param args , The command line arguments
	 */
	public static void main(String[] args) {

		// Create an array of weaponInterface and initialize to specific Weapon
of Bomb and Gun
		WeaponInterface[] weapons = new WeaponInterface[2];
		weapons[0] = new Bomb();
		weapons[1] = new Gun();

		//For all Weapons fire them
		for(int x = 0; x < weapons.length; ++x)
		{
			fireWeapon(weapons[x]);
		}
	}
}
```

```
package topic3_3;
/**
 *
 * The WeaponInterface defines the contract for a weapon
 *
 */
public interface WeaponInterface {

	/**
	 *
	 * Fires the weapon without specifying power.
	 */
```

```
        public void fireWeapon();

        /**
         * Fires the weapon with the specified power.
         *
         * @param power, The power of the weapon
         */
        public void fireWeapon(int power);

        /**
         * Activates or Deactivates the weapon.
         *
         * @param enable {@code true} to enable the weapon, {@code false} to disable
it.
         */
        public void activate(boolean enable);

}

/**
 * Notes
 *
 * Polymorphism is demonstrated in the code through the usage of the WeaponInterface
as a reference type.
 * In the Game class, the fireWeapon() method takes a WeaponInterface object as a
parameter, allowing it to accept any object that implements the WeaponInterface, such
as Bomb and Gun objects.
 * This enables the fireWeapon() method to be invoked with different types of
weapons, and the appropriate implementation of fireWeapon() and activate()
 * methods is called based on the actual type of the object at runtime, showcasing
polymorphic behavior.
 *
 *
 *
 *
 */
```