

```

public class AccessModifierExample {
    // Public field
    public int publicField = 10;

    // Protected field
    protected int protectedField = 20;

    // Default (package-private) field
    int defaultField = 30;

    // Private field
    private int privateField = 40;

    // Public method
    public void publicMethod() {
        System.out.println("This is a public method.");
    }

    // Protected method
    protected void protectedMethod() {
        System.out.println("This is a protected method.");
    }

    // Default (package-private) method
    void defaultMethod() {
        System.out.println("This is a default method.");
    }

    // Private method
    private void privateMethod() {
        System.out.println("This is a private method.");
    }

    public static void main(String[] args) {
        // Create an instance of the class
        AccessModifierExample example = new AccessModifierExample();

        // Accessing public members
        System.out.println("Public field: " + example.publicField);
        example.publicMethod();

        // Accessing protected members
        System.out.println("Protected field: " + example.protectedField);
        example.protectedMethod();

        // Accessing default (package-private) members
        System.out.println("Default field: " + example.defaultField);
        example.defaultMethod();

        // Accessing private members (not allowed outside the class)
        // System.out.println("Private field: " + example.privateField);
        // example.privateMethod();
    }
}

```