

```
// Class with members having different access modifiers
```

```
class Person {
```

```
    public String name;    // public: accessible from anywhere
```

```
    private int age;      // private: accessible only within this class
```

```
    protected String city; // protected: accessible within same package or subclass
```

```
    String country;      // default (no modifier): accessible within same package
```

```
// Constructor
```

```
public Person(String name, int age, String city, String country) {
```

```
    this.name = name;
```

```
    this.age = age;
```

```
    this.city = city;
```

```
    this.country = country;
```

```
}
```

```
// Public method to access private member
```

```
public int getAge() {
```

```
    return age;
```

```
}
```

```
}
```

```
// Another class in the same package accessing members of Person
```

```
public class AccessModifierExample {
```

```
    public static void main(String[] args) {
```

```
        Person person = new Person("Ishan", 21, "Mumbai", "India");
```

```
// Accessing public member
```

```
System.out.println("Name (public): " + person.name);
```

```
// Accessing private member through public method
System.out.println("Age (private via getter): " + person.getAge());

// Accessing protected member (same package)
System.out.println("City (protected): " + person.city);

// Accessing default member (same package)
System.out.println("Country (default): " + person.country);
}
}
```

Name (public): Ishan

Age (private via getter): 21

City (protected): Mumbai

Country (default): India

Explanation

1. **public modifier:**

- name is public, so it can be accessed directly from AccessModifierExample.

2. **private modifier:**

- age is private, so it cannot be accessed directly from outside the Person class.
- It is accessed via the public method getAge().

3. **protected modifier:**

- city is protected, so it can be accessed in the same package or by subclasses.
- Since both classes are in the same package, access is allowed.

4. **default (no modifier):**

- country is accessible within the same package without any special keyword.

Key Takeaways

- public members are accessible from anywhere.
- private members are hidden and only accessible through methods.
- protected members are accessible within the same package or by subclasses.
- Default members (no modifier) are accessible only within the same package.