

JAVA Access Modifiers

Less Visibility

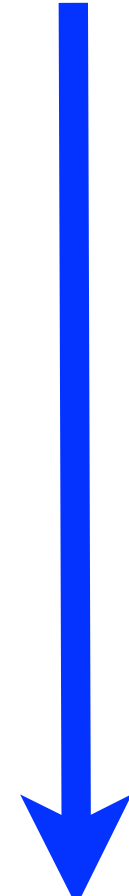
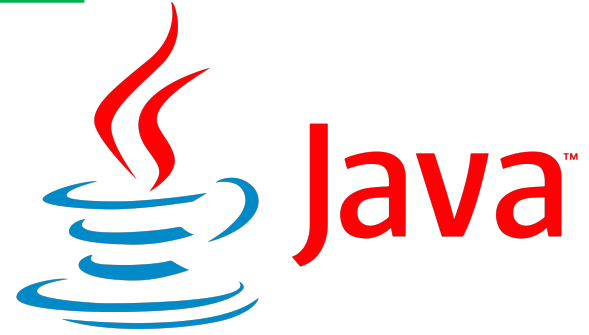


Private

Default

Protected

Public



High Visibility

SNIPPET_MASTERY CHANNEL

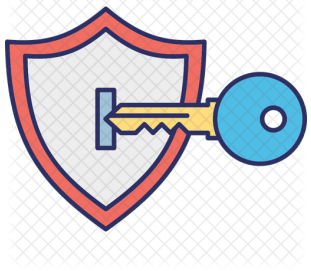
When you design Applications & create Classes,
you need to answer Multiple Questions:

- ✓ How do I restrict other classes from accessing certain **members of a class**?
- ✓ How do I prevent classes from modifying the **state of objects** of a class, both within the **same & separate packages**?

Java Access Modifiers

can Answer all these
Questions.

SNIPPET_MASTERY CHANNEL

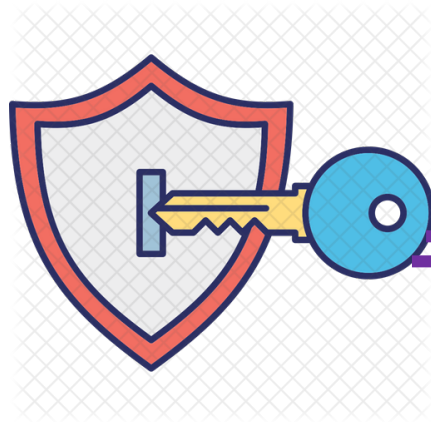


JAVA Access Modifiers

Access modifiers control the Accessibility of a class or an interface, including its members (**methods & variables**), by other classes and interfaces within the same or separate packages.

By using the appropriate access modifiers, you can limit access to your class or interface, and its members.

Access Modifiers Can be applied to



Access Modifiers

Classes

Interfaces

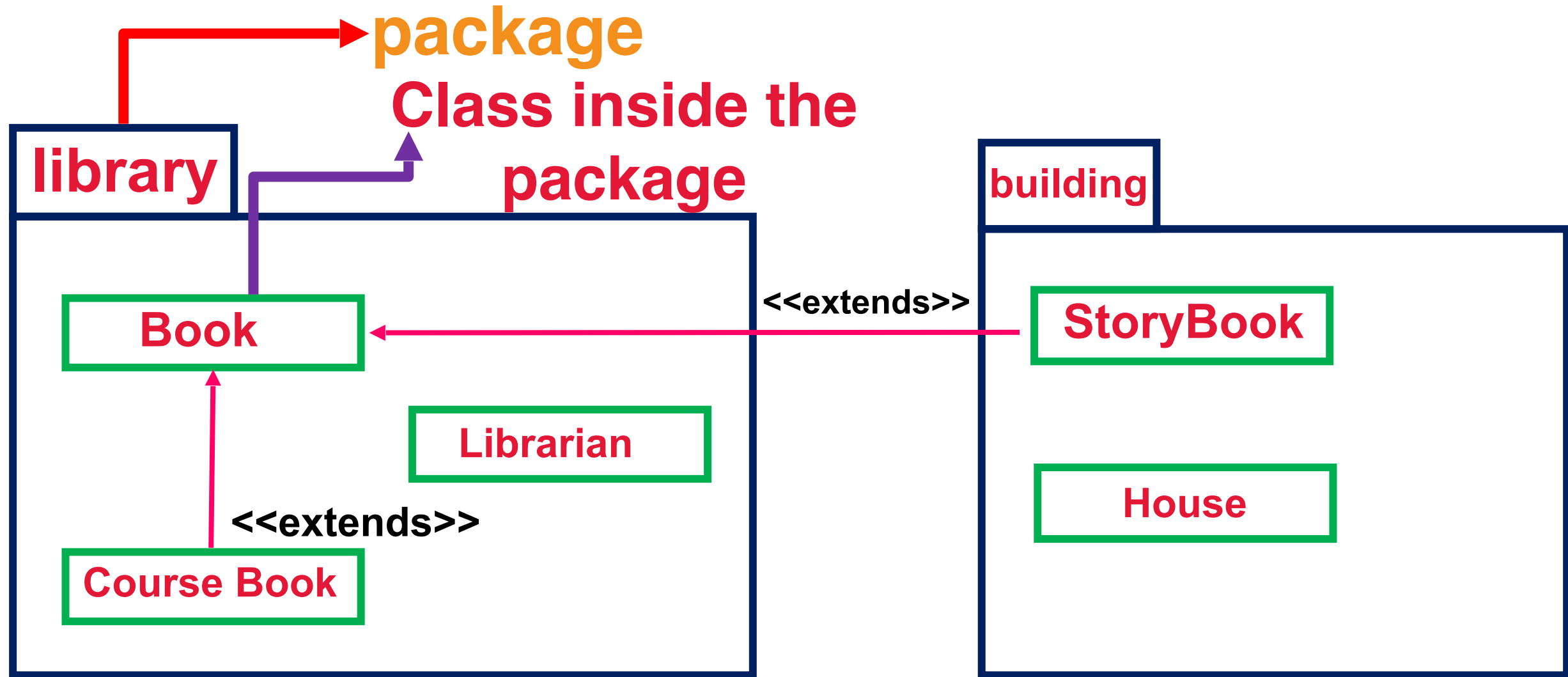
And, their Members

Instance variables
Class variables
Methods

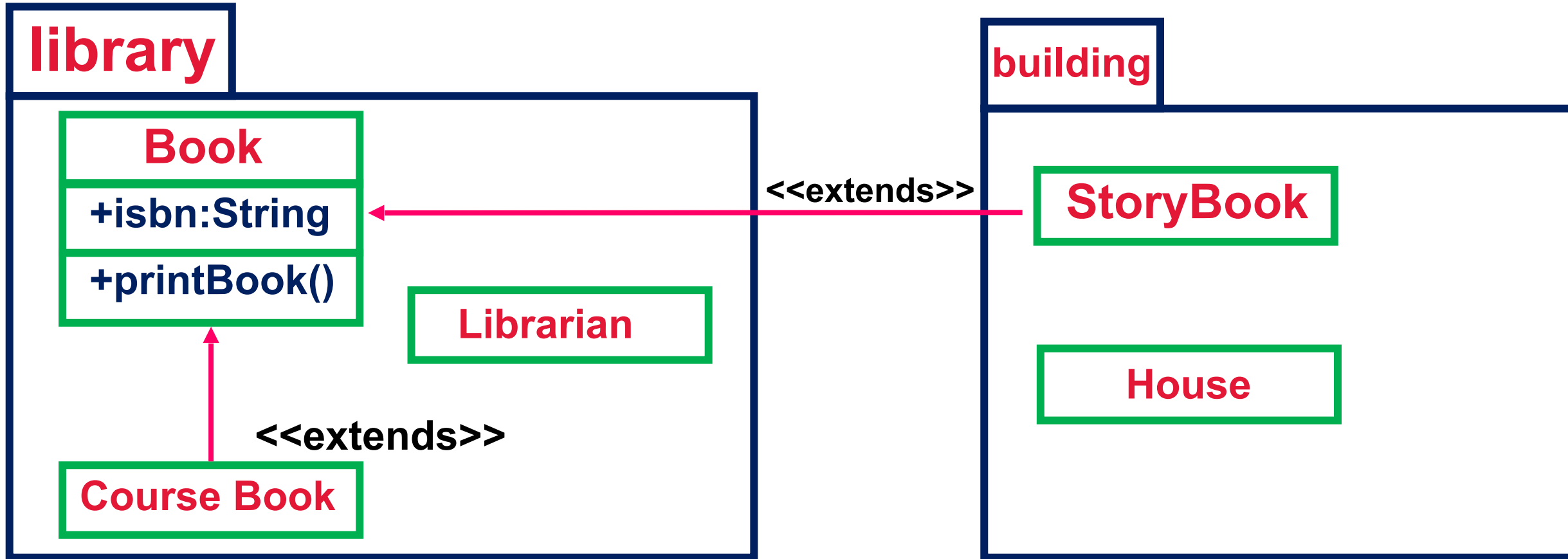
NOTE: Local variables & Method Parameters can't be defined using Access Modifiers.

SNIPPET_MASTERY CHANNEL

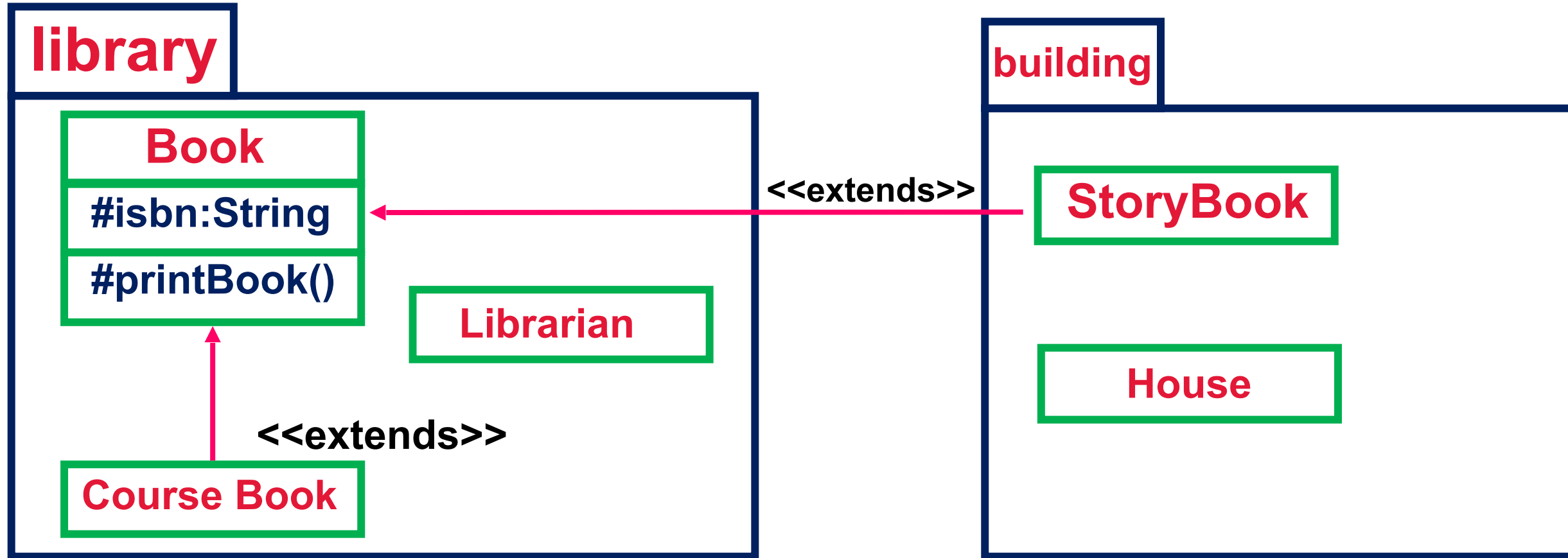
Access Modifiers UML Representation



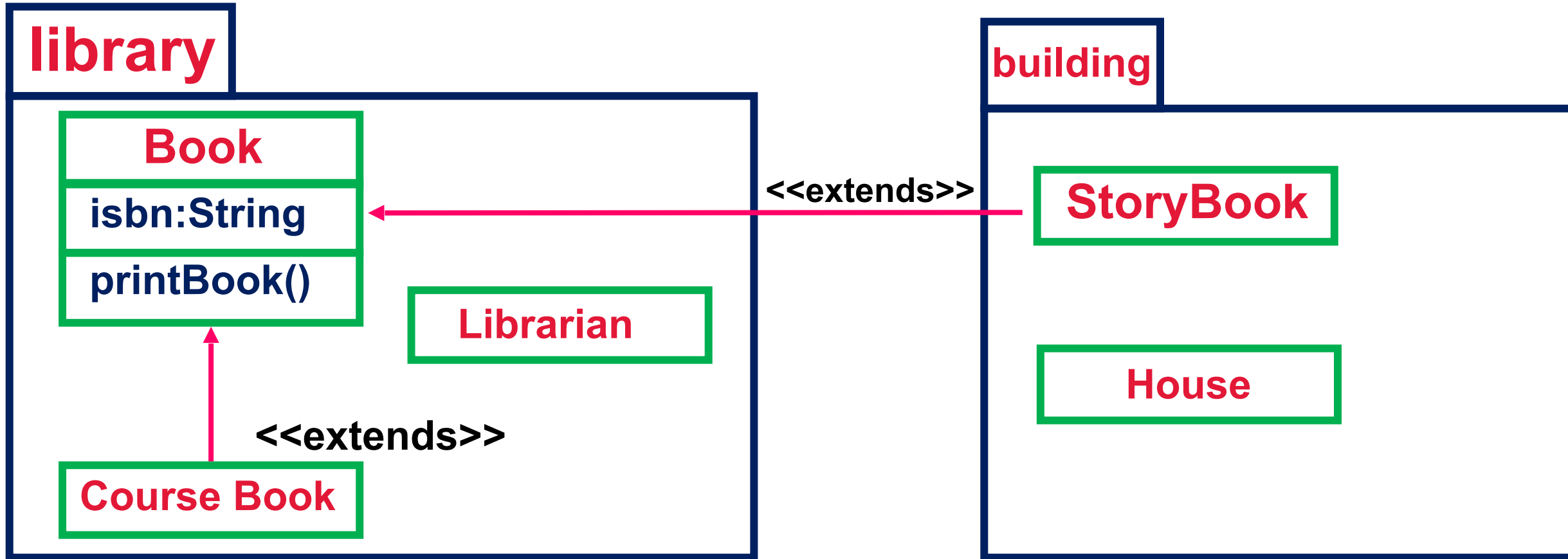
(+) Public class members



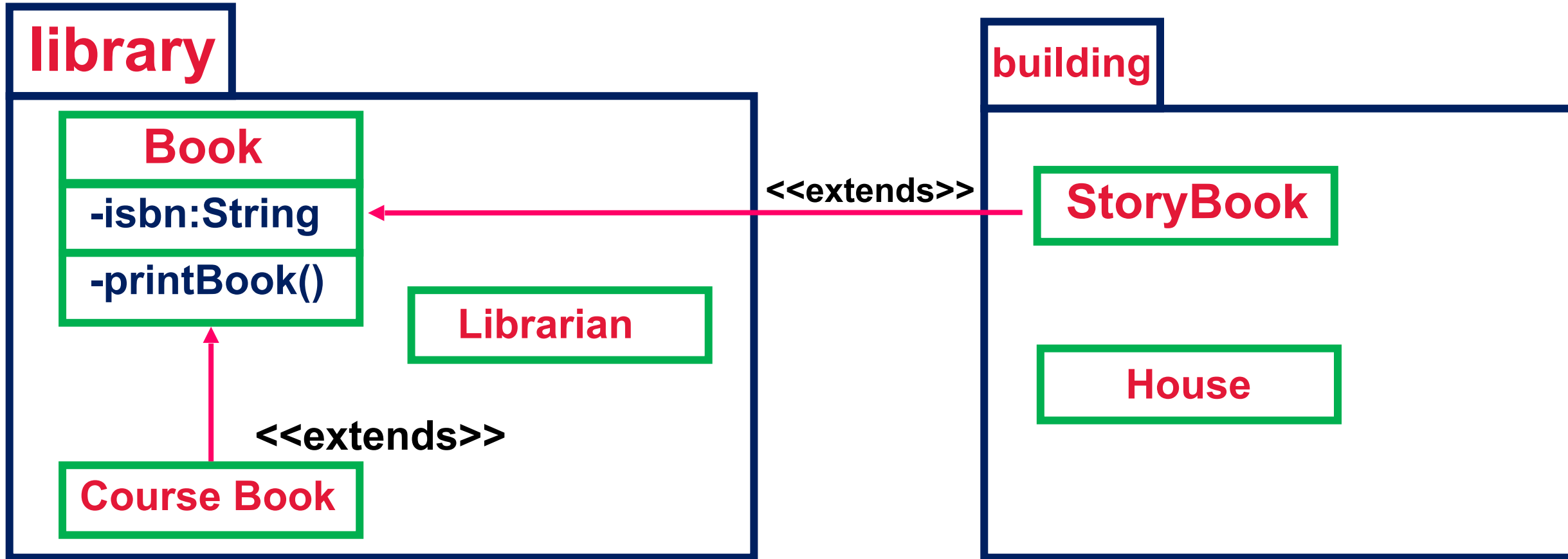
(#) Protected class members



Default class members



(-) Private class members



Access Levels - Chart

Modifier	Class	Package	Subclass	World
public	Yes	Yes	Yes	Yes
protected	Yes	Yes	Yes	No
no modifier (Default)	Yes	Yes	No	No
private	Yes	No	No	No

SNIPPET_MASTERY CHANNEL

Access Modifiers

public

library

building

```
package library;
```

```
public class Book {  
    public int issueCount;  
    public void issueHistory()  
}
```

<<extends>>

Can Access

```
package library;
```

```
public class CourseBook extends Book  
{  
    public CourseBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Can access
Book Members

```
public class Librarian  
{  
    public Librarian() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

<<extends>>

```
package building;
```

```
import library.Book;
```

```
public class StoryBook extends Book  
{  
    public StoryBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Can access

```
package building;
```

```
import library.Book;
```

```
public class House {  
    public House() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

Can access
Book Members

Access Modifiers protected

SNIPPET_MASTERY CHANNEL

library

```
package library;
```

```
public class Book {  
    protected int issueCount;  
    protected void  
    issueHistory(){  
    } }
```

Can Access

```
package library;
```

```
public class CourseBook extends Book  
{  
    public CourseBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Can access

```
public class Librarian  
{  
    public Librarian() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

building

<<extends>>

```
package building;
```

```
import library.Book;
```

```
public class StoryBook extends Book  
{  
    public StoryBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Can access

```
package building;
```

```
import library.Book;
```

```
public class House {  
    public House() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

Cannot access
Book Members

Access Modifiers

default

library

```
package library;  
  
public class Book {  
    int issueCount;  
    void issueHistory(){  
    } }  
  
<<extends>>
```

Can Access

```
package library;  
  
public class CourseBook extends Book  
{  
    public CourseBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Can access
Book Members

```
public class Librarian  
{  
    public Librarian() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

building

```
package building;  
  
import library.Book;  
  
public class StoryBook extends Book  
{  
    public StoryBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Cannot access

```
package building;  
  
import library.Book;  
  
public class House {  
    public House() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

Cannot access
Book Members

Access Modifiers

private

library

```
package library;
```

```
public class Book {  
    private int issueCount;  
    private void issueHistory()  
} }
```

<<extends>>

```
package library;
```

```
public class CourseBook extends Book  
{  
    public CourseBook() {  
        int c = issueCount;  
        issueHistory();  
    }  
}
```

Cannot access
Book Members

```
public class Librarian {  
    public Librarian() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

building

<<extends>>

```
package building;
```

```
import library.Book;
```

```
public class StoryBook extends Book  
{  
    public StoryBook() {  
        int c = issueCount;  
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    }  
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package building;
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import library.Book;
```

```
public class House {  
    public House() {  
        Book b = new Book();  
        int c = b.issueCount;  
        b.issueHistory();  
    }  
}
```

Cannot access
Book Members

Thank You For Watching



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