

Week 3

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Q) Create a class Book which contains four members: name, author, price, num_pages. Include a constructor to set the values for the members. Include methods to set and get the details of the objects.

Include a toString() method that could display the complete details of the book. Develop a Java program to create n book objects.

Explore toString method usage in java

Code:

```
import java.util.Scanner;
```

```
class Book {
```

```
    String name;
```

```
    String author;
```

```
    int price;
```

```
    int numPages;
```

```
    Book(String name, String author, int price, int numPages) {
```

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

```
        this.author = author;
```

```
        this.price = price;
```

```
        this.numPages = numPages;
```

```
    }
```

```
    @Override
```

```
    public String toString() {
```

```
        String bookDetails = "Book Name: " + this.name + "\n" +
```

```
        "Author Name: " + this.author + "\n" +  
        "Price: " + this.price + "\n" +  
        "Number of Pages: " + this.numPages + "\n";  
    return bookDetails;  
}  
}
```

```
public class BooksData {  
    public static void main(String[] args) {  
        System.out.println("Aaryan Prakash");  
        Scanner s = new Scanner(System.in);  
  
        System.out.print("Enter the Number of Books: ");  
        int n = s.nextInt();  
  
        Book[] books = new Book[n];  
  
        for (int i = 0; i < n; i++) {  
            System.out.print("Enter name of book " + (i + 1) + ": ");  
            String name = s.next();  
            System.out.print("Enter author of book " + (i + 1) + ": ");  
            String author = s.next();  
            System.out.print("Enter price of book " + (i + 1) + ": ");  
            int price = s.nextInt();  
            System.out.print("Enter number of pages in book " + (i + 1) + ": ");  
            int numPages = s.nextInt();  
  
            books[i] = new Book(name, author, price, numPages);  
        }  
  
        System.out.println("\nBook Details:");  
    }  
}
```

```
        for (Book book : books) {  
            System.out.println(book);  
        }  
  
        s.close();  
    }  
}
```

Output:

```
C:\Users\Admin>D:  
  
D:\1BM23CS006>javac BooksData.java  
  
D:\1BM23CS006>java BooksData  
Aaryan Prakash  
Enter the Number of Books: 3  
Enter name of book 1: Divergent  
Enter author of book 1: R.Veronica  
Enter price of book 1: 500  
Enter number of pages in book 1: 390  
Enter name of book 2: Emma  
Enter author of book 2: J.Austen  
Enter price of book 2: 399  
Enter number of pages in book 2: 300  
Enter name of book 3: Rebecca  
Enter author of book 3: D.Maurier  
Enter price of book 3: 699  
Enter number of pages in book 3: 469  
  
Book Details:  
Book Name: Divergent  
Author Name: R.Veronica  
Price: 500  
Number of Pages: 390  
  
Book Name: Emma  
Author Name: J.Austen  
Price: 399  
Number of Pages: 300  
  
Book Name: Rebecca  
Author Name: D.Maurier  
Price: 699  
Number of Pages: 469  
  
D:\1BM23CS006>
```