

BOOK CLASS:

```
package bookmapping;

import java.util.HashSet;
import java.util.Set;
import javax.persistence.Column;
import javax.persistence.DiscriminatorColumn;
import javax.persistence.DiscriminatorType;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Inheritance;
import javax.persistence.InheritanceType;
import javax.persistence.JoinColumn;
import javax.persistence.ManyToMany;
import javax.persistence.Table;

@Entity
@Table(name="Book_Details")
@Inheritance(strategy=InheritanceType.TABLE_PER_CLASS)
@DiscriminatorColumn(name="book_type",discriminatorType=DiscriminatorType.STRING)
@DiscriminatorValue("book")
public class Book {
    @ManyToMany
    @JoinTable(name="Book_Author_Relation",
        joinColumns=@JoinColumn(name="book_id"),
        inverseJoinColumns=@JoinColumn(name="author_name"))
    private Set<Author> author = new HashSet<Author>();

    public Set<Author> getAuthor() {
        return author;
    }

    public void setAuthor(Set<Author> author)
    { this.author = author;
    }

    @Column(name="book_id")
    @GeneratedValue
    @Id
    int id;
    @Column(name="book_title")
    String title;

    @Column(name="book_price")
    double price;
    @Column(name="isbn_no")
    String isbnno;
    @Column(name="publisher")
    String publisher;
}
```

```

@Column(name="edition")
String edition;
public Book() {
    super();
    // TODO Auto-generated constructor stub
}
public int getId() {
    return id;
}
public void setId(int id) {
    this.id = id;
}
public String getTitle() {
    return title;
}
public void setTitle(String title) {
    this.title = title;
}
public double getPrice() {
    return price;
}
public void setPrice(double price) {
    this.price = price;
}
public String getIsbnno() {
    return isbnno;
}
public void setIsbnno(String isbnno) {
    this.isbnno = isbnno;
}
public String getPublisher() {
    return publisher;
}
public void setPublisher(String publisher) {
    this.publisher = publisher;
}
public String getEdition() {
    return edition;
}
public void setEdition(String edition) {
    this.edition = edition;
}
}

```

EBOOK CLASS:

```

package bookmapping;

import javax.persistence.Column;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Entity;

```

```

import javax.persistence.Table;
@Entity
@Table(name="EBook_Details")
@DiscriminatorValue("ebook")

public class Ebook extends Book {
    @Column(name="download_url")

    String downloadurl;
    @Column(name="size_in_mb")
    int size_in_mb;
    public Ebook() {
        super();
        // TODO Auto-generated constructor stub
    }
    public String getDownloadurl() {
        return downloadurl;
    }
    public void setDownloadurl(String downloadurl) {
        this.downloadurl = downloadurl;
    }
    public int getSize_in_mb() {
        return size_in_mb;
    }
    public void setSize_in_mb(int size_in_mb) {
        this.size_in_mb = size_in_mb;
    }
}

```

PAPERBOOK CLASS:

```

package bookmapping;

import javax.persistence.Column;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Entity;
import javax.persistence.Table;

@Entity
@Table(name="paperbook_Details")
@DiscriminatorValue("paperbook")
public class PaperBook extends Book {
    @Column(name="shipping_weight")
    float shipping_weight;
    @Column(name="instock")
    int instock;
    public PaperBook() {
        super();
        // TODO Auto-generated constructor stub
    }
    public float getShipping_weight() {

```

```

        return shipping_weight;
    }
    public void setShipping_weight(float shipping_weight) {
        this.shipping_weight = shipping_weight;
    }
    public int getInstock() {
        return instock;
    }
    public void setInstock(int instock) {
        this.instock = instock;
    }
}
}

```

AUTHOR CLASS:

```

package bookmapping;

import java.util.HashSet;
import java.util.Set;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.JoinColumn;
import javax.persistence.ManyToMany;
import javax.persistence.Table;

@Entity
@Table(name="Author")
public class Author {

    @ManyToMany(mappedBy="author")

    private Set<Book> book = new HashSet<Book>();

    public Set<Book> getBook() {
        return book;
    }

    public void setBook(Set<Book> book) {
        this.book = book;
    }

    @Column(name="author_id")
    @Id
    int id;
    @Column(name="author_name")
    String name;
    @Column(name="email_id")
    String email;
    @Column(name="gender")
    String gender;
    @Column(name="url")

```

```

String url;
public Author() {
    super();
    // TODO Auto-generated constructor stub
}
public int getId() {
    return id;
}
public void setId(int id) {
    this.id = id;
}
public String getName() {
    return name;
}
public void setName(String name) {
    this.name = name;
}
public String getEmail() {
    return email;
}
public void setEmail(String email) {
    this.email = email;
}
public String getGender() {
    return gender;
}
public void setGender(String gender) {
    this.gender = gender;
}
public String getUrl() {
    return url;
}
public void setUrl(String url) {
    this.url = url;
}
}
}

```

SOLUTION (MAIN CLASS):

```
package bookmapping;
```

```
import java.io.BufferedReader;
```

```
import java.io.IOException;
```

```
import java.io.InputStreamReader;
```

```
import java.io.InputStreamReader;
```

```
import org.hibernate.Session;
```

```
import org.hibernate.SessionFactory;
```

```
import org.hibernate.cfg.Configuration;
```

```
public class Solution {
```

```
    public static void main(String[] args) throws NumberFormatException, IOException {
```

```
        // TODO Auto-generated method stub
```

```
        SessionFactory sf=new Configuration().configure().buildSessionFactory();
```

```
        Session session=sf.openSession();
```

```
        session.beginTransaction();
```

```
        BufferedReader b=new BufferedReader(new InputStreamReader(System.in));
```

```
        Book book=new Book();
```

```
        book.setId(1);
```

```
        book.setTitle("tintin");
```

```
        book.setPrice(201.7d);
```

```
        book.setIsbnno("1762718");
```

```
        book.setPublisher("sa publisher");
```

```
        book.setEdition("1st Edition");
```

```
        session.save(book);
```

```
Book book1=new Book();  
  
book1.setId(2);  
  
book1.setTitle("two states");  
  
book1.setPrice(655.7d);  
  
book1.setIsbnno("6732372");  
  
book1.setPublisher("na publisher");  
  
book1.setEdition("3rd Edition");  
  
session.save(book1);
```

```
Ebook ebook=new Ebook();  
  
ebook.setDownloadurl("oracle_software_downloads");  
  
ebook.setSize_in_mb(256);  
  
session.save(ebook);
```

```
Ebook ebook1=new Ebook();  
  
ebook1.setDownloadurl("emc_software_downloads");  
  
ebook1.setSize_in_mb(4528);  
  
session.save(ebook1);
```

```
PaperBook paper=new PaperBook();  
  
paper.setShipping_weight(245);  
  
paper.setInstock(3);  
  
session.save(paper);
```

```
PaperBook paper1=new PaperBook();
```

```
paper1.setShipping_weight(67.8f);
```

```
paper1.setInstock(2);
```

```
session.save(paper1);
```

```
session.getTransaction().commit();
```

```
session.close();
```

```
sf.close();
```

```
    }
```

```
}
```