

```

public interface InterbankInterface {

    /**
     * Pay order, and then return the payment transaction
     *
     * @param card - the credit card used for payment
     * @param amount - the amount to pay
     * @param contents - the transaction contents
     * @return {@link PaymentTransaction PaymentTransaction} - if the
     *         payment is successful
     * @throws PaymentException if responded with a pre-defined error code
     * @throws UnrecognizedException if responded with an unknown error code or
     *         something goes wrong
     */
    // 2 usages 1 implementation 1 thanhld
    public abstract PaymentTransaction payOrder(CreditCard card, int amount, String contents)
        throws PaymentException, UnrecognizedException;

    /**
     * Refund, and then return the payment transaction
     *
     * @param card - the credit card which would be refunded to
     * @param amount - the amount to refund
     * @param contents - the transaction contents
     * @return {@link PaymentTransaction PaymentTransaction} - if the
     *         payment is successful
     * @throws PaymentException if responded with a pre-defined error code
     * @throws UnrecognizedException if responded with an unknown error code or
     *         something goes wrong
     */
}

```

Lớp InterbankInterface.java vi phạm DIP vì phụ thuộc vào Credit card mà không phải 1 abstract class.

```

public class Media {

    // no usages
    private static Logger LOGGER = Utils.getLogger(Media.class.getName());

    // 1 usage
    protected Statement stm;
    protected int id;
    protected String title;

    // 6 usages
    protected String category;

    // no usages
    protected int value; // the real price of product (eg: 450)
    protected int price; // the price which will be displayed on browser (eg: 500)
    protected int quantity;
    protected String type;

    // 6 usages
    protected String imageURL;

    // no usages
    protected boolean rushSupported;

    // 1 thanhld
    public Media() throws SQLException {
        stm = AIMSDB.getConnection().createStatement();
    }

    // 1 thanhld
    public Media(int id, String title, String category, int price, int quantity, String type) throws SQLException {
        this.id = id;
        this.title = title;
        this.category = category;
    }
}

```

Media.java vi phạm LSP vì có nhiều method get set mà các class con extend nó k dùng đến như setMediaURL

```
public class HomeScreenHandler extends BaseScreenHandler implements Observer {

    public static Logger LOGGER = Utils.getLogger(HomeScreenHandler.class.getName());

    3 usages
    @FXML
    private Label numMediaInCart;

    2 usages
    @FXML
    private ImageView aimsImage;

    2 usages
    @FXML
    private ImageView cartImage;

    no usages
    @FXML
    private VBox vboxMedia1;

    no usages
    @FXML
    private VBox vboxMedia2;

    no usages
    @FXML
    private VBox vboxMedia3;
```

lớp HomeScreenHandler vi phạm LSP vì không dùng 2 phương thức setPreviousScreen và getPreviousScreen của lớp cha BaseScreenHandler.

lớp này cũng vi phạm ISP do không dùng phương thức setPreviousScreen của lớp cha baseScreenHandler.

```

public class Book extends Media {

    4 usages
    String author;
    4 usages
    String coverType;
    4 usages
    String publisher;
    4 usages
    Date publishDate;
    4 usages
    int numOfPages;
    4 usages
    String language;
    4 usages
    String bookCategory;

    no usages 1 thanhhd
    public Book() throws SQLException{

    }

    1 usage 1 thanhhd
    public Book(int id, String title, String category, int price, int quantity, String type, String author,
                String coverType, String publisher, Date publishDate, int numOfPages, String language,
                String bookCategory) throws SQLException{
        super(id, title, category, price, quantity, type);
        this.author = author;
        this.coverType = coverType;
        this.publisher = publisher;
    }
}

```

lớp Book.java vi phạm lsp vì không gọi super phương thức của class cha Media.java

```

public class CD extends Media {

    4 usages
    String artist;
    4 usages
    String recordLabel;
    4 usages
    String musicType;
    4 usages
    Date releasedDate;

    no usages 1 thanhhd
    public CD() throws SQLException{

    }

    1 usage 1 thanhhd
    public CD(int id, String title, String category, int price, int quantity, String type, String artist,
                String recordLabel, String musicType, Date releasedDate) throws SQLException{
        super(id, title, category, price, quantity, type);
        this.artist = artist;
        this.recordLabel = recordLabel;
        this.musicType = musicType;
        this.releasedDate = releasedDate;
    }

    no usages 1 thanhhd
    public String getArtist() { return this.artist; }
}

```

lớp CD.java vi phạm lsp vì không gọi super phương thức của class cha Media.java

```

public class DVD extends Media {

    4 usages
    String discType;
    4 usages
    String director;
    4 usages
    int runtime;
    4 usages
    String studio;
    4 usages
    String subtitles;
    4 usages
    Date releasedDate;
    4 usages
    String filmType;

    no usages  ▲ thanhid
    public DVD() throws SQLException{

    }

    1 usage  ▲ thanhid
    public DVD(int id, String title, String category, int price, int quantity, String type, String discType,
                String director, int runtime, String studio, String subtitles, Date releasedDate, String filmType) throws SQLException{
        super(id, title, category, price, quantity, type);
        this.discType = discType;
        this.director = director;
        this.runtime = runtime;
        this.studio = studio;
    }
}

```

lớp DVD.java vi phạm lsp vì không gọi super phương thức của class cha Media.java