**National University of Computer & Emerging Sciences**

**Karachi Campus**



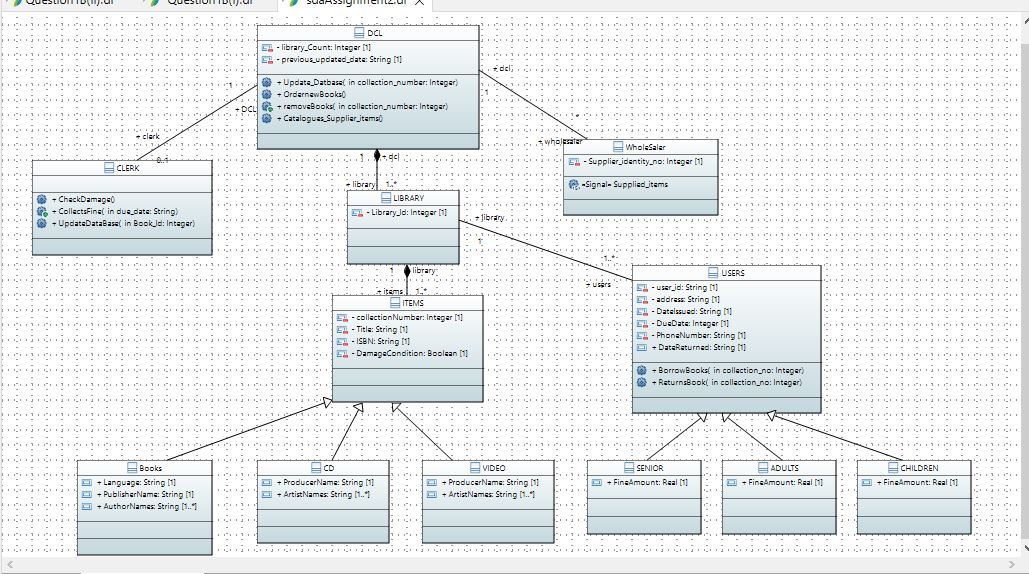
**SDA ASSIGNMENT # 02**

**Ashmal Anis Vayani**

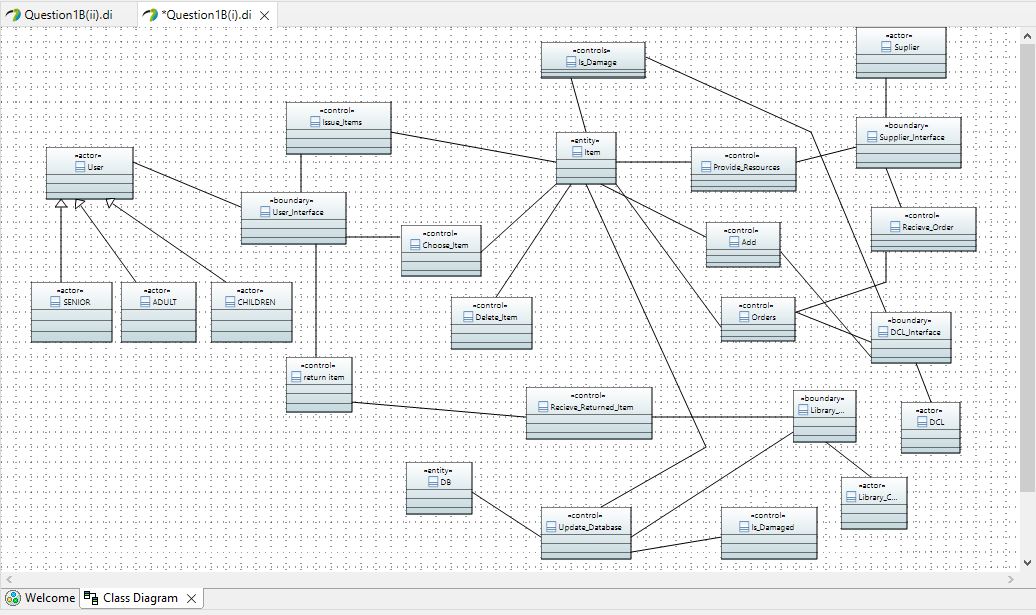
**19K-0305**

**Sec: H**

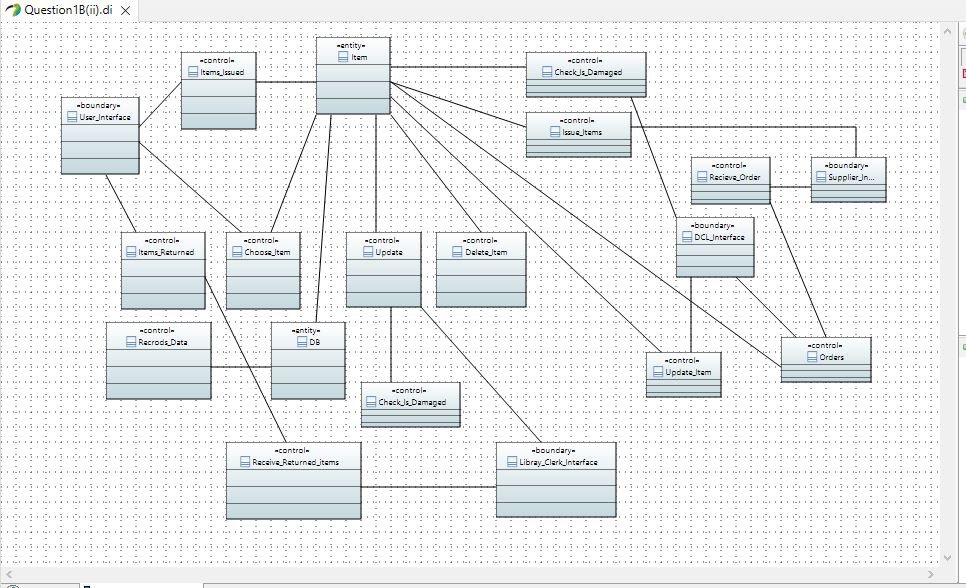
**Question # 01**:



**Question # 02 (i):**



**Question # 02 (ii):**



**Code**

**Adults.java:**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class ADULTS extends USERS {

/\*\*

\*

\*/

public float fine = 1.0;

/\*\*

\*

\*/

public float FineAmount = 1.0;

}

**Books.java:**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class Books extends ITEMS {

/\*\*

\*

\*/

public String Language;

/\*\*

\*

\*/

public String PublisherName;

/\*\*

\*

\*/

public String[] AuthorNames;

}

**CD.java:**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class CD extends ITEMS {

/\*\*

\*

\*/

public String Producer\_name;

/\*\*

\*

\*/

public int no\_of\_artists;

/\*\*

\*

\*/

public String[] artists;

/\*\*

\*

\*/

public String ProducerName;

/\*\*

\*

\*/

public String[] ArtistNames;

}

**Children.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class CHILDREN extends USERS {

/\*\*

\*

\*/

public float fine = 0.05;

/\*\*

\*

\*/

public float FineAmount = 1.0;

}

**Clerk.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class CLERK {

/\*\*

\*

\*/

public float fine\_collected;

/\*\*

\*

\*/

public boolean damaged;

/\*\*

\*

\*/

public void check\_damage() {

}

/\*\*

\*

\* @param due\_date

\* @param date\_of\_return

\*/

public void calculate\_fine(String due\_date, String date\_of\_return) {

}

/\*\*

\*

\* @param user\_id

\* @param collection\_no

\* @param date\_of\_borrow

\*/

public void update1(int user\_id, int collection\_no, String date\_of\_borrow) {

}

/\*\*

\*

\* @param date\_of\_return

\* @param fine

\*/

public void update2(String date\_of\_return, float fine) {

}

/\*\*

\*

\*/

public void CheckDamage() {

}

/\*\*

\*

\* @param due\_date

\*/

public void CollectsFine(String due\_date) {

}

/\*\*

\*

\* @param Book\_Id

\*/

public void UpdateDataBase(int Book\_Id) {

}

}

**DCL.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class DCL {

/\*\*

\*

\*/

public int no\_of\_libraries;

/\*\*

\*

\*/

public String last\_updated\_date;

/\*\*

\*

\*/

private int library\_Count;

/\*\*

\*

\*/

private String previous\_updated\_date;

/\*\*

\*

\* @param collection\_no

\*/

public void update(int collection\_no) {

}

/\*\*

\*

\*/

public void order() {

}

/\*\*

\*

\* @param collection\_no

\*/

public void remove(int collection\_no) {

}

/\*\*

\*

\* @param collection\_number

\*/

public void Update\_Datbase(int collection\_number) {

}

/\*\*

\*

\*/

public void OrdernewBooks() {

}

/\*\*

\*

\* @param collection\_number

\*/

public void removeBooks(int collection\_number) {

}

/\*\*

\*

\*/

public void Catalogues\_Supplier\_items() {

}

}

**ITEMS.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class ITEMS {

/\*\*

\*

\*/

public int collection\_no;

/\*\*

\*

\*/

public String title;

/\*\*

\*

\*/

public String ISBN;

/\*\*

\*

\*/

public String condition;

/\*\*

\*

\*/

public boolean borrowed\_this\_yr;

/\*\*

\*

\*/

private int collectionNumber;

/\*\*

\*

\*/

private String Title;

/\*\*

\*

\*/

private String ISBN;

/\*\*

\*

\*/

private boolean DamageCondition;

}

**LIBRARY.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class LIBRARY {

/\*\*

\*

\*/

public String name;

/\*\*

\*

\*/

public String address;

/\*\*

\*

\*/

public int id;

/\*\*

\*

\*/

private int Library\_Id;

}

**Senior.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class SENIOR extends USERS {

/\*\*

\*

\*/

public float fine = 0.5;

/\*\*

\*

\*/

public float FineAmount = 1.0;

}

**USERS.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class USERS {

/\*\*

\*

\*/

public String user\_id;

/\*\*

\*

\*/

public String address;

/\*\*

\*

\*/

public String phone\_no;

/\*\*

\*

\*/

public int date\_of\_return;

/\*\*

\*

\*/

public String date\_of\_borrow;

/\*\*

\*

\*/

public String duedate;

/\*\*

\*

\*/

private String user\_id;

/\*\*

\*

\*/

private String DateIssued;

/\*\*

\*

\*/

private String address;

/\*\*

\*

\*/

private String PhoneNumber;

/\*\*

\*

\*/

public String DateReturned;

/\*\*

\*

\*/

private int DueDate;

/\*\*

\*

\* @param collection\_no

\*/

public void borrows(int collection\_no) {

}

/\*\*

\*

\* @param collection\_no

\*/

public void returns(int collection\_no) {

}

/\*\*

\*

\* @param collection\_no

\*/

public void BorrowBooks(int collection\_no) {

}

/\*\*

\*

\* @param collection\_no

\*/

public void ReturnsBook(int collection\_no) {

}

}

**VIDEO.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class VIDEO extends ITEMS {

/\*\*

\*

\*/

public String Producer\_name;

/\*\*

\*

\*/

public int no\_of\_artists;

/\*\*

\*

\*/

public String[] artists;

/\*\*

\*

\*/

public String ProducerName;

/\*\*

\*

\*/

public String[] ArtistNames;

}

**Wholesaler.java**

// --------------------------------------------------------

// Code generated by Papyrus Java

// --------------------------------------------------------

package sdaAssignment2;

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*

\*

\*/

public class WholeSaler {

/\*\*

\*

\*/

public int supplier\_id;

/\*\*

\*

\*/

public String supplier\_name;

/\*\*

\*

\*/

private int Supplier\_identity\_no;

/\*\*

\*

\*/

public void supply\_items() {

}

}