WEEK - 4

Structural Modeling-Component Diagram

4.1 Component diagram for Passport Issuance Automation

Design the component diagram for passport issuance automation system. It is used in the effective dispatch of passport to all of the applicants. This system adopts a comprehensive approach to minimize the manual work and schedule resources, time in a cogent manner.

The core of the system is to get the online registration form (with details such as name, address etc.,) filled by the applicant whose testament is verified for its genuineness by the Passport Automation System with respect to the already existing information in the database.

Hints:

/**

*Design the Static implementation view with Component diagram.

*/

To design a Component Diagram:

Select first an element where a new Component Diagram to be contained as achild.

Select Model | Add Diagram | Component Diagram in Menu Bar or select Add

Diagram | Component Diagram in Context Menu.

To design a Component:

Select Component in Toolbox.

Drag on the diagram as the size of Component.

To design a Component (model element only) by Menu:

Select an Element where a new Component to be contained.

Select Model | Add | Component in Menu Bar or Add | Component in ContextMenu.

A component represents a modular part of a system, that encapsulates itcontents and

whose manifestation is replaced with in its environment. A component defines its

behaviors in terms of provide and required

interfaces.

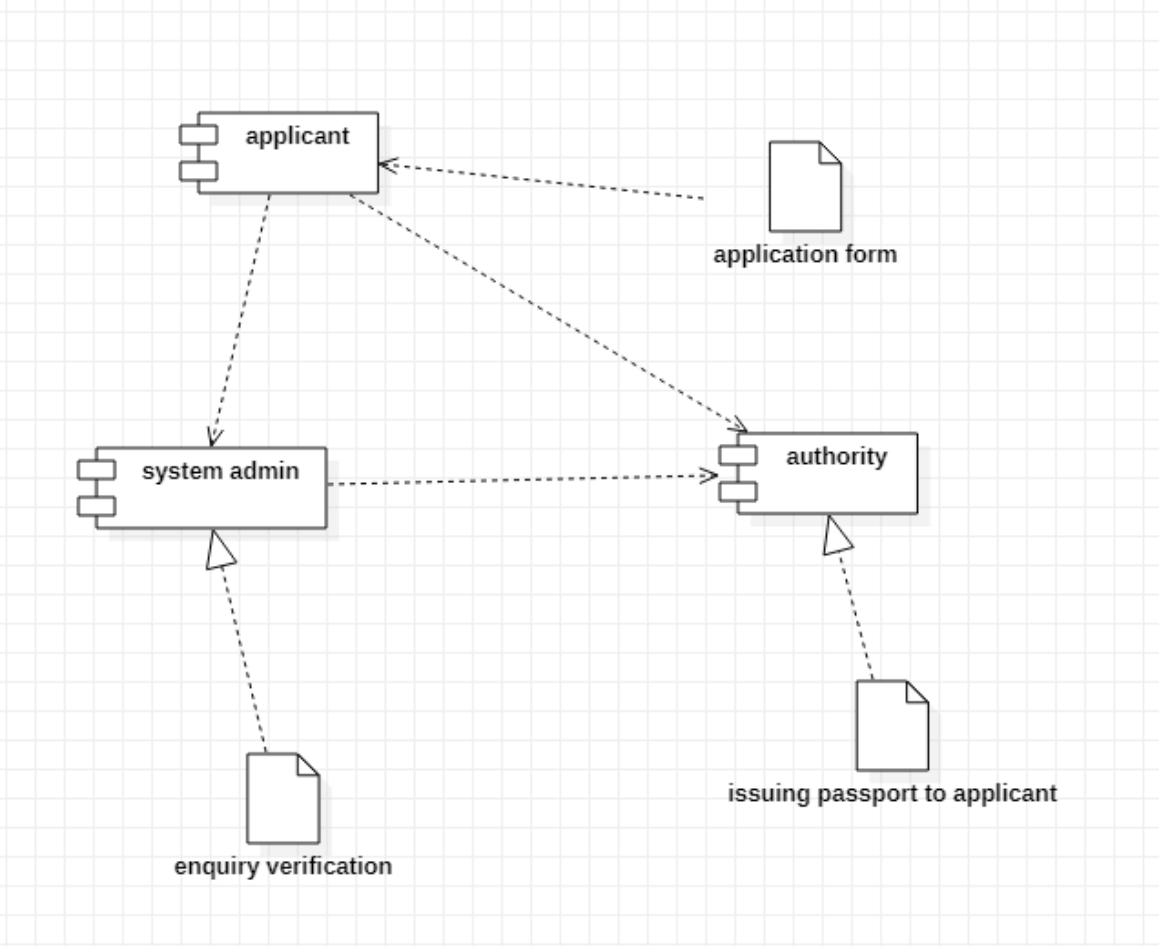
• Here the three components are applicant, system admin and authority.

• The interface between people and system admin, from people to authority.

The applicant, System admin, enquiry verification are components being

interacted. Here the three components are applicant, system admin andauthority.

The interface between people and system admin, from people to authority.



Conclusion: The component diagram was designed successfully by following the stepsdescribed above.

4.2 Component diagram for Digital commerce platform

The component diagram of an Digital commerce platform is used to show how the parts of a system work together to make the online shopping operate. A component diagram shows how the software's parts are organized and how they depend on each other. This diagram gives a high-level look at the parts of a system.

Hints

//* Design the Static implementation view with Component diagram *//

To design a Component Diagram:

Select first an element where a new Component Diagram to be contained as a child.

Select Model | Add Diagram | Component Diagram in Menu Bar or select Add Diagram | Component Diagram in Context Menu.

To design a Component:

Select Component in Toolbox.

Drag on the diagram as the size of Component.

To design a Component (model element only) by Menu:

Select an Element where a new Component to be contained.

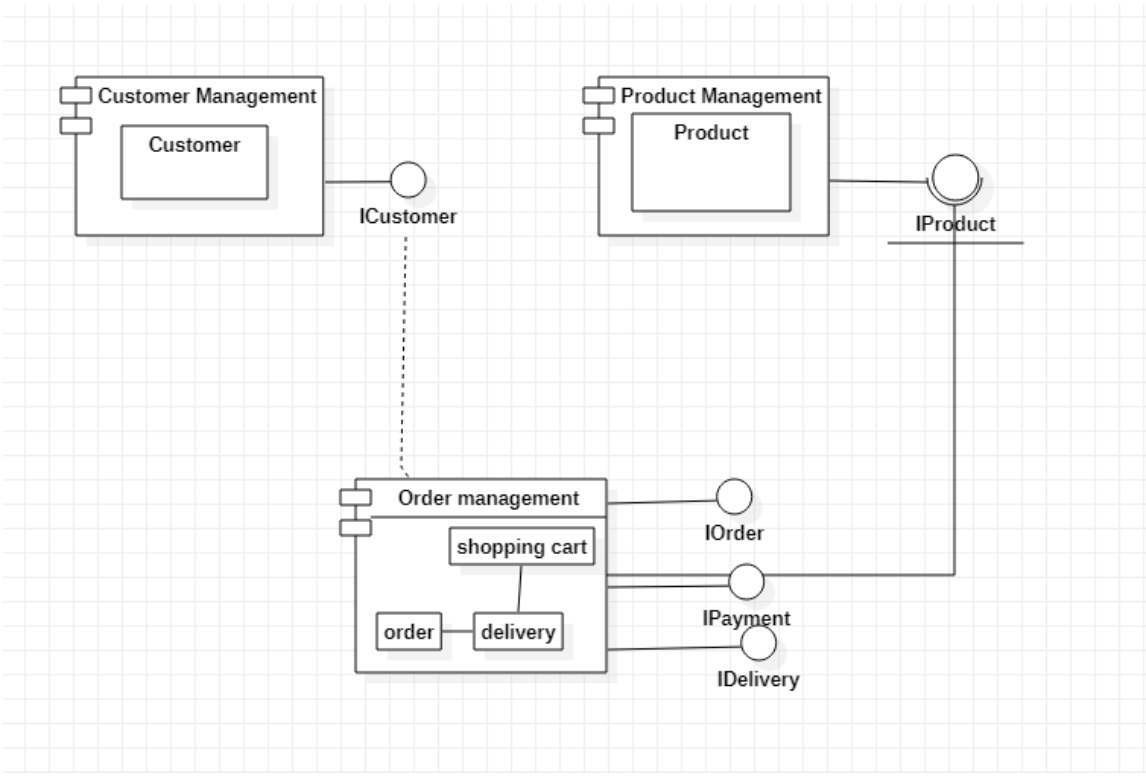
Select Model | Add | Component in Menu Bar or Add | Component in Context Menu

component diagram shows how an online shopping system will be made up of aset of deployable components, such as dynamic-link library (DLL) files, executable files, or web services. Using well-defined interfaces, these parts communicate with each other and keep their internal details hiddenfrom each other and the outside world.

components which are the product database, transaction database, product list, shopping cart, order details, and the user. The component productlist is the required interface which is dependent on the provided component Product database. The component transaction database is also dependent to order details.

Conclusion: The component diagram was designed successfully by following the steps

described above


Customer Management
Customer
ICustomer
Product Management
Product
IProduct
Order management
shopping cart
order
delivery
IOrder
IPayment
IDelivery

4.3 Component diagram for Smart bank services

Design and develop a component diagram for an Smart bank services which will be made up of a set of deployable components, such as dynamic-link library (DLL) files, executable files, or20 web services. Using well-defined interfaces, these parts communicate with each other andkeep their internal details hidden from each other and the outside world.

Hints

* Design the Static implementation view with Component diagram for Smartbank services.

To design a Component Diagram:

Select first an element where a new Component Diagram to be contained as achild.

Select Model | Add Diagram | Component Diagram in Menu Bar or select AddDiagram | Component Diagram in Context Menu.

To design a Component:

Select Component in Toolbox.

Drag on the diagram as the size of Component.

To design a Component (model element only) by Menu:

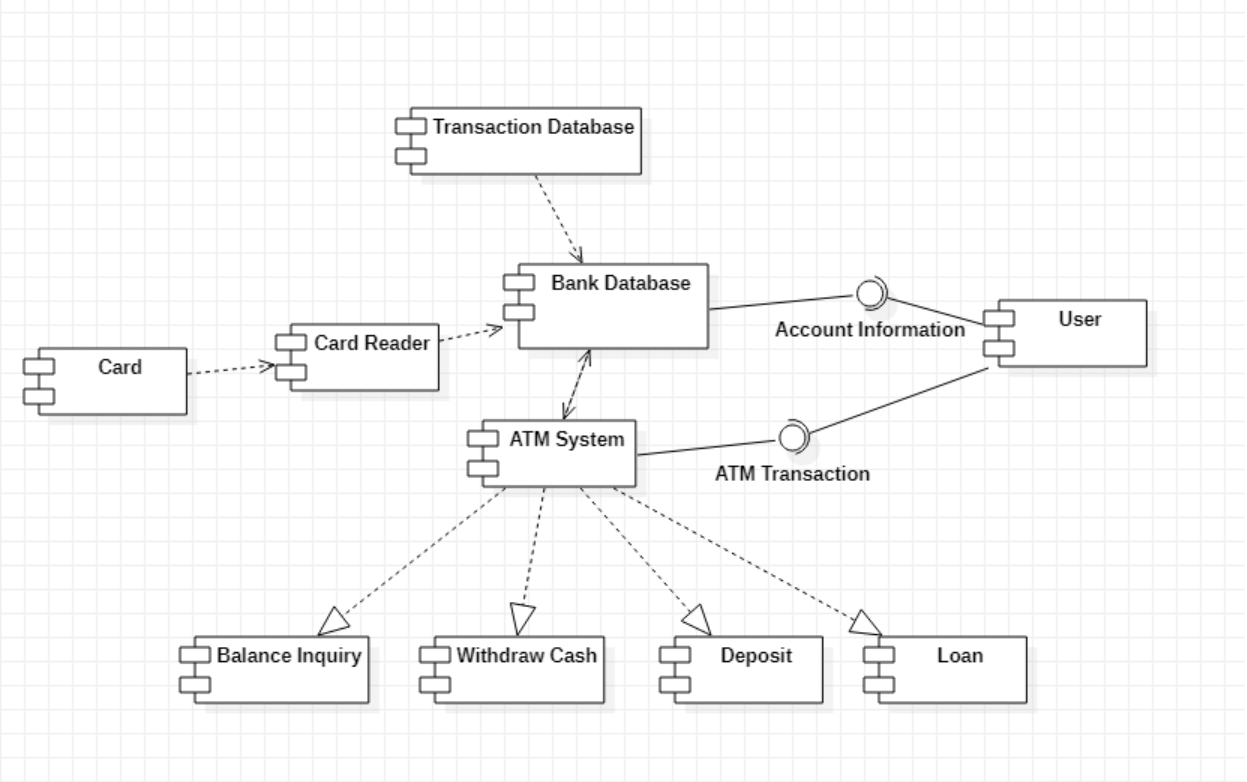
Select an Element where a new Component to be contained.

Select Model | Add | Component in Menu Bar or Add | Component in ContextMenu

The components are labeled to clarify their part in the system's operation. They were represented by symbols that explain their functionand role in the overall ATM system operation.

The component diagram of ATM system has 8 components which are the accountdatabase, transaction database, balance inquiry, withdraw, deposit, loan,

card, and the user. The components under the ATM system are the requiredinterface at the same time are provided interface which serves as the
provider for the transaction database and required for the accountsdatabase
The dependencies on each component are explained through the lines andarrows drawn in the diagram



4.4 Component diagram for E-Health Record software (EHR)System

Design and develop the Component Diagram for E-Health Record software (EHR)Systemwhich is used to show the overall flow of the system parts work together to make the

hospital system perform efficiently.

Hints

/**

* Design the Static implementation view with Component diagram for E-Health Record software (EHR)System.

*/

To design a Component Diagram:

Select first an element where a new Component Diagram to be contained as a child.

Select Model | Add Diagram | Component Diagram in Menu Bar or select Add Diagram | Component Diagram in Context Menu.

To design a Component:

Select Component in Toolbox.

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To design a Component (model element only) by Menu:

Select an Element where a new Component to be contained.

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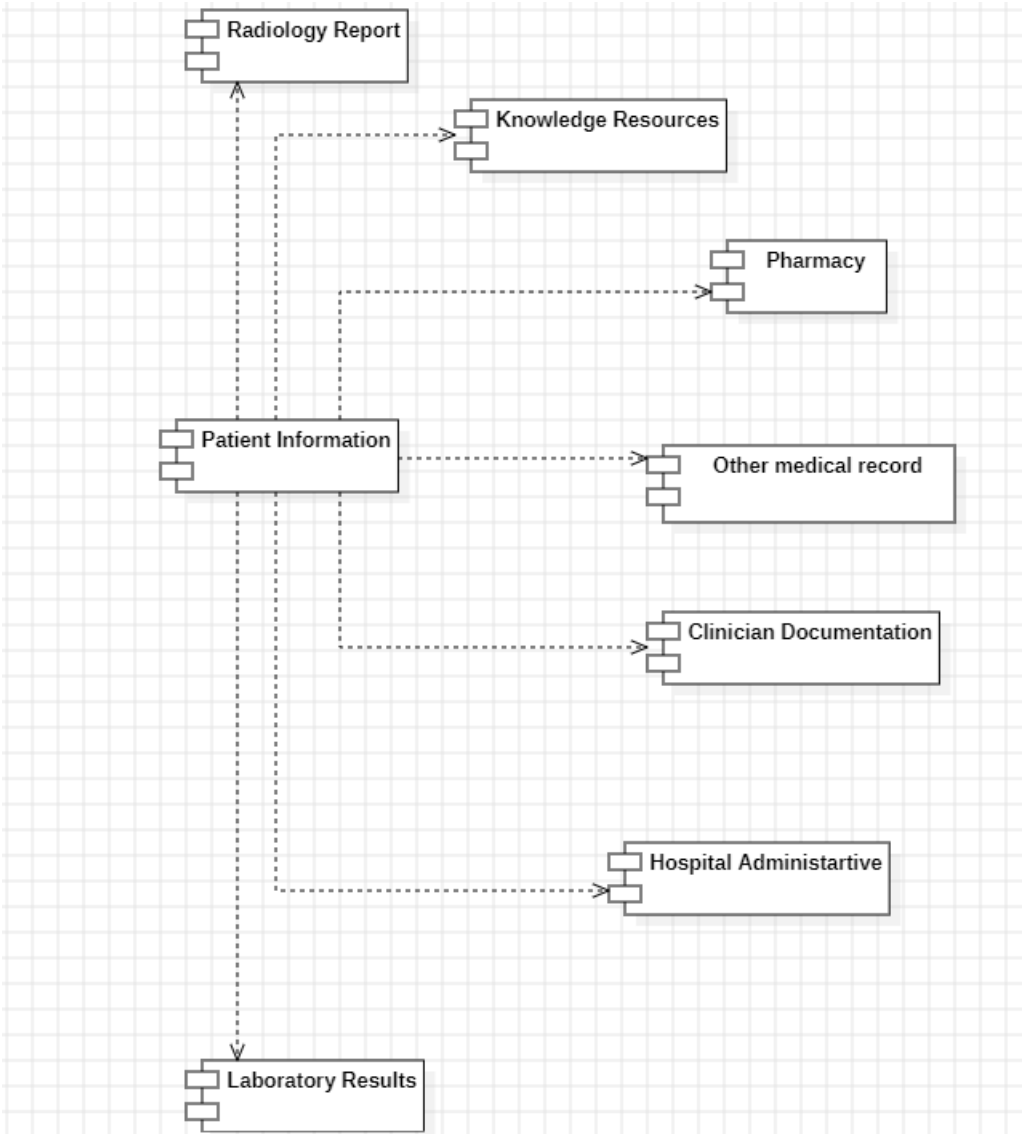


Conclusion: The component diagram was designed successfully by following the stepsdescribed above

4.5 Component diagram for Digital Food Delivery Platform

Design and develop a component diagram of a Digital Food Delivery Platform. An Online Food Ordering System is a piece of software that allows restaurants, coffee shops, and bars to take orders over the internet. In most cases, customers can choose and pay for food before the kitchen is told that an order has been made.

Hints

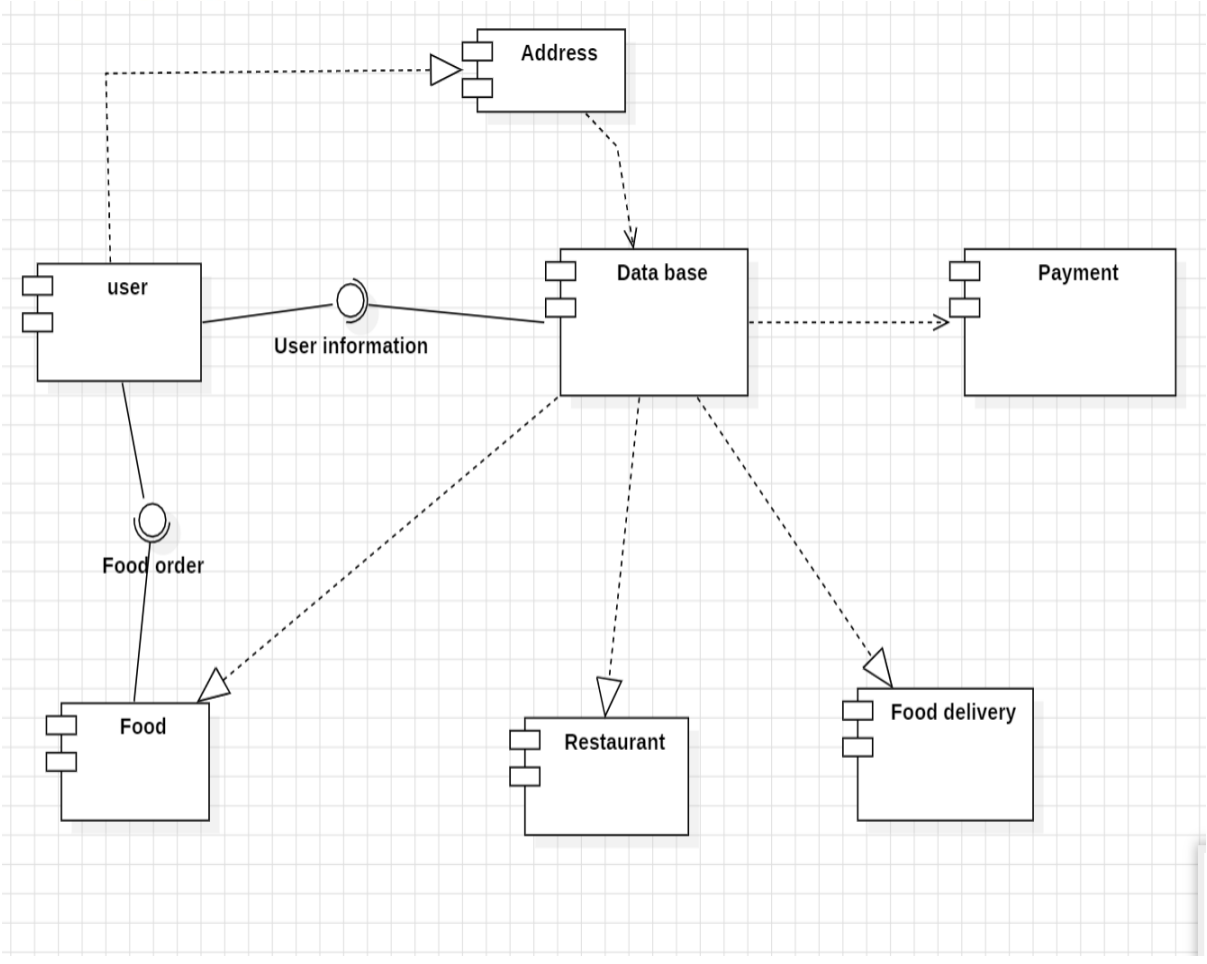
```
/**
 * Design the Static implementation view with Component diagram for
Digital Food Delivery Platform.
 */
Here are the steps in developing the food ordering system component
diagram

1. Finalize the Function and Processes of the Software
2. Put the Components included
3. Add the Dependencies (Ports and interfaces)

The component's port is a feature that indicates where the component and
its environment meet.

Interfaces show how components are wired together and how they work
together. When a component needs a certain interface, the assembly
connector lets you connect it to another component that already has that
interface. It looks like a semi-circle and a line.
```

Conclusion: The component diagram was designed successfully by following the steps described above



4.6 Component diagram for Smart library information services

Design and develop a component diagram of a Smart library information serviceswhich is software that can be used to manage all the tasks of a library, like howmany members can come in and out. This tool keeps track of new books and thebooks that members have checked out. They can also be monitored when the borrowing session is due.

Hints

/**

* Design the Static implementation view with Component diagram for Smartlibrary information services.

*/

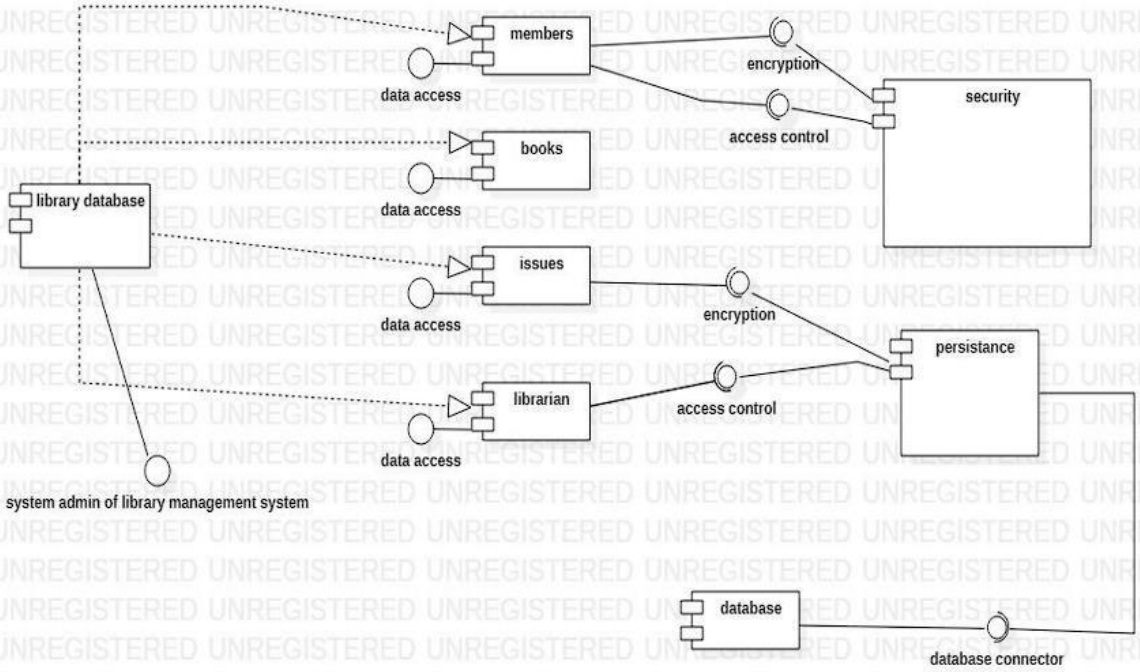
This component diagram shows the structure of the library system, whichconsists of the software components and their interfaces, and how they work together.

The component diagram of library Automation system has 5 components whichare book database, transaction database, output, online search, and the

user. The component “output” is the required interface which is dependent

on the provided book database component. The included components werejust based on the main function of the system.

The dependencies on each component are explained through the lines andarrows drawn in the diagram.


members
data access
books
data access
library database
issues
data access
librarian
data access
system admin of library management system
encryption
access control
security
encryption
persistance
access control
database
database connector