1. **Introduction:**

Hostel Management System is designed to manage all hostel activities like hostel admissions, fees, room, mess allotment, hostel stores & generates related reports for smooth transactions. It is also used to manage monthly bill calculation, hostel staff payroll, student certificates, etc.

Designed & developed keeping in mind all the hostel management concerns of staff, Edu Feet Hostel Management Software is a one-stop-solution for higher education institutions. Right from students' registration to allocating rooms & managing student count records, and ins-and-outs of students, it streamlines & automates all the day-today hostel activities.

Checking the rooms' availability, allocating room to new students, managing hostel fees, visitors' records and all such hostel management related activities manually consume efforts, time, and resources. Moreover, hostel management also requires looking after the security of students which can only be achieved with close supervision of daily students' activities.

Modules: Edu-Feet Hostel Management System (EFHMS):

In any hostel, maintaining the data of the students living in that hostel and the data of workers who are working in that hostel is a hectic task, so we are creating this software to make that task less painful.

This software includes following modules for making that software effective Here are they given below:

- **Login**
- **Main Window**
  - Registration
  - Student Record
  - Room Availability
  - Staff Management
- **Registration**
  - Add Student

- Update
- Student Report
- Student Detail

❖ Student Record

- All Student Details

❖ Room Availability

- Vacant Rooms
- Booked Rooms
- Employee Data
- Mess
- Fees

2. Objective of the Project:

Edu-Feet is a Hostel Management Software developed for managing various activities in the hostel. For the past few years the number of educational institutions is increasing rapidly. Thereby the number of hostels is also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the

hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually. Identification of the drawbacks of the existing system leads to the development of computerized hostel management system that will be compatible to the existing system with the system which is more users friendly and more GUI oriented

We can improve the efficiency of the system, thus overcome the drawbacks of the existing hostel management system. Less human error, Strength and strain of manual labour can be reduced, High security, Data redundancy can be avoided to some extent, Data consistency, Easy to handle, Easy data updating, Easy record keeping, Backup data can be easily generated.

I. Need of Hostel Management System:

Education institutions are rapidly expanding over the past few years. From time-to-time popular educational institutions increasing their branches, this is leading to the mushrooming of hostels, and students are being admitted to hostels for studying in these institutions.

II. Abstract of Hostel Management System:

As the name specifies "HOSTEL MANAGEMENT SYSTEM" is a software developed

for managing various activities in the hostel. For the past few years, the number of educational institutions are increasing rapidly. Thereby the number of hostels are also increasing for the accommodation of the students studying in this institution. And hence there is a lot of strain on the person who are running the hostel and software's are not usually used in this context. This particular project deals with the problems on managing a hostel and avoids the problems which occur when carried manually. Identification of the drawbacks of the existing system leads to the designing of computerized system that will be compatible to the existing system with the system which is more user friendly and more GUI oriented

Benefits:

❖ Our Vision:

Our Vision is to make room allotment an easy task for everyone and increase the throughput with giving minimum efforts. The main objective of this project is to automate all the manual operations of the hotels. Keep records of students, visitors in digital storage rack the record of hostelers.

All the details of students will be available on the one-click of the search button. Track the finance or fee details of the students. Check room availability. Track the record of visitors. It will save a lot of time and paperwork.

It provides the most flexible and adaptable standards management system solutions for hostel.

❖ Our Mission:

With the help of hostel management software, students are able to maintain separate hostel account and rooms are allotted according to types and deciding on the number of occupants in each room, waiting list maintenance, issuance of receipts for the fees collected and more.

3. System Design:

First in the system development process is preliminary Investigation.

Preliminary Investigation is conducted in the following phases.

• Project clarification

• Feasibility study

Project appraisal Project clarification is the process of selecting a project request for further study.

When a system development or modification request is made, the first systems activity, the preliminary investigation, begins the activity has three parts:

Request clarification, feasibility study and project appraisal. Many request from employees and users in organization are not clearly stated.

Therefore, before any systems investigation can be considered, the project request must be examined to determine preciously what the originator wants.

This is called Request clarification.

As important outcome of the preliminary investigation is the determination that the system request in feasible

4. Feasibility Study and Requirement:

First in the system development process is preliminary Investigation. Preliminary Investigation is conducted in the following phases.

- Project clarification
- Feasibility study
- Project appraisal

Project Clarification:

Project clarification is the process of selecting a project request for further study. When a system development or modification request is made, the first systems activity, the preliminary investigation, begins the activity has three parts: Request clarification, feasibility study and project appraisal. Many request from employees and users in organization are not clearly stated.

Therefore, before any systems investigation can be considered, the project request must be examined to determine preciously what the originator wants. This is called Request clarification. As important outcome of the preliminary investigation is the determination that the system request in feasible

Hostel management system is software product that automates the hostel facility management exercise. It has several compelling features like powerful reservation management, synchronization of computers, reception and cash box administration, point of sale, accounts statistics and reports.

Feasibility Study:

The feasibility study is performed to determine whether the proposed system is viable considering the Technical, Operational and Economical factors. After going through feasibility study we can have a clear-cut view of the system's benefits and drawbacks.

- ## Technical Feasibility:

The technical feasibility in the proposed system deals with the technology used in the system. It deals with the hardware and software used in the system whether they are of latest technology or not and if it happens that after a system is prepared, a new technology arises and the user wants the system based on that technology. This system use windows platform, Apache NetBeans, SQL for database as the language and Java and Java Swing as user interface. Thus, HOSTEL MANAGEMENT SYSTEM is technically feasible.

- ## Economic Feasibility:

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis. JAVA, Apache NetBeans and SQL database are easily available on internet so there is no expanse on the tools to build this software

OPERATIONAL FEASIBILITY:

The project has been developed in such a way that it becomes very easy even for a person with little computer knowledge to operate it. This software is very user friendly

and does not require any technical person to operate. Thus, the project is even operationally feasible.

5. System Analysis:

It is a detailed document about the tools and languages which we are going to use for building that software.

It is basically divided into two parts-

- Frontend
- Backend

6. Frontend Description:

The front end is an interface between the user and the back end. The front and back ends maybe distributed amongst one or more systems.

In network computing, front end can refer to any hardware that optimizes or protects network traffic called application front-end hardware because it is placed on the network's outward-facing front end or boundary. Network traffic passes through the front-end hardware before entering the network.

In compilers, the front end translates a computer programming source code into an intermediate representation, and the back end works with the intermediate representation to produce code in a computer output language. The back end usually optimizes to produce code that runs faster. The frontend/back-end distinction can separate the parser section that deals with source code and the back end that generates code and optimizes.

These days, front-end development refers to the part of the web users interact with. In the past, web development consisted of people who worked with JAVA & JAVA SWING.

Most of everything you see on any window based is a mixture java & java swing which are all controlled by the Apache NetBeans & oracle. For example, if you’re using Google Chrome or Firefox, the browser is what translates all of the code in a manner for you to see and with which to interact, such as fonts, colours, drop-down menus, sliders, forms, etc. In order for all of this to work, though, there has to be something to support the front-end; this is where the backend comes into play. We have used JAVA so here is the description about the JAVA.

JAVA:

Java Architecture is a collection of components, i.e., **JVM, JRE,** and **JDK**. **It** integrates the process of interpretation and compilation. It defines all the processes involved in creating a Java program. **Java Architecture** explains each and every step of how a program is compiled and executed. **Java Architecture** can be explained by using the following steps:

- There is a process of compilation and interpretation in Java.
- Java compiler converts the Java code into byte code.
- After that, the JVM converts the byte code into machine code. The machine code is then executed by the machine.

The following figure represents the **Java Architecture** in which each step is elaborate graphically. Now let's dive deep to get more knowledge about **Java Architecture**. As we know that the Java architecture is a collection of components, so we will discuss each and every component into detail.

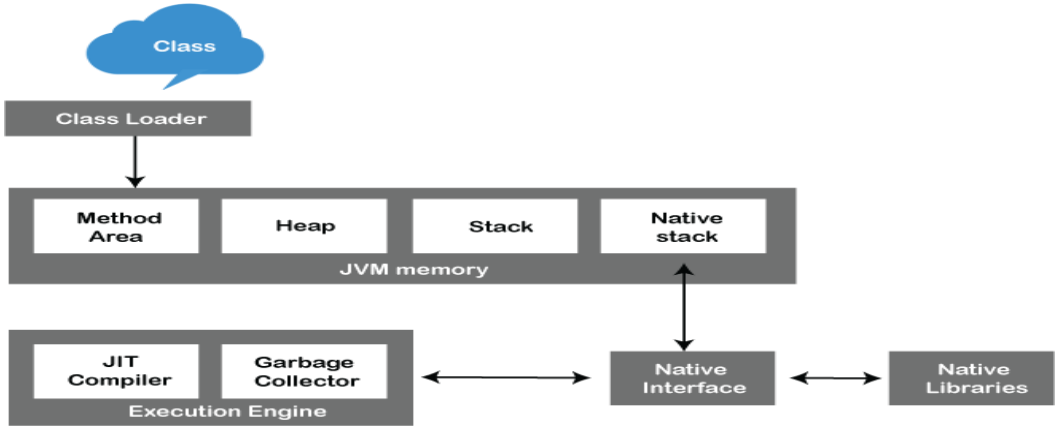
The Java architecture includes the three main components:

- Java Virtual Machine (JVM)
- Java Runtime Environment (JRE)
- Java Development Kit (JDK) Java Virtual Machine:

The main feature of Java is **WORA**. WORA stands for **Write Once Run Anywhere**. The feature states that we can write our code once and use it anywhere or on any operating system. Our Java program can run any of the platforms only because of the Java Virtual Machine. It is a Java platform component that gives us an environment to execute java programs. JVM's main task is to convert byte code into machine code.

JVM, first of all, loads the code into memory and verifies it. After that, it executes the code and provides a runtime environment. Java Virtual Machine (JVM) has its own architecture, which is given below:

JVM Architecture JVM is an abstract machine that provides the environment in which Java bytecode is executed. The falling figure represents the architecture of the JVM.



Class Loader: Class Loader is a subsystem used to load class files. Class Loader first loads the Java code whenever we run it.

Class Method Area: In the memory, there is an area where the class data is stored during the code's execution. Class method area holds the information of static variables, static methods, static blocks, and instance methods.

Heap: The heap area is a part of the JVM memory and is created when the JVM starts up. Its size cannot be static because it increase or decrease during the application runs.

Stack: It is also referred to as thread stack. It is created for a single execution thread. The thread uses this area to store the elements like the partial result, local variable, data used for calling method and returns etc.

Native Stack: It contains the information of all the native methods used in our application.

Execution Engine: It is the central part of the JVM. Its main task is to execute the byte code and execute the Java classes. The execution engine has three main components used for executing Java classes.

Interpreter: It converts the byte code into native code and executes. It sequentially executes the code. The interpreter interprets continuously and even the same method multiple times. This reduces the performance of the system, and to solve this, the JIT compiler is introduced.

JIT Compiler: JIT compiler is introduced to remove the drawback of the interpreter. It increases the speed of execution and improves performance.

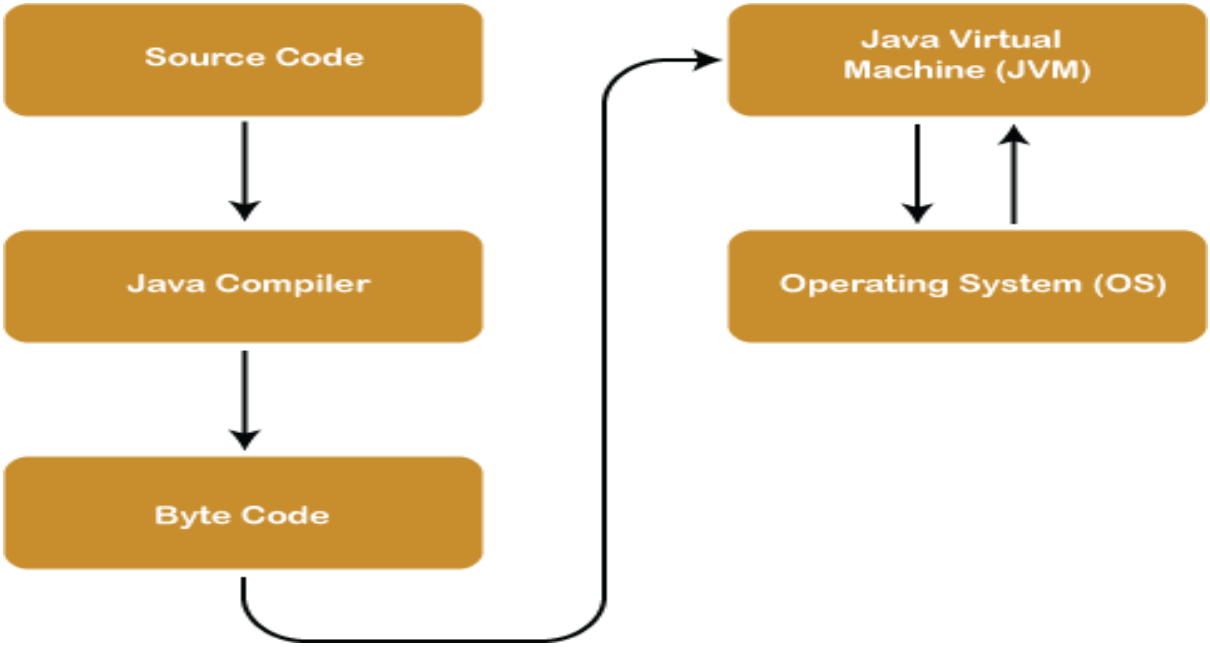
Garbage Collector: The garbage collector is used to manage the memory, and it is a program written in Java. It works in two phases, i.e., **Mark** and **Sweep**. Mark is an area where the garbage collector identifies the used and unused chunks of memory. The Sweep removes the identified object from the **Mark.**

Java Native Interface: Java Native Interface works as a mediator between Java method calls and native libraries.

Java Runtime Environment: It provides an environment in which Java programs are executed. JRE takes our Java code, integrates it with the required libraries, and then starts the JVM to execute it.

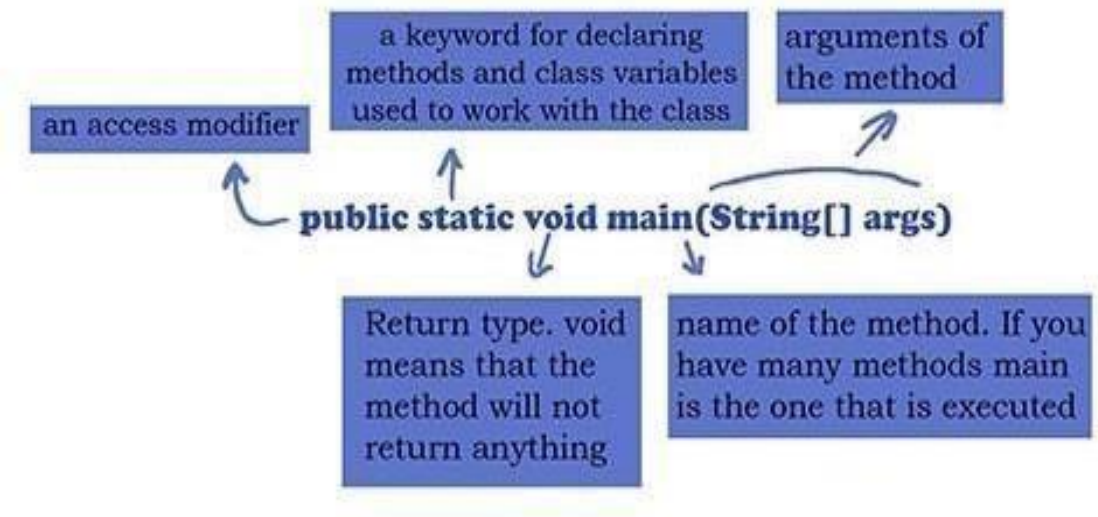
Java Development Kit: It is a software development environment used in the development of Java applications and applets. Java Development Kit holds JRE, a compiler, an interpreter or loader, and several development tools in it.

JAVA was developed by James Gosling at **Sun Microsystems** Inc. in the year **1995**, later acquired by Oracle Corporation. It is a simple programming language. Java makes writing, compiling, and debugging programming easy. It helps to create reusable code and modular programs. Java is a class-based, object-oriented programming language and is designed to have as few implementation dependencies as possible. A general-purpose programming language made for developers to *write once run anywhere* that is compiled Java code can run on all platforms that support Java. Java applications are compiled to byte code that can run on any Java Virtual Machine. The syntax of Java is similar to c/c++.



JAVA Syntax:

In Java, there are 51 keywords. Some of the keywords in Java are: abstract, Boolean, byte, char, long, short, int, finally, extends, implements, interface, package, new, while, for, do, break, continue, return, public, private, this, case, final, default, etc.



JAVA Swing:

Swing in Java is a lightweight GUI toolkit which has a wide variety of widgets for building optimized window-based applications. It is a part of the JFC (Java Foundation Classes). It is built on top of the AWT API and entirely written in java. It is platform independent unlike AWT and has lightweight components.

It becomes easier to build applications since we already have GUI components like button, checkbox etc. This is helpful because we do not have to start from the scratch.

Container Class:

Any **class** which has other components in it is called as a container class. For building GUI applications at least one container class is necessary.

Following are the three types of container classes:

- Panel – It is used to organize components on to a window
- Frame – A fully functioning window with icons and titles
- Dialog – It is like a pop up window but not fully functional like the frame

Difference between AWT and Swing:

Sr. No.	AWT	Swing
1.	Java AWT is an API to develop GUI applications in Java	Swing is a part of Java Foundation Classes and used to create various applications.
2.	The components of Java AWT are heavy weighted.	The components of Java Swing are light weighted.
3.	Java AWT has comparatively less functional as compared to Swing.	Java Swing has more functionality as compared AWT.
4.	The execution time of AWT is more than Swing.	The execution time of Swing is less than AWT.
5.	The components of Java AWT are platfo dependent.	The components of Java Swing are platform independent.
6.	MVC pattern is not supported by AWT.	MVC pattern is supported by Swing.
7.	AWT provides comparatively less power components.	Swing provides more powerful components.
8.	AWT components require java.awt package	Swing components requires javax.swing package
9.	AWT is a thin layer of code on top of the operating system. .	Swing is much larger swing also has very much richer functionality
10.	AWT stands for Abstract windows toolkit.	Swing is also called as JFC (java Foundation classes) is part of oracle's JFC.
11.	Using AWT, you have to implement a lot things yourself .	Swing has them built in.

7. Backend Description:

Backend is all of that works to support the front-end of the website. The backend has three parts to it: server, application, and database.

The backend is the server side of the software.

It stores and arranges data, and also makes sure everything on the client side of the software works fine.

It is the part of the software that you cannot see and interact with.

It is the portion of software that does not come in direct contact with the users.

The parts and characteristics developed by backend designers are indirectly accessed by users through a front-end application. Activities, like writing APIs, creating libraries, and working with system components without user interfaces or even systems of scientific programming, are also included in the backend.

Software and tool used:

We have used Oracle 10g as a server and database services with this we have used Apache NetBeans as an IDE tool for the development.

We have used Oracle 10g and here we have the description about it.

ORACLE:

Install ORACLE by double clicking on the icon, an installation wizard will be opened.

Installing Oracle 10g

Express Edition Garrett

Taylor

This tutorial will walk you through installing the personal edition of the Oracle 10g database. It will also show you how to install and run the demo applications that come as a part of the install package.

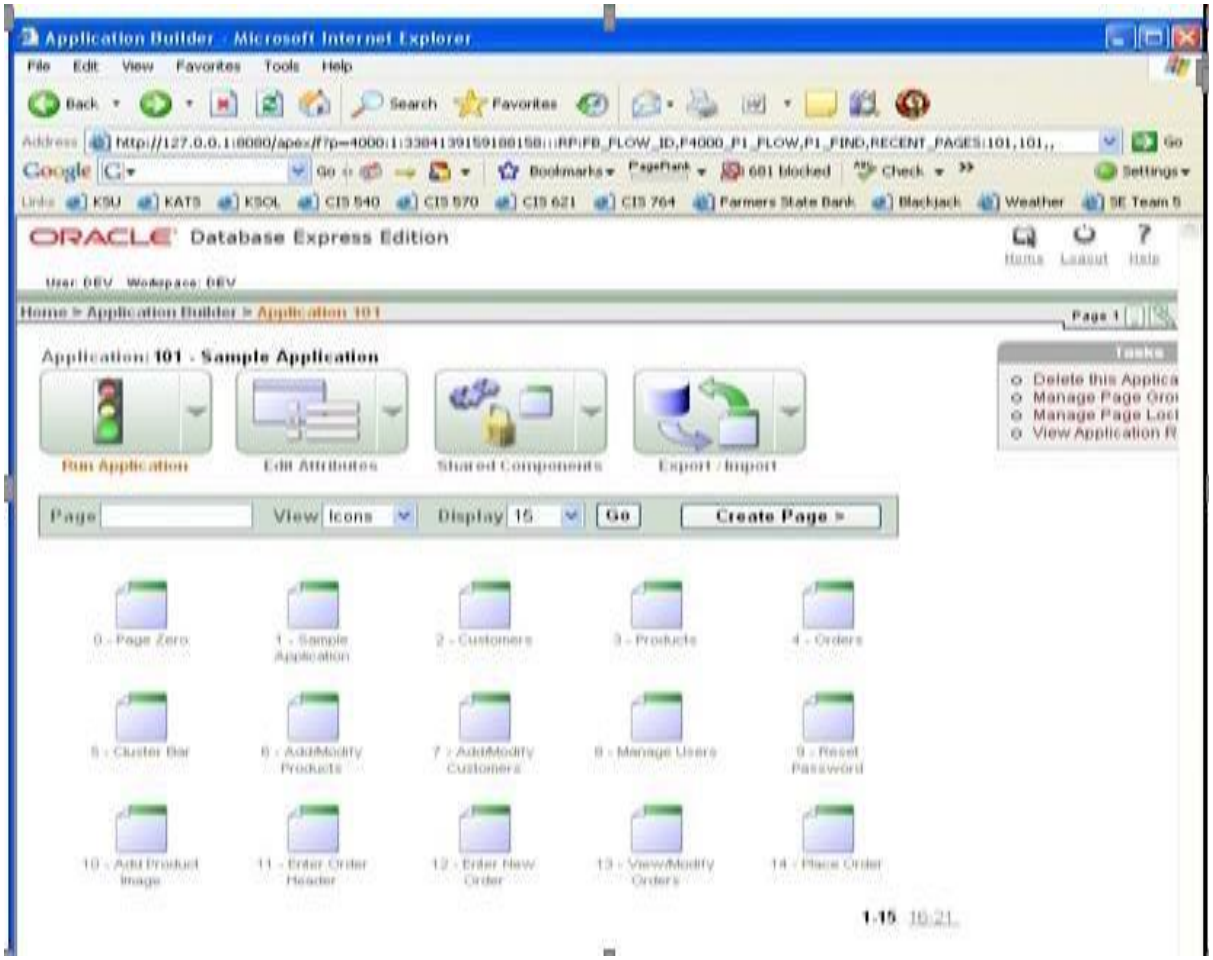
1. Download the Oracle Database 10*g* Express Edition installer. It can be found at http://www.oracle.com/technology/software/products/database/xe/index.html. You will need to select the Windows download and accept the license agreement before the download will commence

2. Run the installer. The only required input is the SYSTEM account password, which you should write down or make sure you remember.

3. When the installer finishes, click Finish and wait for the Application Express Login page to appear. Login to the database using the SYSTEM account with the password you specified at install time.

Click Next and Install on the following screens, and the demonstration applications are now installed.

To run any of the applications we have installed, go back to the Application Builder screen and click on any of the applications. On the screen that comes up, click the Run Application button and log in as directed.



If you are motivated, explore each of the sample applications to see how they are built using the Application Builder. It is a rather complex but powerful tool if learned.

8. System Requirements:

System Requirement consist of two requirement one is hardware requirement and another is software requirement.

Hardware Requirement:

Processor : Intel Core Duo 2.0 GHz or More

RAM : 2GB or More

Hard disk : 80GB or more

Monitor : 15'' CRT or LCD monitor

Keyboard : Normal or Multimedia

Mouse : Compatible Mouse

Software Requirement:

Front End : NETBEANS 8.2 or higher, Supported JAR File and JDK 19

Back End : ORACLE 10g

OS : Windows 7 with server pack 1 and higher version

We have used NetBeans Version 8.2 IDE for building this project .

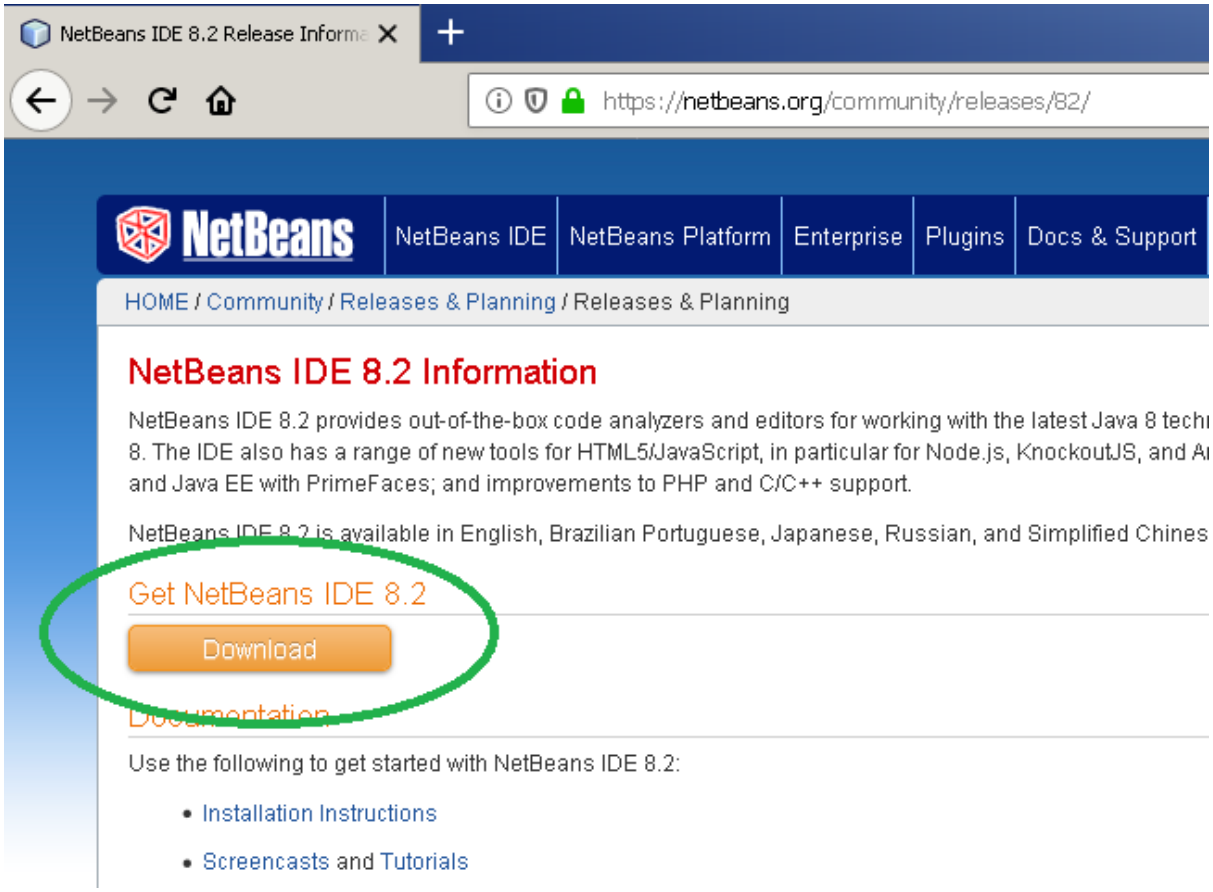
Here is the process to install the NetBeans :-

Steps to Install NetBeans IDE 8.2

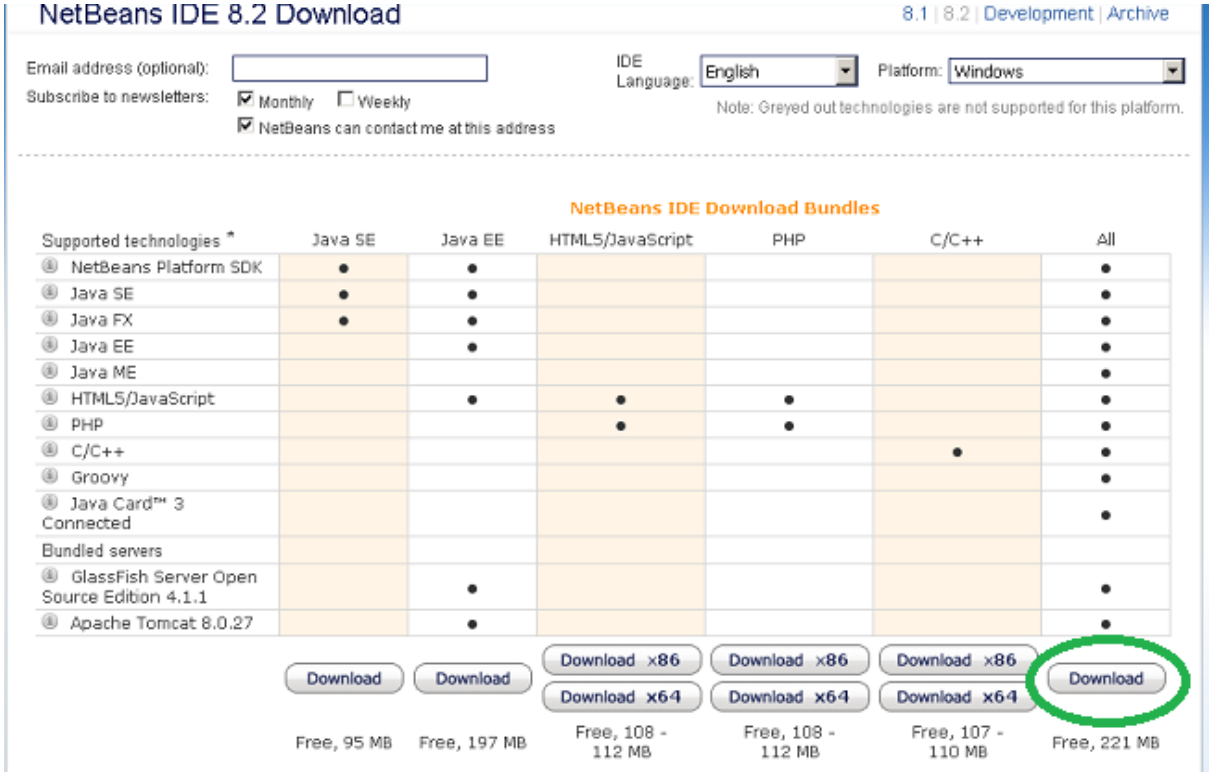
To install NetBeans on your windows computer you must follow these steps.

Download NetBeans IDE 8.2

We start our installation by downloading the latest version of NetBeans IDE 8.2. Visit the site http://netbeans.org to download it.

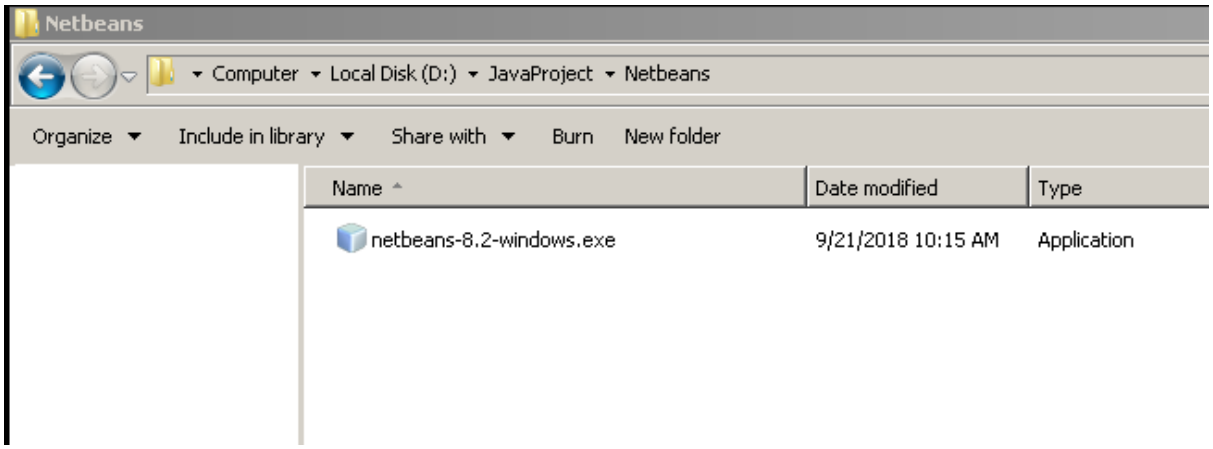


When you click on the download option, it will take you to the download page. You can download any package suitable for your computer, but for the sake of this tutorial, download the full version.



Download Full version

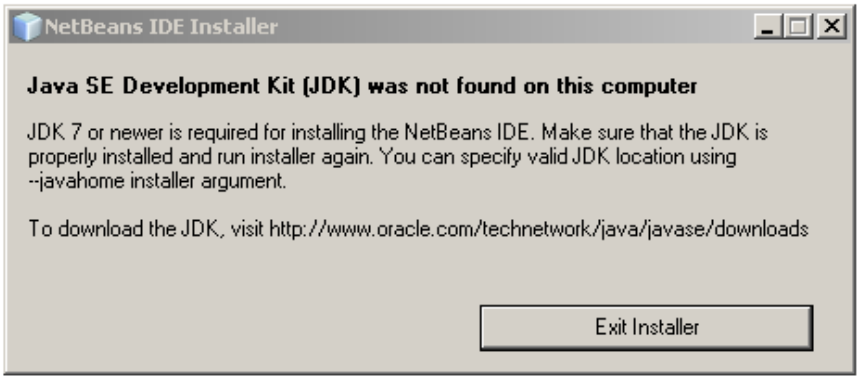
The full version contains most of the packages. Now, create a new folder NetBeans and download the software.



NetBeans setup file

You cannot run the setup immediately before you run setup to make sure that the Java JDK 10.0.2 is installed correctly.

Sometimes, you may receive an error when you start the setup. The screenshot for error is shown below.

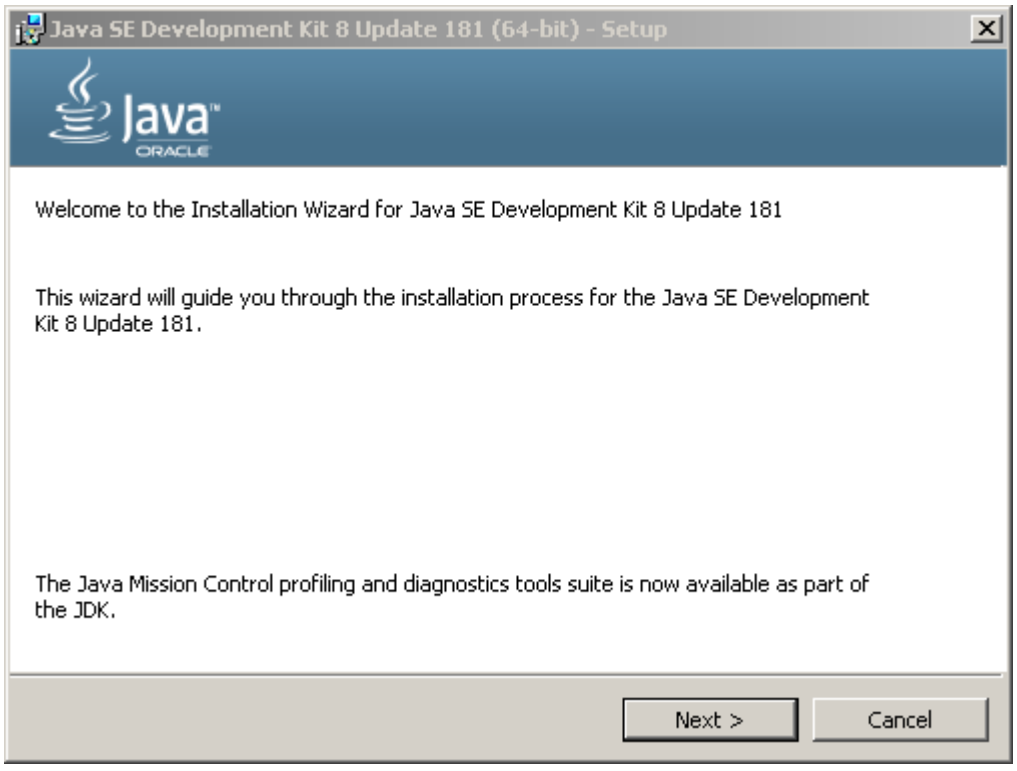


NetBeans Setup error

We have Java JDK installed, but you may still get this message. To solve this problem, download and install Java JDK 8u111 update from the Oracle site.

Download and Install JDK 8u111 Update

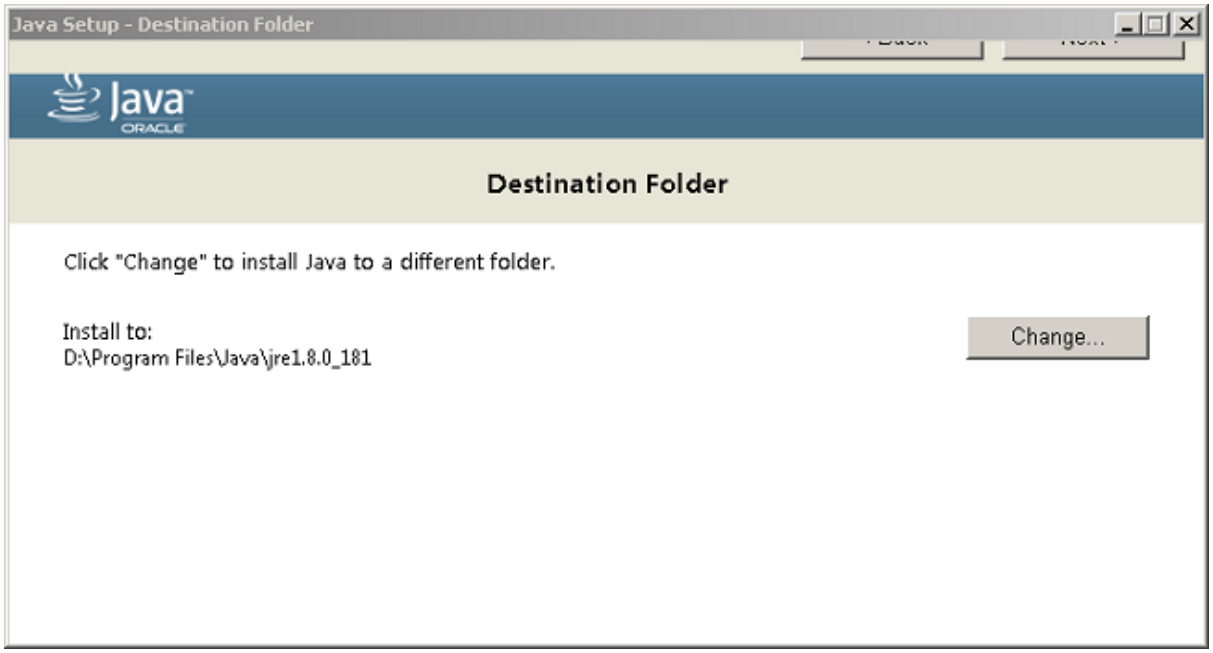
Once downloaded JDK 8u111 updates, you can begin the installation.



updates installation

Click next to continue with the installation.

Custom Setup



Installer Custom Setup

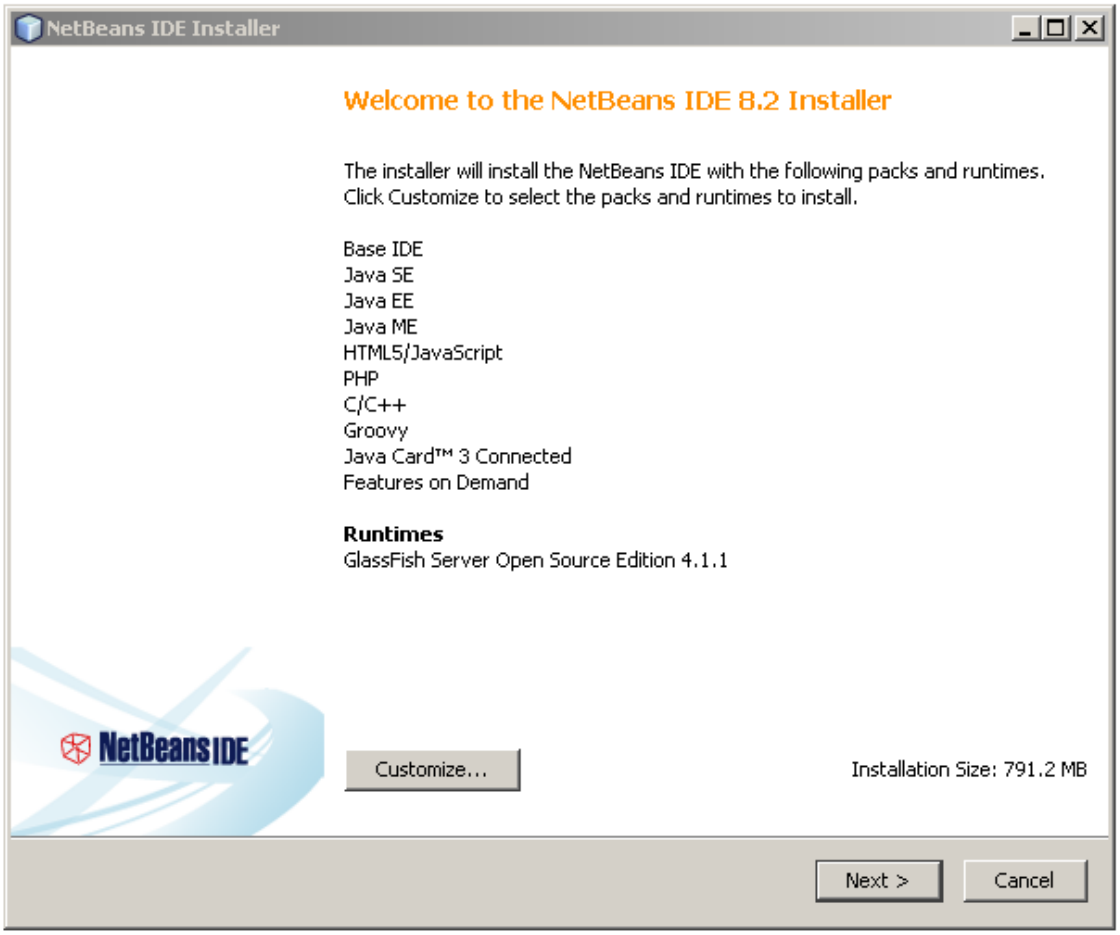
Click next on the top to continue.

Setup Completes

Close the window when installation is finished.

Install NetBeans IDE 8.2

With all prerequisites in place, you can begin installing NetBeans IDE 8.2. Double click the setup again.

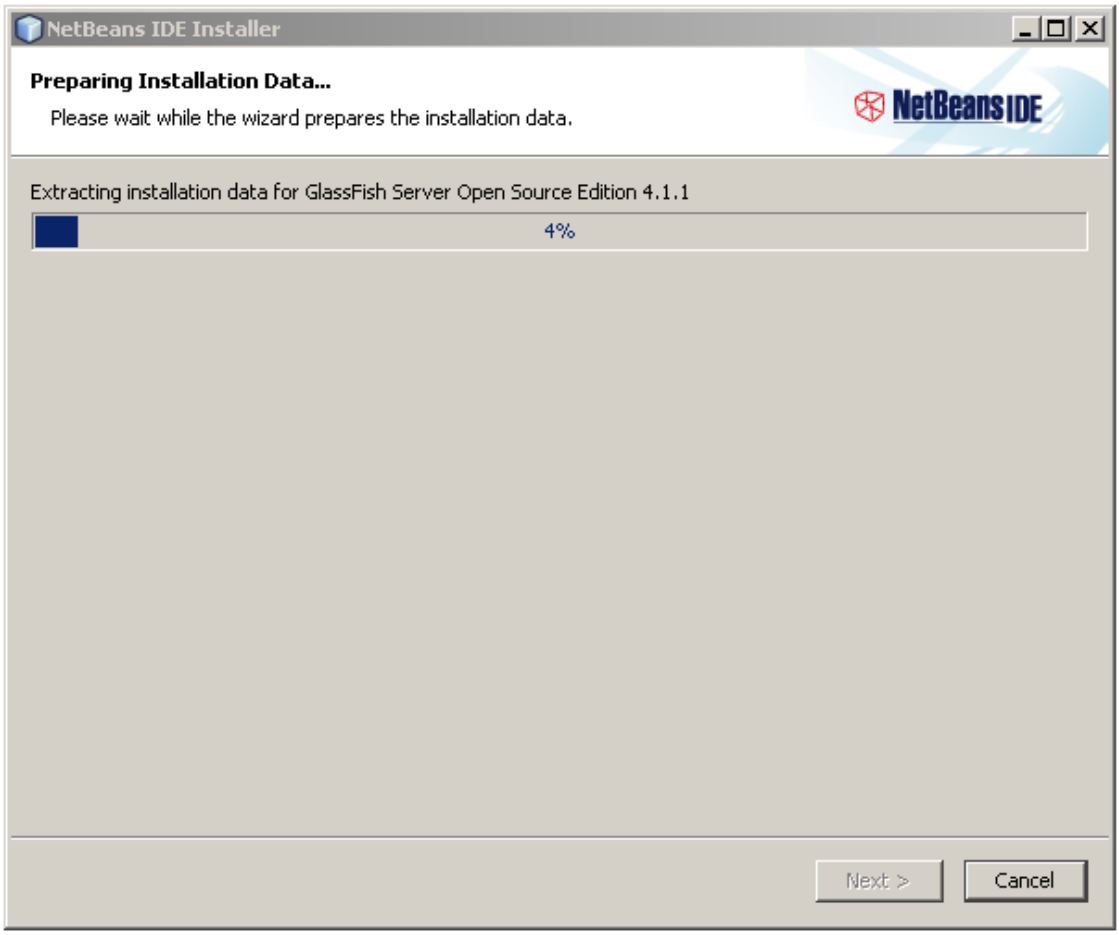


NetBeans 8.2 Setup

This the screen where you can customize, by choosing what to install. Click on next to continue.

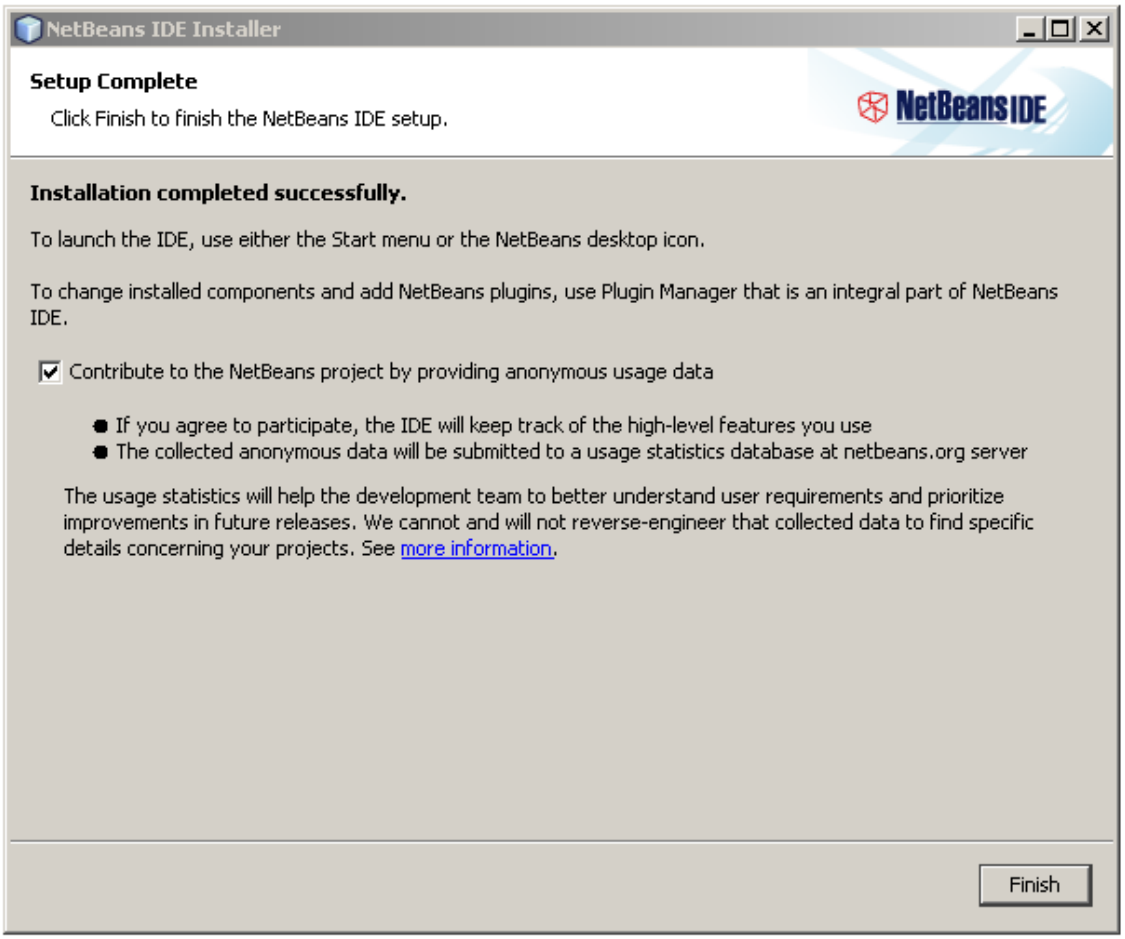
Agree to the License agreement

Put a check on “I accept the terms in the license agreement” after you have read the license agreement. Click next to continue with the setup.



Installation continues

The installation may take some time depending on the speed of your computer.



Installation Completes

After the installation completes click on Finish to complete the setup process.

9. Module Description:

Hostel Management System windows-based Software. Functions and features delivered to the end users. The end users of the proposed system are:

Login:

This helps the administrator to login to the main window only if password and user name matches. Login is a process by which individual access to a computer system is controlled by identifying and authenticating the user through the cardinalities presented by the user

Login Window:

Main Window:

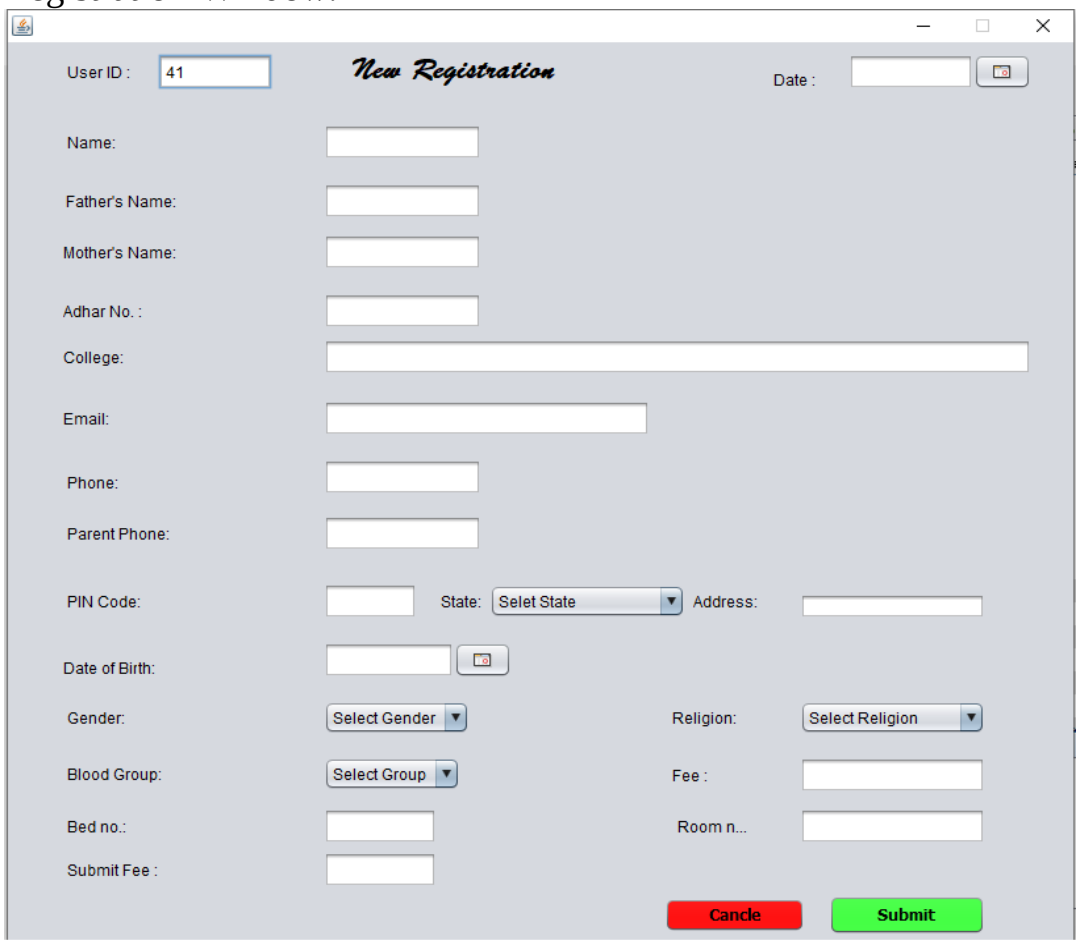
This is the main window of the software from where we can access all the functionality of software either it is registering the new student or managing the workers from the management record.

We can also call it the master-window of the Edu-Feet Hostel Management System.

Registration Window:

This module is used to store student details i.e. information like profile details, contact information, educational details etc. Users can search according different criteria such as name, course, room number etc

Registration-Window:



Room Availability:

It manages the room. Here we can update and delete the room allotment.

Room availability window:

Student Records:

We can see all the data of all the student at once and search for the related record.

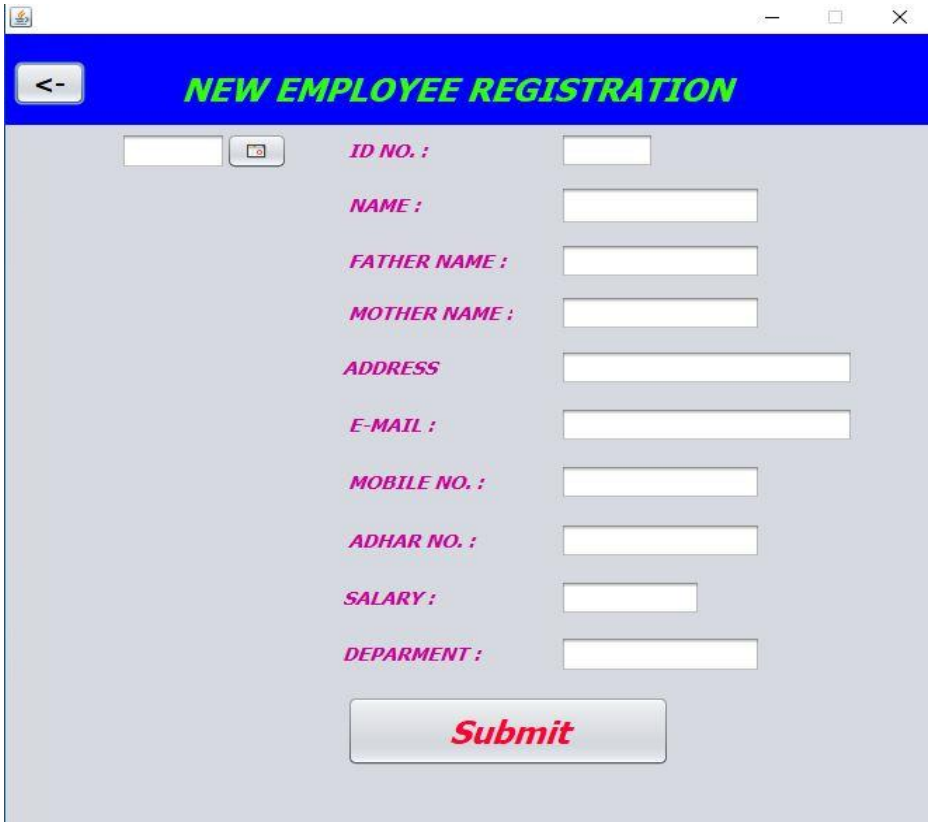
Student Records Window:

New Employee Registration:

In this window we will manage the data of the employee.

New Employee Registration Window:

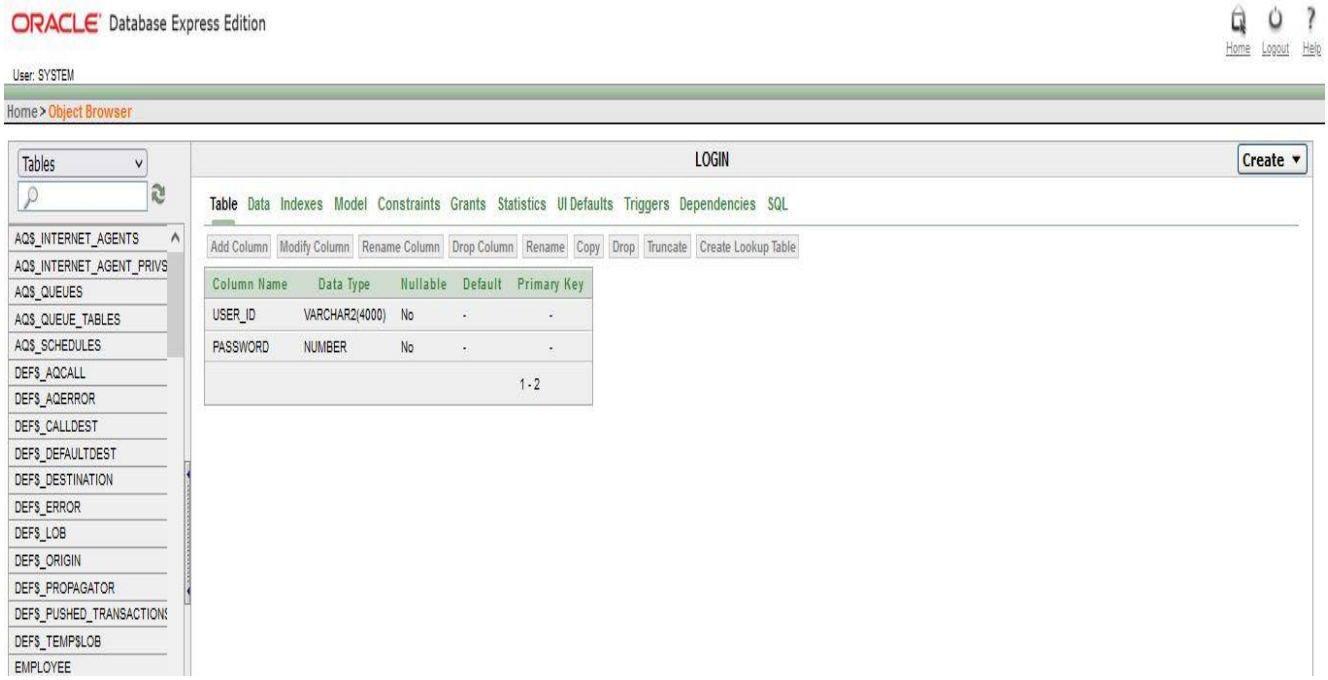
Database Structure Login:



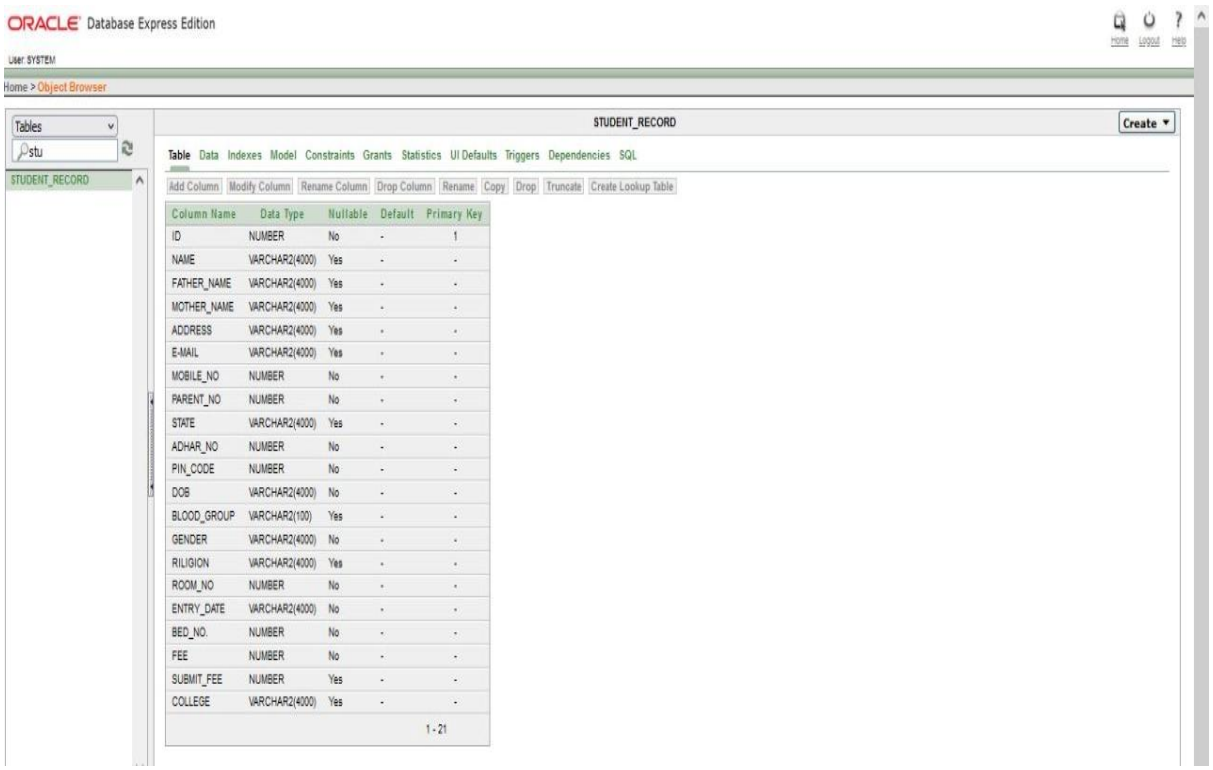
10. Database Module:

Structure Of Login:

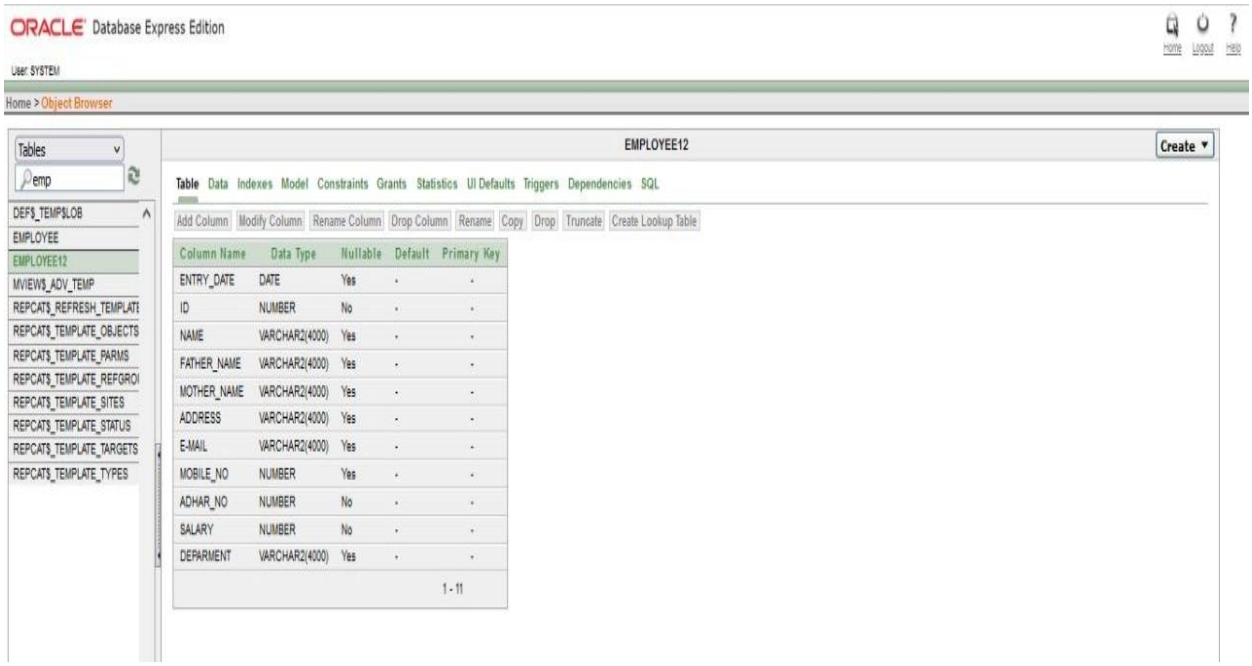
Here is the structure of login table:



Here is the structure of Student record table:



Here is the structure of Employee table:



11. Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It can be manual, automated, or a combination of both.

It shows how data enters and leaves the system, what changes the information, and where data is stored.

The objective of a DFD is to show the scope and boundaries of a system as a whole. It may be used as a communication tool between a system analyst and any person who plays a part in the order that acts as a starting point for redesigning a system. The DFD is also called as a data flow graph or bubble chart.

The following observations about DFDs are essential:

All names should be unique. This makes it easier to refer to elements in the DFD.

Remember that DFD is not a flow chart. Arrows is a flow chart that represents the order of events; arrows in DFD represents flowing data. A DFD does not involve any order of events.

Suppress logical decisions. If we ever have the urge to draw a diamond-shaped box in a DFD, suppress that urge! A diamond-shaped box is used in flow charts to represents decision points with multiple exists paths of which the only one is taken. This implies an ordering of events, which makes no sense in a DFD.

Do not become bogged down with details. Defer error conditions and error handling until the end of the analysis.

Standard symbols for DFDs are derived from the electric circuit diagram analysis and are shown in fig:

Symbols for Data Flow Diagrams

Circle: A circle (bubble) shows a process that transforms data inputs into data outputs.

Data Flow: A curved line shows the flow of data into or out of a process or data store.

Data Store: A set of parallel lines shows a place for the collection of data items. A data store indicates that the data is stored which can be used at a later stage or by the other processes in a different order. The data store can have an element or group of elements.

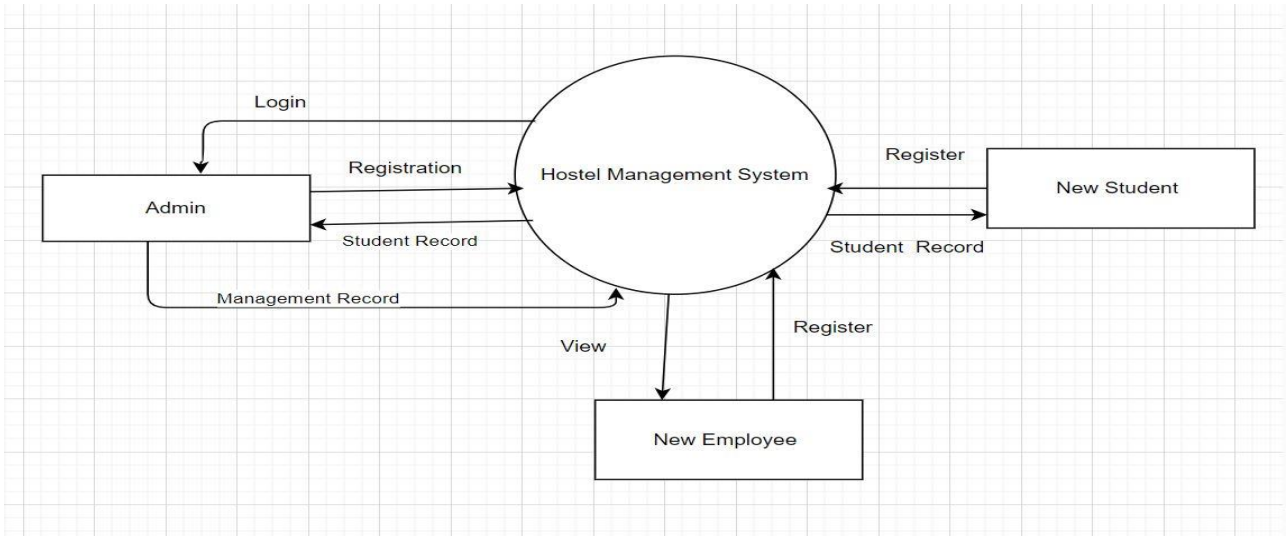
Source or Sink: Source or Sink is an external entity and acts as a source of system inputs or sink of system outputs.

Levels in Data Flow Diagrams (DFD):

The DFD may be used to perform a system or software at any level of abstraction. In fact, DFDs may be partitioned into levels that represent increasing information flow and functional detail. Levels in DFD are numbered 0, 1, 2 or beyond. Here, we will see primarily three levels in the data flow diagram, which are: 0-level DFD, 1-level DFD, and 2-level DFD.

0-level DFD for Hostel Management System:

It is also known as fundamental system model, or context diagram represents the entire software requirement as a single bubble with input and output data denoted by incoming and outgoing arrows. Then the system is decomposed and described as a DFD with multiple bubbles. Parts of the system represented by each of these bubbles are then decomposed and documented as more and more detailed DFDs. This process may be repeated at as many levels as necessary until the program at hand is well understood. It is essential to preserve the number of inputs and outputs between levels, this concept is called levelling by De-Macro. Thus, if bubble "A" has two inputs x_1 and x_2 and one output y, then the expanded DFD, that represents "A" should have exactly two external inputs and one external output as shown in fi:



The Level-0 DFD, also called context diagram of the result management system is shown in fig. As the bubbles are decomposed into less and less abstract bubbles, the corresponding data flow may also be needed to be decomposed

DFD of Admin login:

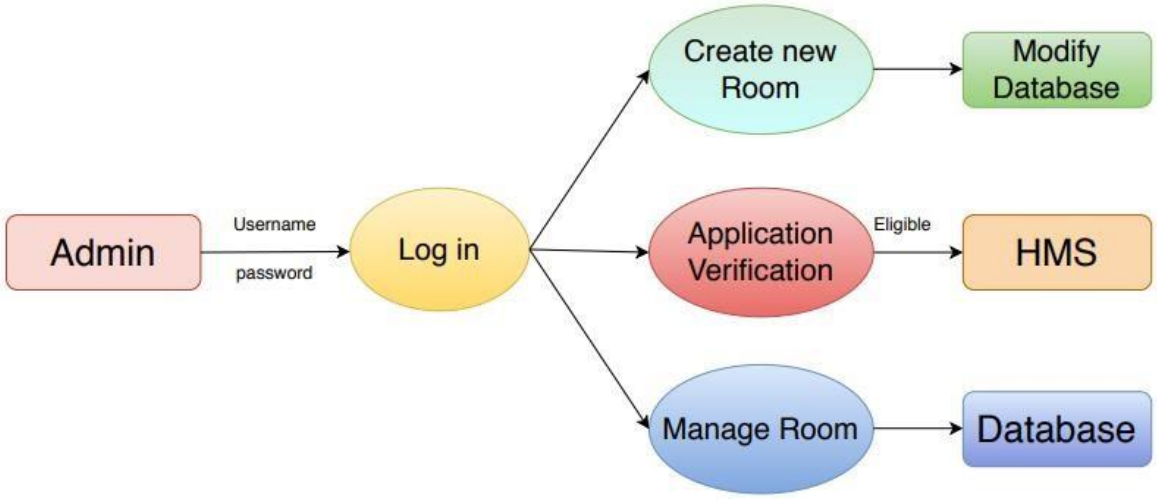


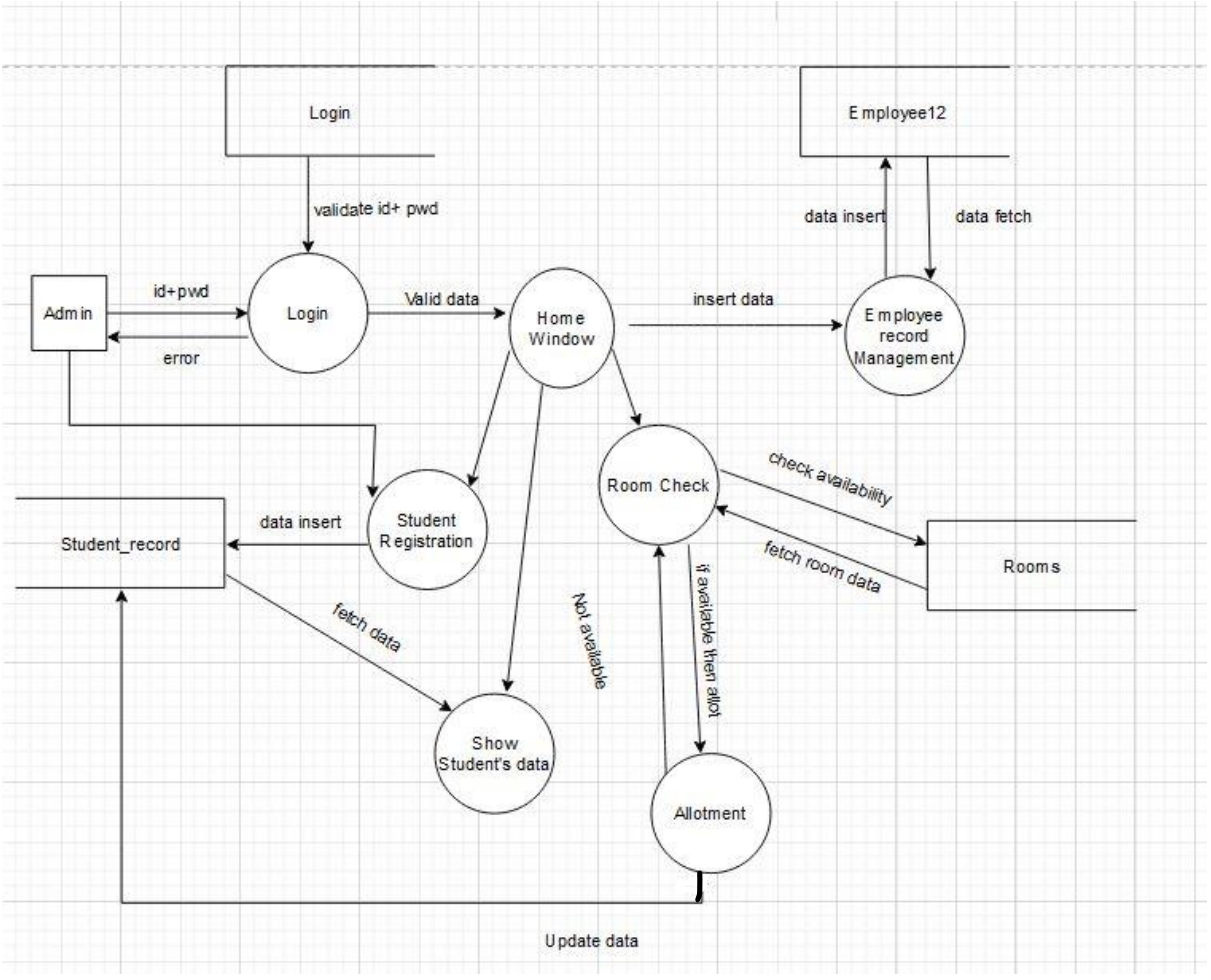
Diagram for Admin Module

Student Registration:

Diagram for Student Registration

1-level DFD for Hostel Management System:

In 1-level DFD, a context diagram is decomposed into multiple bubbles/processes. In this level, we highlight the main objectives of the system and breakdown the high-level process of 0-level DFD into sub-processes.

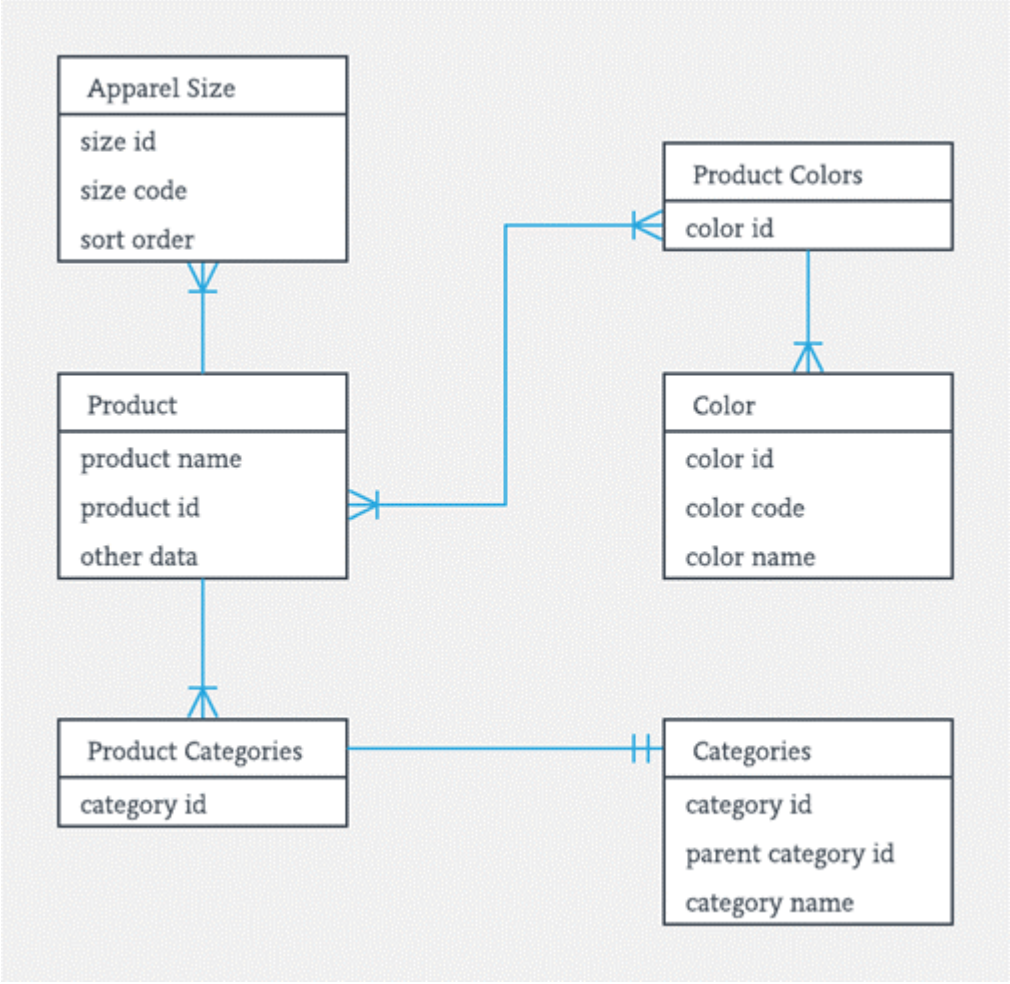


12. ER Diagram:

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships.

At first look, an ER diagram looks very similar to the flowchart. However, ER Diagram includes many specialized symbols, and its meanings make this model unique. The purpose of ER Diagram is to represent the entity framework infrastructure.



ER Model:

ER Model stands for Entity Relationship Model is a high-level conceptual data model diagram. ER model helps to systematically analyze data requirements to produce a well-designed database. The ER Model represents real-world entities and the relationships between them. Creating an ER Model in DBMS is considered as a best practice before implementing your database.

ER Modelling helps you to analyse data requirements systematically to produce a well-designed database. So, it is considered a best practice to complete ER modelling before implementing your database.

History of ER models:

ER diagrams are visual tools that are helpful to represent the ER model. Peter Chen proposed ER Diagram in 1971 to create a uniform convention that can be used for relational databases and networks. He aimed to use an ER model as a conceptual modelling approach.

Use of ER-Diagrams:

Here, are prime reasons for using the ER Diagram. Helps you to define terms related to entity relationship modelling. Provide a preview of how all your tables should connect, what fields are going to be on each table

Helps to describe entities, attributes, relationships

- ER diagrams are translatable into relational tables which allows you to build databases quickly
- ER diagrams can be used by database designers as a blueprint for implementing data in specific software applications
- The database designer gains a better understanding of the information to be contained in the database with the help of ERP diagram
- ERD Diagram allows you to communicate with the logical structure of the database to users

ER Diagrams Symbols & Notations:

Entity Relationship Diagram Symbols & Notations mainly contains three basic symbols which are rectangle, oval and diamond to represent relationships between elements, entities and attributes.

There are some sub-elements which are based on main elements in ERD Diagram. ER Diagram is a visual representation of data that describes how data is related to each other using different ERD Symbols and Notations.

Following are the main components and its symbols in ER-

Diagrams:

Rectangles: This Entity Relationship Diagram symbol represents entity types.

Ellipses: Symbol represent attributes

Diamonds: This symbol represents relationship types

Lines: It links attributes to entity types and entity types with other relationship types

Primary key: attributes are underlined.

Double Ellipses: Represent multi-valued attributes

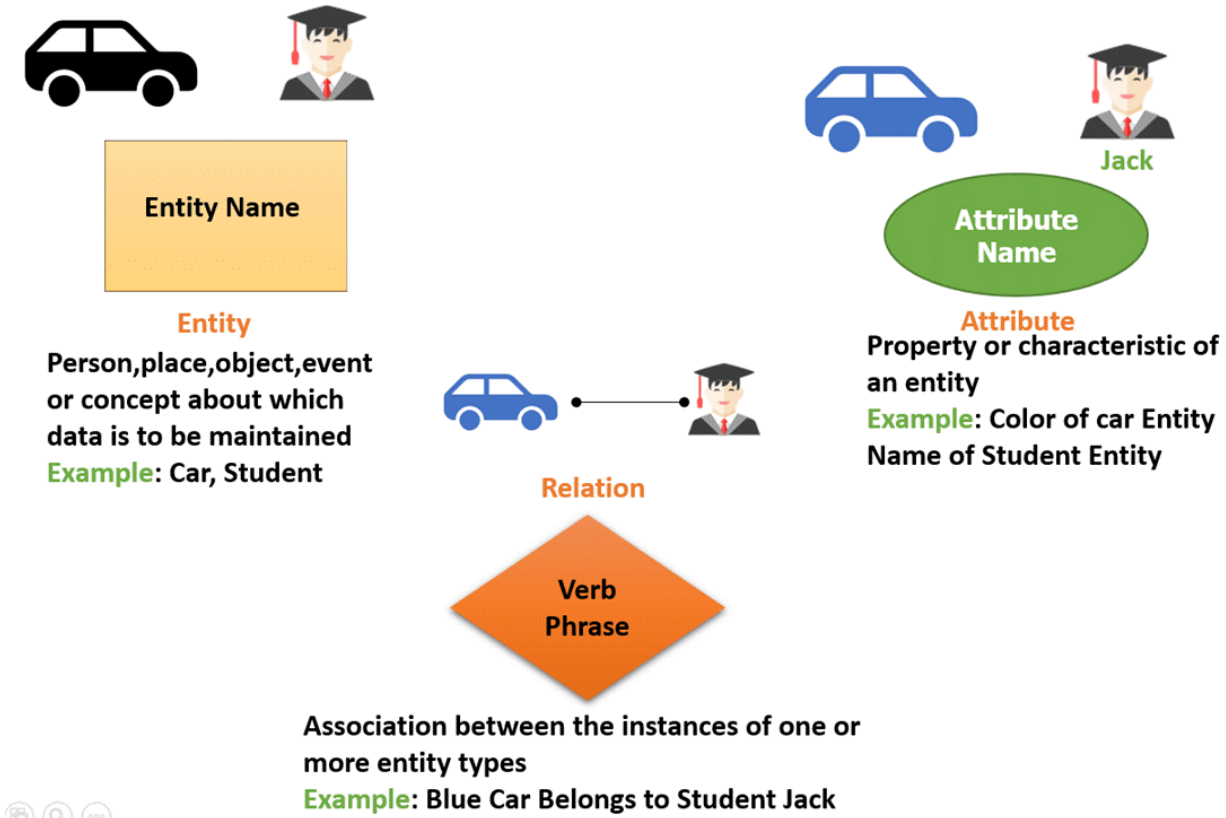
COMPONENTS OF THE ER DIAGRAM:

This model is based on three basic concepts:

- Entities
- Attributes
- Relationships

ER Diagram Examples

For example, in a University database, we might have entities for Students, Courses, and Lecturers. Students entity can have attributes like Rollno, Name, and DeptID. They might have relationships with Courses and Lecturers.



WHAT IS ENTITY ?

A real-world thing either living or non-living that is easily recognizable and non-recognizable. It is anything in the enterprise that is to be represented in our database. It may be a physical thing or simply a fact about the enterprise or an event that happens in the real world.

An entity can be place, person, object, event or a concept, which stores data in the database. The characteristics of entities are must have an attribute, and a unique key. Every entity is made up of some 'attributes' which represent that entity.

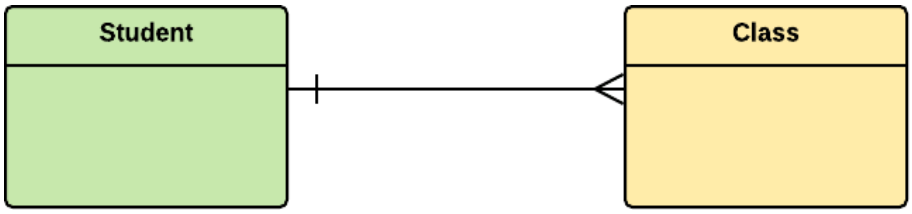
Examples of entities:

- **Person:** Employee, Student, Patient
- **Place:** Store, Building
- **Object:** Machine, product, and Car
- **Event:** Sale, Registration, Renewal
- **Concept :** Account, Course.

Entity set:

Student

An entity set is a group of similar kind of entities. It may contain entities with attribute sharing similar values. Entities are represented by their properties, which also called attributes. All attributes have their separate values. For example, a student entity may have a name, age, class, as attributes.



Example of Entities:

A university may have some departments. All these departments employ various lecturers and offer several programs.

Some courses make up each program. Students register in a particular program and enroll in various courses. A lecturer from the specific department takes each course, and each lecturer teaches a various group of students.

Relationship:

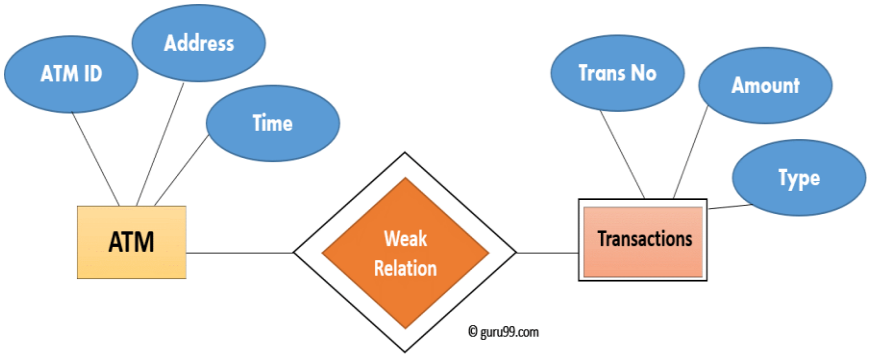
Relationship is nothing but an association among two or more entities. E.g., Tom works in the Chemistry department. Entities take part in relationships. We can often identify relationships with verbs or verb phrases.

For example:

You are attending this lecture I am giving the lecture Just like entities, we can classify relationships according to relationship-types: A student attends a lecture. A lecturer is giving a lecture.

Weak Entities:

A weak entity is a type of entity which doesn't have its key attribute. It can be identified uniquely by considering the primary key of another entity. For that, weak entity sets need to have participation.

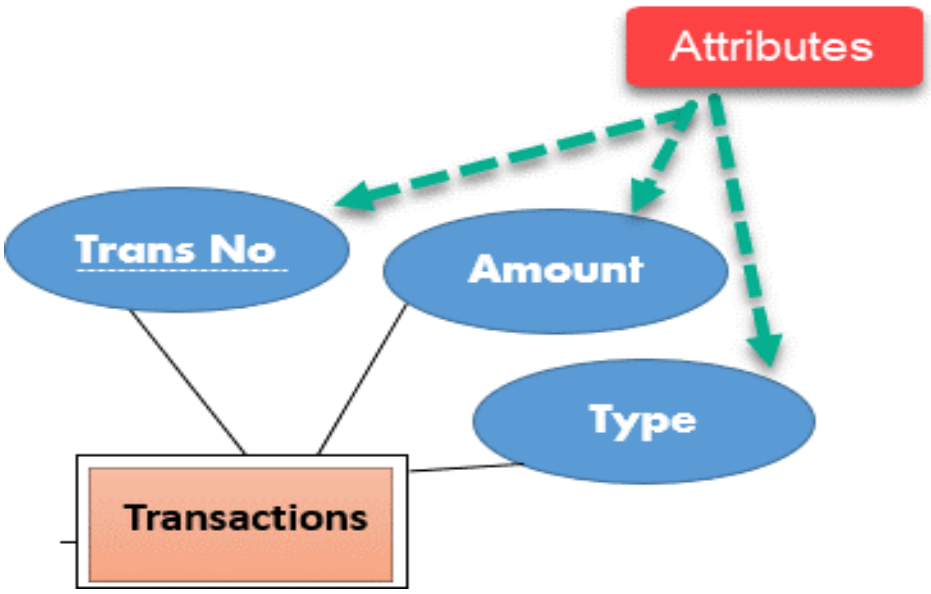


In above ER Diagram examples, "Trans No" is a discriminator within a group of transactions in an ATM.
Let's learn more about a weak entity by comparing it with a Strong Entity

Sr. No.	Strong Entity Set	Weak Entity Set
1.	Strong entity set always has a primary key	does not have enough attributes to build a primary key.
2.	It is represented by a rectangle symbol.	It is represented by a double rectangle symbol.
3.	It contains a Primary key represented by the underline symbol	It contains a Partial Key which is represented by a dashed underline symbol.
4.	Primary Key is one of its Attributes which helps to identify ember.	In a weak entity set, it is a combination of primary key and partial key of the strong entity set.
5.	In the ER diagram the relationship between two strong entities set shown by using a diamond symbol.	The relationship between one strong and a weak entity set shown by using the double diamond symbol.
6.	The connecting line of the strong entity set with the relationship is single	The line connecting the weak entity set for identifying relationship is double.

Attributes:

It is a single-valued property of either an entity-type or a relationship-type. For example, a lecture might have attributes: time, date, duration, place, etc. An attribute in ER Diagram examples, is represented by an Ellipse



Types of Attributes:

Simple attribute:

Simple attributes can't be divided any further. For example, a student's contact number. It is also called an atomic value.

Composite attribute:

It is possible to break down composite attribute. For example, a student's full name may be further divided into first name, second name, and last name.

Derived attribute:

This type of attribute does not include in the physical database. However, their values are derived from other attributes present in the database. For example, age should not be stored directly. Instead, it should be derived from the DOB of that employee.

Multivalued-attribute:

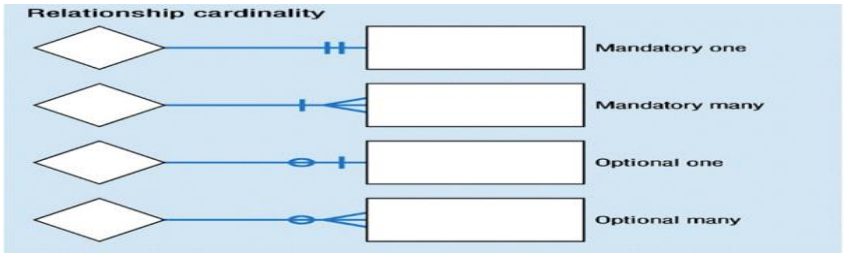
Multivalued attributes can have more than one values. For example, a student can have more than one mobile number, email address, etc.

Cardinality:

Defines the numerical attributes of the relationship between two entities or entity sets.

Different types of cardinal relationships are:

- One-to-One Relationships
- One-to-Many Relationships
- May to One Relationships
- Many-to-Many Relationships



One-to-one:

One entity from entity set X can be associated with at most one entity of entity set Y and vice versa. Example: One student can register for numerous courses. However, all those courses have a single line back to that one student.

One-to-many:

One entity from entity set X can be associated with multiple entities of entity set Y, but an entity from entity set Y can be associated with at least one entity. For example, one class is consisting of multiple students.

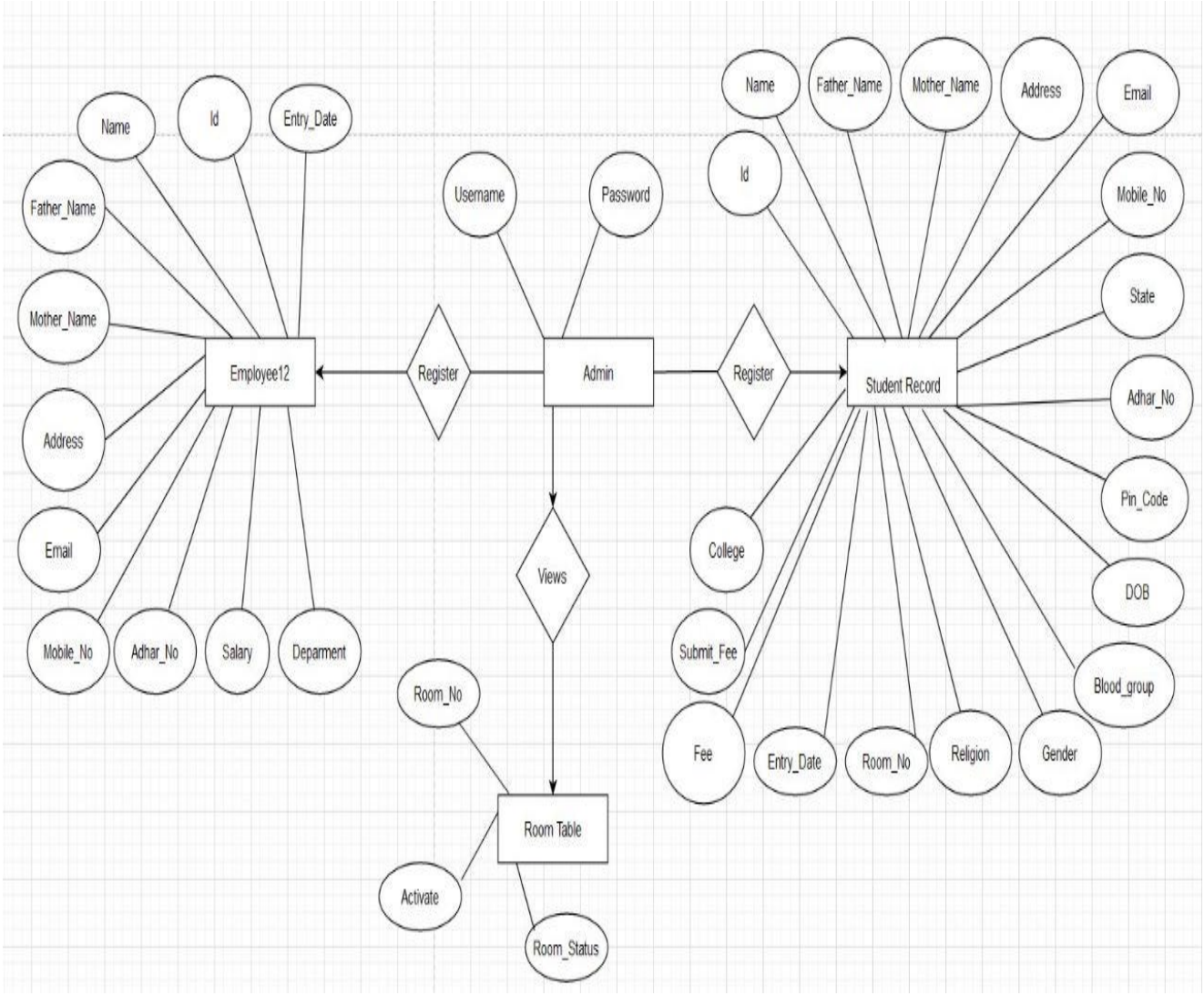
Many to One

More than one entity from entity set X can be associated with at most one entity of entity set Y. However, an entity from entity set Y may or may not be associated with more than one entity from entity set X. For example, many students belong to the same class.

Many to Many:

One entity from X can be associated with more than one entity from Y and vice versa. For example, Students as a group are associated with multiple faculty members, and faculty members can be associated with multiple students.

ER Diagram for Hostel Management System:



13.Coding:

Login Window:

```
Import Package
import java.sql.*;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.swing.JOptionPane;
try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","system");
PreparedStatement stmt=con.prepareStatement("select * from login12 where username=? and
password=?");
stmt.setString(1,txt1.getText());
stmt.setInt(2,Integer.parseInt(pfld.getText()));
ResultSet rs=stmt.executeQuery();
if(rs.next())
{
Home obj=new Home();
obj.show();
}
else
{
JOptionPane.showMessageDialog(this, " Unsuccessfull login");
}

con.close();
this.dispose();
}
catch(Exception e)
{
JOptionPane.showMessageDialog(this, e);
}
```

Registration Form:

```
Import package
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.text.SimpleDateFormat;
import javax.swing.JOptionPane;
import java.util.*;
import java.util.GregorianCalendar;
import java.util.Calendar;
import java.time.format.*;
import java.time.*;
import javax.swing.JTextField;
try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","system");
PreparedStatement stmt=con.prepareStatement("insert into Student_Record
values(?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)");
stmt.setInt(1,Integer.parseInt(txt10.getText()));
stmt.setString(2,txt1.getText());
stmt.setString(3,txt2.getText());
stmt.setString(4,txt3.getText());
stmt.setString(5,txta1.getText());
stmt.setString(6,txt5.getText());
stmt.setLong(7,Long.parseLong(txt6.getText()));
stmt.setLong(8,Long.parseLong(txt7.getText()));
stmt.setString(9,cmb1.getSelectedItem().toString());
stmt.setLong(10,Long.parseLong(txt11.getText()));
stmt.setInt(11,Integer.parseInt(txt8.getText()));
stmt.setString(12,((JTextField) txt9.getDateEditor().getUiComponent()).getText());
stmt.setString(13,cmb3.getSelectedItem().toString());
stmt.setString(14,cmb2.getSelectedItem().toString());
stmt.setString(15,cmb4.getSelectedItem().toString());
stmt.setInt(16,Integer.parseInt(txt14.getText()));
//SimpleDateFormat sd=new SimpleDateFormat();
String dc2=((JTextField) dc1.getDateEditor().getUiComponent()).getText();
stmt.setString(17,dc2);
stmt.setInt(18,Integer.parseInt(txt13.getText()));
stmt.setInt(19,Integer.parseInt(txt12.getText()));
stmt.setInt(20,Integer.parseInt(txt21.getText()));
stmt.setString(21,txt4.getText());
int i=stmt.executeUpdate();
```

```
JOptionPane.showMessageDialog(this, i+"  record inserted");
con.close();
}
catch(Exception e)
{
JOptionPane.showMessageDialog(this,e.getMessage());
}
}

private void cmb2ActionPerformed(java.awt.event.ActionEvent evt) {
if(cmb2.getSelectedIndex()==0)
{
JOptionPane.showMessageDialog(this, "Select valid Gender");
}// TODO add your handling code here:
}

private void cmb4ActionPerformed(java.awt.event.ActionEvent evt) {
if(cmb3.getSelectedIndex()==0)
{
JOptionPane.showMessageDialog(this, "select valid Riligion");
}
}
```

Home Window:

```
import com.sun.webkit.ContextMenu;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.ResultSetMetaData;
import javax.swing.JOptionPane;
import javax.swing.table.DefaultTableModel;

/*
* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/

/**
*
* @author USER
*/
public class Home extends javax.swing.JFrame {
```

```
/**
* Creates new form Home
*/
public Home() {
initComponents();
}

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

jPanel1 = new javax.swing.JPanel();
jButton1 = new javax.swing.JButton();
jButton2 = new javax.swing.JButton();
jButton3 = new javax.swing.JButton();
jButton4 = new javax.swing.JButton();
jLabel2 = new javax.swing.JLabel();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setResizable(false);
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jPanel1.setBackground(new java.awt.Color(255, 255, 255, 108));
jPanel1.setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jButton1.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jButton1.setForeground(new java.awt.Color(0, 0, 204));
jButton1.setText("Registration");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});
jPanel1.add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 10, 200, 30));

jButton2.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jButton2.setForeground(new java.awt.Color(0, 0, 204));
jButton2.setText("Student Record");
jButton2.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton2ActionPerformed(evt);
}
});
jPanel1.add(jButton2, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 60, 200, 30));

jButton3.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jButton3.setForeground(new java.awt.Color(0, 0, 204));
```

```
jButton3.setText("Room Availbility");
jButton3.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton3ActionPerformed(evt);
}
});
jPanel1.add(jButton3, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 110, 200, 30));

jButton4.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jButton4.setForeground(new java.awt.Color(0, 0, 204));
jButton4.setText("Management Record");
jButton4.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton4ActionPerformed(evt);
}
});
jPanel1.add(jButton4, new org.netbeans.lib.awtextra.AbsoluteConstraints(10, 160, 200, 30));

getContentPane().add(jPanel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 510, 330));

jLabel2.setIcon(new javax.swing.ImageIcon("C:\\Users\\USER\\Downloads\\bed-
142516__340.jpg")); // NOI18N
jLabel2.setText("jLabel2");
getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 510, 330));

pack();
}// </editor-fold>

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
newReg reg=new newReg();
reg.show();// TODO add your handling code here:
}

private void jButton2ActionPerformed(java.awt.event.ActionEvent evt) {

showtable st=new showtable();
st.show();// TODO add your handling code here:
}

private void jButton3ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}

private void jButton4ActionPerformed(java.awt.event.ActionEvent evt) {
Regestration rg=new Regestration();
rg.show();        // TODO add your handling code here:
}
```

```
try {
for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
if ("Nimbus".equals(info.getName())) {
javax.swing.UIManager.setLookAndFeel(info.getClassName());
break;
}
}
} catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Home.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Home.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Home.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Home.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
}
//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
public void run() {
new Home().setVisible(true);
}
});
}

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JButton jButton3;
private javax.swing.JButton jButton4;
private javax.swing.JLabel jLabel2;
private javax.swing.JPanel jPanel1;
// End of variables declaration
}
```

Show Table:

```
import java.sql.*;
import javax.swing.JOptionPane;
```

```
import javax.swing.table.DefaultTableColumnModel;
import javax.swing.table.DefaultTableModel;

public class showtable extends javax.swing.JFrame {

public showtable() {
initComponents();
}
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

jScrollPane2 = new javax.swing.JScrollPane();
jTable2 = new javax.swing.JTable();
jButton1 = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);

jTable2.setBackground(new java.awt.Color(102, 255, 102));
jTable2.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {

},
new String [] {
"Title 1", "Title 2", "Title 3", "Title 4", "Title 5", "Title 6", "Title 7", "Title 8", "Title 9", "Title 10",
"Title 11", "Title 12"
}
));
jScrollPane2.setViewportView(jTable2);

jButton1.setText("Show Record");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addContainerGap()
.addComponent(jScrollPane2, javax.swing.GroupLayout.DEFAULT_SIZE, 762,
Short.MAX_VALUE))
.addGroup(layout.createSequentialGroup()
.addGap(318, 318, 318)
```

```
.addComponent(jButton1)
.addGap(0, 0, Short.MAX_VALUE))
);
layout.setVerticalGroup(
layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(layout.createSequentialGroup()
.addContainerGap()
.addComponent(jButton1)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
.addComponent(jScrollPane2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
);

pack();
}// </editor-fold>

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
try {
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","system");
PreparedStatement stmt=con.prepareStatement("select * from student_record");

ResultSet rs=stmt.executeQuery();

ResultSetMetaData rsmd=rs.getMetaData();
DefaultTableModel dtc=(DefaultTableModel)jTable2.getModel();
dtc.setRowCount(0);
int col=rsmd.getColumnCount();
String[] colName=new String[col];
for(int i=0;i<col;i++)
{
colName[i]=rsmd.getColumnName(i+1);
}
dtc.setColumnIdentifiers(colName);

while(rs.next())
{
String Id=String.valueOf(rs.getInt(1));
String Ename=rs.getString(2);
String father_name=rs.getString(3);
String mother_name=rs.getString(4);
String address=rs.getString(5);
String email=rs.getString(6);
String mobile_no=rs.getString(7);
String adhar_no=rs.getString(8);
```

```
String room_no=rs.getString(9);
String bed_no=rs.getString(10);
String entry_date=rs.getString(11);
String exit_date=rs.getString(12);

String
tdata[]={Id,Ename,father_name,mother_name,address,email,mobile_no,adhar_no,room_no,bed_no,
entry_date,exit_date};

dtc.addRow(tdata);

}
rs.close();
con.close();
} catch (Exception e) {
JOptionPane.showMessageDialog(this, e);
}
// TODO add your handling code here:
}

/**
* @param args the command line arguments
*/
public static void main(String args[]) {
/* Set the Nimbus look and feel */
//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
/* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
* For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
*/
try {
for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
if ("Nimbus".equals(info.getName())) {
javax.swing.UIManager.setLookAndFeel(info.getClassName());
break;
}
}
} catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(showtable.class.getName()).log(java.util.logging.Level.SEVER
E, null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(showtable.class.getName()).log(java.util.logging.Level.SEVER
E, null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(showtable.class.getName()).log(java.util.logging.Level.SEVER
E, null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
```

```
java.util.logging.Logger.getLogger(showtable.class.getName()).log(java.util.logging.Level.SEVER
E, null, ex);
}
//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
public void run() {
new showtable().setVisible(true);
}
});
}

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JScrollPane jScrollPane2;
private javax.swing.JTable jTable2;
// End of variables declaration
}
```

Employee Registration:

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import javax.swing.JOptionPane;
import javax.swing.JTextField;

/*
* To change this license header, choose License Headers in Project Properties.
* To change this template file, choose Tools | Templates
* and open the template in the editor.
*/

/**
*
* @author USER
*/
public class Regestration extends javax.swing.JFrame {

/**
* Creates new form Regestration
*/
public Regestration() {
initComponents();
}
```

```
public int start=1;
/**
* This method is called from within the constructor to initialize the form.
* WARNING: Do NOT modify this code. The content of this method is always
* regenerated by the Form Editor.
*/
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

jPanel2 = new javax.swing.JPanel();
jPanel1 = new javax.swing.JPanel();
jLabel2 = new javax.swing.JLabel();
txt3 = new javax.swing.JTextField();
txt2 = new javax.swing.JTextField();
jLabel3 = new javax.swing.JLabel();
txt4 = new javax.swing.JTextField();
jLabel4 = new javax.swing.JLabel();
txt5 = new javax.swing.JTextField();
txt6 = new javax.swing.JTextField();
jLabel6 = new javax.swing.JLabel();
txt8 = new javax.swing.JTextField();
jLabel7 = new javax.swing.JLabel();
txt9 = new javax.swing.JTextField();
jLabel8 = new javax.swing.JLabel();
txt10 = new javax.swing.JTextField();
txt7 = new javax.swing.JTextField();
jLabel9 = new javax.swing.JLabel();
txt1 = new javax.swing.JTextField();
jLabel5 = new javax.swing.JLabel();
btn1 = new javax.swing.JButton();
jLabel10 = new javax.swing.JLabel();
jLabel11 = new javax.swing.JLabel();
dc1 = new com.toedter.calendar.JDateChooser();
jPanel3 = new javax.swing.JPanel();
jLabel14 = new javax.swing.JLabel();
jButton1 = new javax.swing.JButton();
jLabel1 = new javax.swing.JLabel();

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
jPanel2.setLayout(jPanel2Layout);
jPanel2Layout.setHorizontalGroup(
jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGap(0, 100, Short.MAX_VALUE)
);
jPanel2Layout.setVerticalGroup(
jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
.addGap(0, 100, Short.MAX_VALUE)
);

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setResizable(false);
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jPanel1.setBackground(new java.awt.Color(51, 255, 51));
jPanel1.setForeground(new java.awt.Color(0, 255, 51));
jPanel1.setCursor(new java.awt.Cursor(java.awt.Cursor.DEFAULT_CURSOR));
jPanel1.setOpaque(false);

jLabel2.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel2.setForeground(new java.awt.Color(204, 0, 153));
jLabel2.setText(" NAME :");
jLabel2.setToolTipText("");

txt3.setMaximumSize(new java.awt.Dimension(6, 20));
txt3.setOpaque(false);

txt2.setHorizontalAlignment(javax.swing.JTextField.LEFT);
txt2.setMaximumSize(new java.awt.Dimension(6, 20));
txt2.setOpaque(false);

jLabel3.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel3.setForeground(new java.awt.Color(204, 0, 153));
jLabel3.setText(" FATHER NAME :");
jLabel3.setToolTipText("");

txt4.setMaximumSize(new java.awt.Dimension(6, 20));
txt4.setOpaque(false);
txt4.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
txt4ActionPerformed(evt);
}
});

jLabel4.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel4.setForeground(new java.awt.Color(204, 0, 153));
jLabel4.setText(" MOTHER NAME :");
jLabel4.setToolTipText("");

txt5.setMaximumSize(new java.awt.Dimension(6, 20));
txt5.setOpaque(false);
txt5.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
txt5ActionPerformed(evt);
```

```
}
});

txt6.setMaximumSize(new java.awt.Dimension(6, 20));
txt6.setOpaque(false);

jLabel6.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel6.setForeground(new java.awt.Color(204, 0, 153));
jLabel6.setText(" E-MAIL :");

txt8.setMaximumSize(new java.awt.Dimension(6, 20));
txt8.setOpaque(false);

jLabel7.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel7.setForeground(new java.awt.Color(204, 0, 153));
jLabel7.setText(" MOBILE NO. :");

txt9.setMaximumSize(new java.awt.Dimension(6, 20));
txt9.setOpaque(false);

jLabel8.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel8.setForeground(new java.awt.Color(204, 0, 153));
jLabel8.setText(" ADHAR NO. :");

txt10.setMaximumSize(new java.awt.Dimension(6, 20));
txt10.setOpaque(false);

txt7.setMaximumSize(new java.awt.Dimension(6, 20));
txt7.setOpaque(false);
txt7.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
txt7ActionPerformed(evt);
}
});

jLabel9.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel9.setForeground(new java.awt.Color(204, 0, 153));
jLabel9.setText(" ID NO. :");
jLabel9.setToolTipText("");

txt1.setMaximumSize(new java.awt.Dimension(6, 20));
txt1.setOpaque(false);
txt1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
txt1ActionPerformed(evt);
}
});
```

```
jLabel5.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel5.setForeground(new java.awt.Color(204, 0, 153));
jLabel5.setText("ADDRESS");

btn1.setFont(new java.awt.Font("Tahoma", 3, 24)); // NOI18N
btn1.setForeground(new java.awt.Color(255, 0, 51));
btn1.setText("Submit");
btn1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
btn1ActionPerformed(evt);
}
});

jLabel10.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel10.setForeground(new java.awt.Color(204, 0, 153));
jLabel10.setText("SALARY :");

jLabel11.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jLabel11.setForeground(new java.awt.Color(204, 0, 153));
jLabel11.setText("DEPARMENT :");

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addGap(22, 22, 22)
.addComponent(dc1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
.addGap(39, 39, 39)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING,
false)
.addComponent(jLabel3,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jLabel4,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jLabel9,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jLabel2,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(jLabel5javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addComponent(jLabel7,javax.swing.GroupLayout.PREFERRED_SIZE, 109,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addComponent(jLabel6,javax.swing.GroupLayout.PREFERRED_SIZE, 109,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING,
false)
.addComponent(jLabel10,javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE,javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
.addComponent(jLabel8,javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE, 109, Short.MAX_VALUE))
.addComponent(jLabel11, javax.swing.GroupLayout.PREFERRED_SIZE, 109,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(34, 34, 34)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(txt7javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(txt10,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(txt8javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(txt2, javax.swing.GroupLayout.DEFAULT_SIZE, 171, Short.MAX_VALUE)
.addComponent(txt3,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addComponent(txt4,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
.addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(txt1, javax.swing.GroupLayout.PREFERRED_SIZE, 67,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt9, javax.swing.GroupLayout.PREFERRED_SIZE, 100,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(0, 0, Short.MAX_VALUE)))
.addGap(72, 72, 72))
.addGroup(jPanel1Layout.createSequentialGroup()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
.addComponent(txt6,javax.swing.GroupLayout.Alignment.LEADING,
javax.swing.GroupLayout.DEFAULT_SIZE,javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
.addComponent(txt5,javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
.addContainerGap())))
.addGroup(jPanel1Layout.createSequentialGroup()
.addGap(183, 183, 183)
.addComponent(btn1, javax.swing.GroupLayout.PREFERRED_SIZE, 230,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
```

```
);
jPanel1Layout.setVerticalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createSequentialGroup()
.addContainerGap()
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel9,javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt1,javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addComponent(dc1,javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel2,javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt2, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel3,
javax.swing.GroupLayout.PREFERRED_SIZE,30,javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt3,javax.swing.GroupLayout.PREFERRED_SIZE,27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel4,javax.swing.GroupLayout.PREFERRED_SIZE,23,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt4, javax.swing.GroupLayout.PREFERRED_SIZE,27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel5,javax.swing.GroupLayout.PREFERRED_SIZE,33,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt5,javax.swing.GroupLayout.PREFERRED_SIZE,27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel6,javax.swing.GroupLayout.PREFERRED_SIZE,30,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt6, javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel7, javax.swing.GroupLayout.PREFERRED_SIZE, 34,
javax.swing.GroupLayout.PREFERRED_SIZE)
```

```
.addComponent(txt7, javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel8, javax.swing.GroupLayout.PREFERRED_SIZE, 33,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt8, javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel10, javax.swing.GroupLayout.PREFERRED_SIZE, 31,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt9, javax.swing.GroupLayout.PREFERRED_SIZE, 27,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
.addComponent(jLabel11, javax.swing.GroupLayout.PREFERRED_SIZE, 30,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addComponent(txt10, javax.swing.GroupLayout.PREFERRED_SIZE, 28,
javax.swing.GroupLayout.PREFERRED_SIZE))
.addGap(18, 18, 18)
.addComponent(btn1, javax.swing.GroupLayout.PREFERRED_SIZE, 54,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(86, Short.MAX_VALUE))
);

getContentPane().add(jPanel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(60, 70, 550,
580));

jPanel3.setBackground(new java.awt.Color(0, 0, 255));

jLabel14.setFont(new java.awt.Font("Tahoma", 3, 24)); // NOI18N
jLabel14.setForeground(new java.awt.Color(51, 255, 0));
jLabel14.setText("NEW EMPLOYEE REGISTRATION");

jButton1.setFont(new java.awt.Font("Tahoma", 1, 18)); // NOI18N
jButton1.setText("<-");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});

javax.swing.GroupLayout jPanel3Layout = new javax.swing.GroupLayout(jPanel3);
jPanel3.setLayout(jPanel3Layout);
jPanel3Layout.setHorizontalGroup(
jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
```

```
.addGroup(jPanel3Layout.createSequentialGroup()
.addContainerGap()
.addComponent(jButton1)
.addGap(68, 68, 68)
.addComponent(jLabel14, javax.swing.GroupLayout.PREFERRED_SIZE, 419,
javax.swing.GroupLayout.PREFERRED_SIZE)
.addContainerGap(108, Short.MAX_VALUE))
);
jPanel3Layout.setVerticalGroup(
jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addGroup(jPanel3Layout.createSequentialGroup()
.addGap(21, 21, 21)
.addGroup(jPanel3Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
.addComponent(jLabel14, javax.swing.GroupLayout.DEFAULT_SIZE, 38, Short.MAX_VALUE)
.addGroup(jPanel3Layout.createSequentialGroup()
.addComponent(jButton1)
.addGap(0, 0, Short.MAX_VALUE)))
.addContainerGap())
);

getContentPane().add(jPanel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 0, 660, 70));
getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, -50, 640,
660));

pack();
}// </editor-fold>

private void txt5ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}

private void txt4ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}

private void btn1ActionPerformed(java.awt.event.ActionEvent evt) {
try
{
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","system");
PreparedStatement stmt=con.prepareStatement("insert into employee12
values(?,?,?,?,?,?,?,?,?,?)");
stmt.setString(1,((JTextField) dc1.getDateEditor().getUiComponent()).getText());
stmt.setInt(2,Integer.parseInt(txt1.getText()));
stmt.setString(3,txt2.getText());
stmt.setString(4,txt3.getText());
```

```
stmt.setString(5,txt4.getText());
stmt.setString(6,txt5.getText());
stmt.setString(7,txt6.getText());
stmt.setString(8,txt7.getText());
stmt.setString(9,txt8.getText());
stmt.setString(10,txt9.getText());
stmt.setString(11,txt10.getText());
int i=stmt.executeUpdate();
JOptionPane.showMessageDialog(this, i+"  record inserted");
con.close();
}
catch(Exception e)
{
JOptionPane.showMessageDialog(this, e);
}    // TODO add your handling code here:
}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
Home m=new Home();
m.show();
this.dispose();// TODO add your handling code here:
}

private void txt7ActionPerformed(java.awt.event.ActionEvent evt) {
txt7.setColumns(10);  // TODO add your handling code here:
}

private void txt1ActionPerformed(java.awt.event.ActionEvent evt) {
/* try {
Class.forName("oracle.jdbc.driver.OracleDriver");
Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:1521:xe","system","system");
PreparedStatement ps=con.prepareStatement("select id, (1*rownum) as id\n" +"from student_record
");
ResultSet rs=ps.executeQuery();
if(rs.next())
{
/* DateTimeFormatter dtf=DateTimeFormatter.ofPattern("yyyy-MM-dd");
LocalDateTime ldt=LocalDateTime.now();
//Date d=new Date();
//String y = dtf.format(ldt);
jLabel19.setText(dtf.format(ldt));
//d.getYear()
// JOptionPane.showMessageDialog(this,y);*/
/*  txt10.setText(String.valueOf(rs.getInt(1)));
}
else
```

```
{

txt10.setText(String.valueOf(start));

}
con.close();
}
catch (Exception e)
{
JOptionPane.showMessageDialog(this, e+"error");
}*/

}

/**
* @param args the command line arguments
*/
public static void main(String args[]) {
/* Set the Nimbus look and feel */
//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
/* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
* For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
*/
try {
for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
if ("Nimbus".equals(info.getName())) {
javax.swing.UIManager.setLookAndFeel(info.getClassName());
break;
}
}
} catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Regestration.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Regestration.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Regestration.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Regestration.class.getName()).log(java.util.logging.Level.SEV
ERE, null, ex);
}
//</editor-fold>

/* Create and display the form */
```

```
java.awt.EventQueue.invokeLater(new Runnable() {
@Override
public void run() {
new Regestration().setVisible(true);
}
});
}

// Variables declaration - do not modify
private javax.swing.JButton btn1;
private com.toedter.calendar.JDateChooser dc1;
private javax.swing.JButton jButton1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel10;
private javax.swing.JLabel jLabel11;
private javax.swing.JLabel jLabel14;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JLabel jLabel8;
private javax.swing.JLabel jLabel9;
private javax.swing.JPanel jPanel1;
private javax.swing.JPanel jPanel2;
private javax.swing.JPanel jPanel3;
private javax.swing.JTextField txt1;
private javax.swing.JTextField txt10;
private javax.swing.JTextField txt2;
private javax.swing.JTextField txt3;
private javax.swing.JTextField txt4;
private javax.swing.JTextField txt5;
private javax.swing.JTextField txt6;
private javax.swing.JTextField txt7;
private javax.swing.JTextField txt8;
private javax.swing.JTextField txt9;
// End of variables declaration
}
```

ROOM ALLOTMENT:

```
public class Roomavailable extends javax.swing.JFrame {

/**
* Creates new form Roomavailable
*/
```

```
public Roomavailable() {
initComponents();
}

/**
* This method is called from within the constructor to initialize the form.
* WARNING: Do NOT modify this code. The content of this method is always
* regenerated by the Form Editor.
*/
@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

jLabel1 = new javax.swing.JLabel();
jLabel2 = new javax.swing.JLabel();
jTextField1 = new javax.swing.JTextField();
jCheckBox1 = new javax.swing.JCheckBox();
jLabel3 = new javax.swing.JLabel();
jButton1 = new javax.swing.JButton();
jSeparator1 = new javax.swing.JSeparator();
jLabel4 = new javax.swing.JLabel();
jLabel5 = new javax.swing.JLabel();
jTextField2 = new javax.swing.JTextField();
jLabel6 = new javax.swing.JLabel();
jCheckBox2 = new javax.swing.JCheckBox();
jButton2 = new javax.swing.JButton();
jButton3 = new javax.swing.JButton();
jSeparator2 = new javax.swing.JSeparator();
jLabel7 = new javax.swing.JLabel();
jScrollPane1 = new javax.swing.JScrollPane();
jTable1 = new javax.swing.JTable();
jSeparator3 = new javax.swing.JSeparator();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setMinimumSize(new java.awt.Dimension(689, 550));
setPreferredSize(new java.awt.Dimension(400, 500));
getContentPane().setLayout(new org.netbeans.lib.awtextra.AbsoluteLayout());

jLabel1.setFont(new java.awt.Font("Algerian", 3, 20)); // NOI18N
jLabel1.setText("Add New Room");
getContentPane().add(jLabel1, new org.netbeans.lib.awtextra.AbsoluteConstraints(247, 31, 178,
39));

jLabel2.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel2.setText("Room Number");
getContentPane().add(jLabel2, new org.netbeans.lib.awtextra.AbsoluteConstraints(40, 90, 112, -1));
```

```
jTextField1.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
getContentPane().add(jTextField1, new org.netbeans.lib.awtextra.AbsoluteConstraints(160, 90, 88,
-1));

jCheckBox1.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jCheckBox1.setText("Yes");
jCheckBox1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jCheckBox1ActionPerformed(evt);
}
});
getContentPane().add(jCheckBox1, new org.netbeans.lib.awtextra.AbsoluteConstraints(350, 90, -1,
-1));

jLabel3.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel3.setText("Activate ");
getContentPane().add(jLabel3, new org.netbeans.lib.awtextra.AbsoluteConstraints(280, 90, -1, -1));

jButton1.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jButton1.setIcon(new
javax.swing.ImageIcon("C:\\Users\\USER\\Pictures\\Screenshots\\save.png")); // NOI18N
jButton1.setText("Save");
jButton1.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jButton1ActionPerformed(evt);
}
});
getContentPane().add(jButton1, new org.netbeans.lib.awtextra.AbsoluteConstraints(550, 80, -1, -
1));
getContentPane().add(jSeparator1, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 161, 689,
-1));

jLabel4.setFont(new java.awt.Font("Algerian", 3, 20)); // NOI18N
jLabel4.setText("Update or Delete Room");
getContentPane().add(jLabel4, new org.netbeans.lib.awtextra.AbsoluteConstraints(200, 190, 281, -
1));

jLabel5.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel5.setText("Room Number");
getContentPane().add(jLabel5, new org.netbeans.lib.awtextra.AbsoluteConstraints(40, 280, 120, -
1));

jTextField2.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jTextField2.addActionListener(new java.awt.event.ActionListener() {
public void actionPerformed(java.awt.event.ActionEvent evt) {
jTextField2ActionPerformed(evt);
}
```

```
});
getContentPane().add(jTextField2, new org.netbeans.lib.awtextra.AbsoluteConstraints(170, 280,
69, -1));

jLabel6.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jLabel6.setText("Activate ");
getContentPane().add(jLabel6, new org.netbeans.lib.awtextra.AbsoluteConstraints(290, 280, 80, -
1));

jCheckBox2.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jCheckBox2.setText("Yes");
getContentPane().add(jCheckBox2, new org.netbeans.lib.awtextra.AbsoluteConstraints(370, 280, -
1, -1));

jButton2.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jButton2.setText("Update");
getContentPane().add(jButton2, new org.netbeans.lib.awtextra.AbsoluteConstraints(490, 280, 90, -
1));

jButton3.setFont(new java.awt.Font("Tahoma", 1, 14)); // NOI18N
jButton3.setText("Delete");
getContentPane().add(jButton3, new org.netbeans.lib.awtextra.AbsoluteConstraints(600, 280, -1, -
1));
getContentPane().add(jSeparator2, new org.netbeans.lib.awtextra.AbsoluteConstraints(0, 728, 689,
-1));

jLabel7.setFont(new java.awt.Font("Algerian", 3, 20)); // NOI18N
jLabel7.setText("     RoomS");
getContentPane().add(jLabel7, new org.netbeans.lib.awtextra.AbsoluteConstraints(270, 360, 133,
21));

jTable1.setFont(new java.awt.Font("Tahoma", 3, 14)); // NOI18N
jTable1.setModel(new javax.swing.table.DefaultTableModel(
new Object [][] {
{null, null, null},
{null, null, null},
{null, null, null},
{null, null, null}
},
new String [] {
"Room Number", "Activate", "Room Status"
}
));
jScrollPane1.setViewportView(jTable1);

getContentPane().add(jScrollPane1, new org.netbeans.lib.awtextra.AbsoluteConstraints(90, 390,
512, 125));
```

```
getContentPane().add(jSeparator3, new org.netbeans.lib.awtextra.AbsoluteConstraints(-11, 335,
700, 10));

pack();
}// </editor-fold>

private void jTextField2ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}

private void jButton1ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}

private void jCheckBox1ActionPerformed(java.awt.event.ActionEvent evt) {
// TODO add your handling code here:
}
public static void main(String args[]) {
//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
try {
for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
if ("Nimbus".equals(info.getName())) {
javax.swing.UIManager.setLookAndFeel(info.getClassName());
break;
}
}
} catch (ClassNotFoundException ex) {
java.util.logging.Logger.getLogger(Roomavailable.class.getName()).log(java.util.logging.Level.SE
VERE, null, ex);
} catch (InstantiationException ex) {
java.util.logging.Logger.getLogger(Roomavailable.class.getName()).log(java.util.logging.Level.SE
VERE, null, ex);
} catch (IllegalAccessException ex) {
java.util.logging.Logger.getLogger(Roomavailable.class.getName()).log(java.util.logging.Level.SE
VERE, null, ex);
} catch (javax.swing.UnsupportedLookAndFeelException ex) {
java.util.logging.Logger.getLogger(Roomavailable.class.getName()).log(java.util.logging.Level.SE
VERE, null, ex);
}
//</editor-fold>

/* Create and display the form */
java.awt.EventQueue.invokeLater(new Runnable() {
public void run() {
new Roomavailable().setVisible(true);
}
```

```
});
}

// Variables declaration - do not modify
private javax.swing.JButton jButton1;
private javax.swing.JButton jButton2;
private javax.swing.JButton jButton3;
private javax.swing.JCheckBox jCheckBox1;
private javax.swing.JCheckBox jCheckBox2;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JScrollPane jScrollPane1;
private javax.swing.JSeparator jSeparator1;
private javax.swing.JSeparator jSeparator2;
private javax.swing.JSeparator jSeparator3;
private javax.swing.JTable jTable1;
private javax.swing.JTextField jTextField1;
private javax.swing.JTextField jTextField2;
// End of variables declaration
```

14.Future Scope:

Hostel management system is a desktop application for managing hostel records. Hostel management system helps hostel admin in managing records of the hostel in an efficient manner. This project manage records of the students, hostel rooms and other things related to the hostel.

The manual way of hostel record management it is very difficult to find the record of all students their mess bills and the information of about old students who had left the hostel many years before. Project Abstract of Hostel Management System
Hostel management system' provides a detailed view of how the students records, room allocation and courses. The hostel management system also equipped with some special features for helping hostel admin.
Each record in the system has unique identity and it can be searched by an unique id. For developing front end of the Hostel management system Visual Basic 6.0 has been used and MS Access has been used for its back-end.
The main objective of developing hostel management system is to save money and time. The proposed system generates following reports to help management of the hostel in decision making:

Allocated Room report

• Unallocated Room Report

• Partially allocated room

• Student List (department wise)

All student report
Conclusion

Hostel Management is a user-friendly and Customization software for student Hostel. Hostel management system has been developed to manage and automate the over-all processing of any large student hostel.

ER Diagram for Visa Application Processing System Hostel management system project is capable of managing hostel rooms, student records and room allocation process etc. Hostel Management System is a user-friendly and customize software for providing support for hostel admin.

15. Bibliography:

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