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# HOSTEL ALLOTMENT PORTAL



## **Introduction of the Project Hostel Allotment Portal**

In an educational institution, managing hostel accommodations efficiently is crucial for ensuring a smooth and organized student experience. To streamline this process and enhance convenience for both students and administrative staff, the Hostel Allotment Portal is introduced.

The Hostel Allotment Portal is an innovative online platform designed to automate and simplify the process of hostel room allocation. It serves as a centralized system where students can apply for hostel accommodations, and administrators can efficiently manage and allocate rooms based on various parameters such as availability, preferences, and eligibility criteria.

This portal aims to revolutionize the traditional manual hostel allocation methods by providing a user-friendly interface accessible to both students and administrators. Through the Hostel Allotment Portal, students can submit their accommodation preferences, view available rooms, and receive timely notifications regarding their room allocations.

## Objective

The objectives of the Hostel Allotment Portal project are multifaceted and aimed at addressing various challenges associated with traditional hostel room allocation processes while striving to enhance the overall experience for both students and administrative staff. Some of the key objectives include:

**Efficiency Improvement:** Streamlining the hostel room allocation process by replacing manual procedures with automated systems, thereby reducing the time and effort required for administrative tasks.

**Transparency and Fairness:** Ensuring fairness and transparency in room allocation by implementing standardized criteria and algorithms for assigning rooms, eliminating biases and favoritism.

**Enhanced Accessibility:** Providing a user-friendly online platform accessible to students from anywhere, allowing them to conveniently apply for hostel accommodations and monitor the status of their applications.

**Optimized Resource Utilization:** Maximizing the utilization of hostel facilities by efficiently allocating rooms based on occupancy rates, preferences, and other relevant factors, thereby minimizing vacancies and optimizing revenue generation.

**Customization and Personalization:** Allowing students to specify their preferences regarding room type, roommate selection, and other accommodation-related preferences, enhancing their satisfaction and comfort levels.

**Administrative Simplification:** Facilitating administrative tasks related to hostel management by offering comprehensive dashboards, automated reports, and tools for monitoring occupancy rates, payment status, and other relevant metrics.

**Cost Reduction:** Minimizing costs associated with manual paperwork, communication, and room allocation errors through the implementation of automated systems and streamlined processes.

**Feedback Integration:** Incorporating mechanisms for collecting feedback from students regarding their hostel experiences, allowing for continuous improvement and refinement of services.

**Compliance and Accountability:** Ensuring compliance with institutional policies and regulations regarding hostel management while promoting accountability and auditability through transparent processes and documentation.

**Scalability and Adaptability:** Designing the portal in a scalable and adaptable manner to accommodate future growth, technological advancements, and evolving needs within the educational institution.

## Database

### 1. UserInfo :-

<u>Field Name</u>	<u>Datatype</u>	<u>Constraint</u>
User_id	Char(6)	Foreign key
Name	Varchar(100)	Not null
Contact_no	char(10)	unique
Id_Proof	Varchar(100)	Unique
Address	Varchar(200)	Not null
Type	Varchar(50)	Not null
Father_name	Varchar(100)	Not null
Mother_name	Varchar(100)	Not null
Local_guardian	Varchar(100)	Null
Parent_contact	Char(10)	Not null
Local_guardian_contno	Char(10)	Null
Local_address	Varchar(100)	Null
Blood_group	Varchar(10)	Null
Photo	Blob	Null

### 2. RoomDetails :-

<u>Field Name</u>	<u>Datatype</u>	<u>Constraint</u>
Room_no	Varchar(10)	Primary key
Room_type	Varchar(200)	Not null
Total_bed	Varchar(10)	Not null
Status	Varchar(50)	Not null

### 3. RoomAllocation :-

<u>Field Name</u>	<u>Datatype</u>	<u>Constraint</u>
Room_no	Varchar(10)	Foreign key
User_id	char(6)	Foreign key
Check_in_date	Date	Not null
Check_out_date	Date	Null
Allocation_status	Varchar(20)	Not null

### 4. FeeDetails :-

<u>Field Name</u>	<u>Datatype</u>	<u>Constraint</u>
User_id	char(6)	Foreign key
Fee_amt	int	Not null
Pay_date	Date	Not null
Pay_mode	Varchar(20)	Not null
Month_name	Varchar(20)	Not null
Status	Varchar(20)	Not null

### 4. Rules :-

<u>Field Name</u>	<u>Datatype</u>	<u>Constraint</u>
Id	char(6)	Not null
Rule_desc	Varchar(2000)	Not null

## 5. Login :-

<b><u>Field Name</u></b>	<b><u>Datatype</u></b>	<b><u>Constraint</u></b>
User_id	char(6)	Primary key
Password	Varchar(20)	Not null
Security_ques	Varchar(200)	Not null
Security_ans	Varchar(200)	Not null
Role	Varchar(50)	Not null
Status	Varchar(50)	Not null



## **Modules**

- **Admin Module:**

- Admin can approve all users.
- Admin can update and delete user information.
- Admin can handle all operation of room details.
- Admin can allocate room to users.
- Admin can insert, delete, search and update fee details of all users.
- Admin can define and modify rules of hostel.

- **User Module:**

- An user can insert, search and update his/her details in user information.
- An user can see room details.
- An user can see room allocation details.
- An user can see his/her payment details.
- An user can download his/her payment receipt.

## Software and Hardware Requirements Specifications

### Software Requirements:

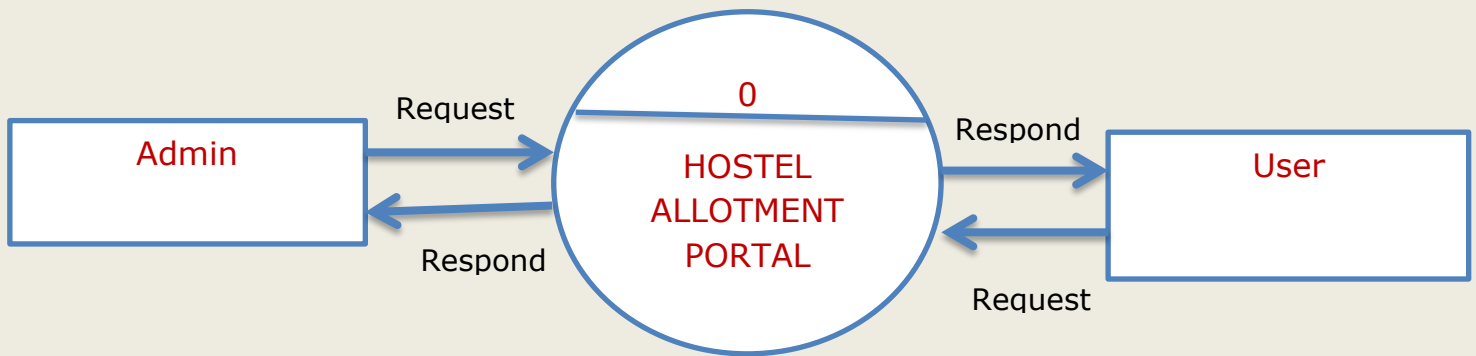
Name of component	Specification
Operating System	Windows 11
Frontend Language	HTML5, CSS3, JavaScript, JQuery, Bootstrap
Backend Language	Python
Database	My SQL
IDE	VS-Code

### Hardware Requirements:

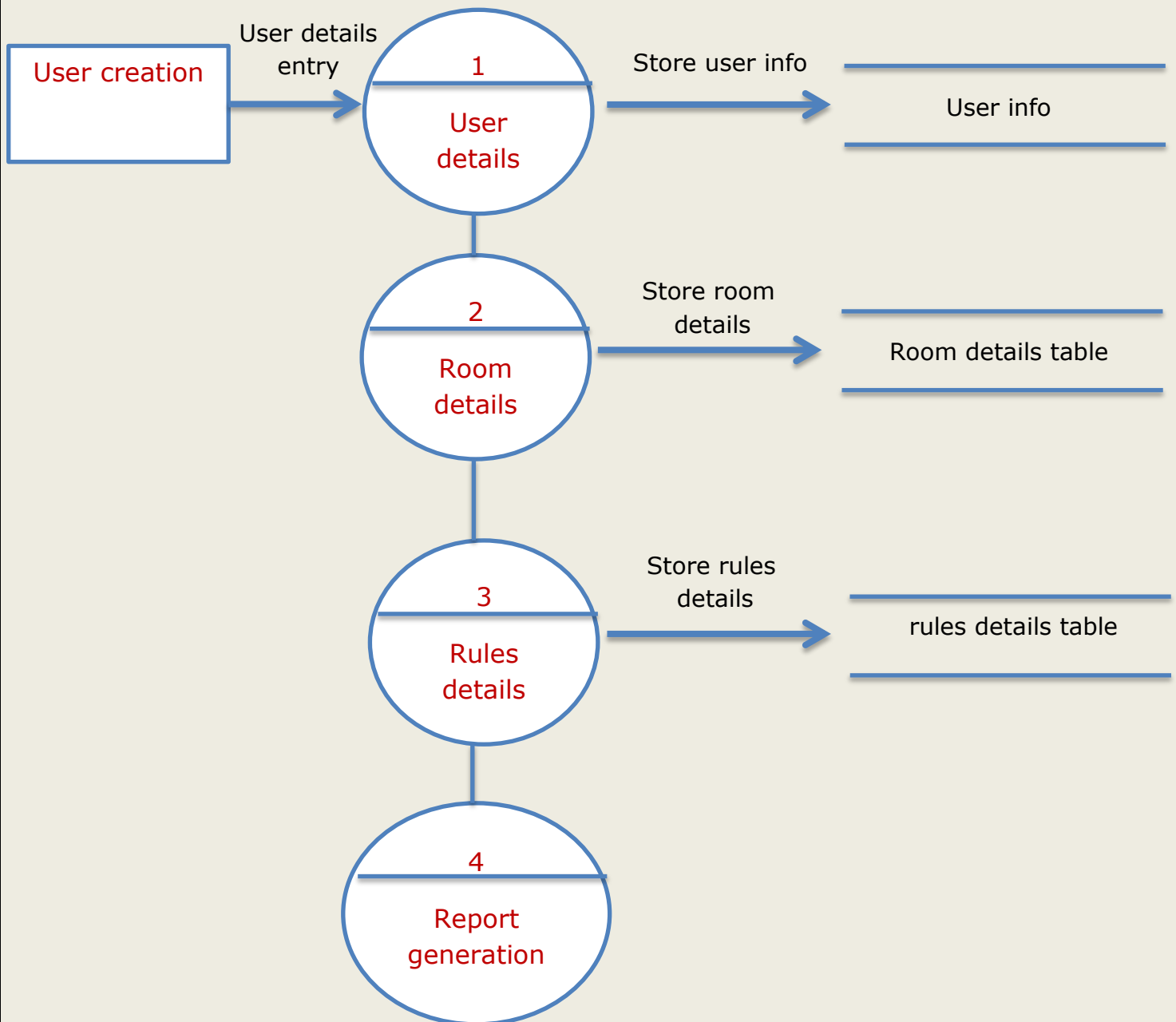
Name of component	Specification
Processor	Pentium III 630MHz
RAM	500 MB
Hard disk	512 MB
Monitor	15" color monitor
Keyboard	122 keys

## Data Flow Diagram(DFD)

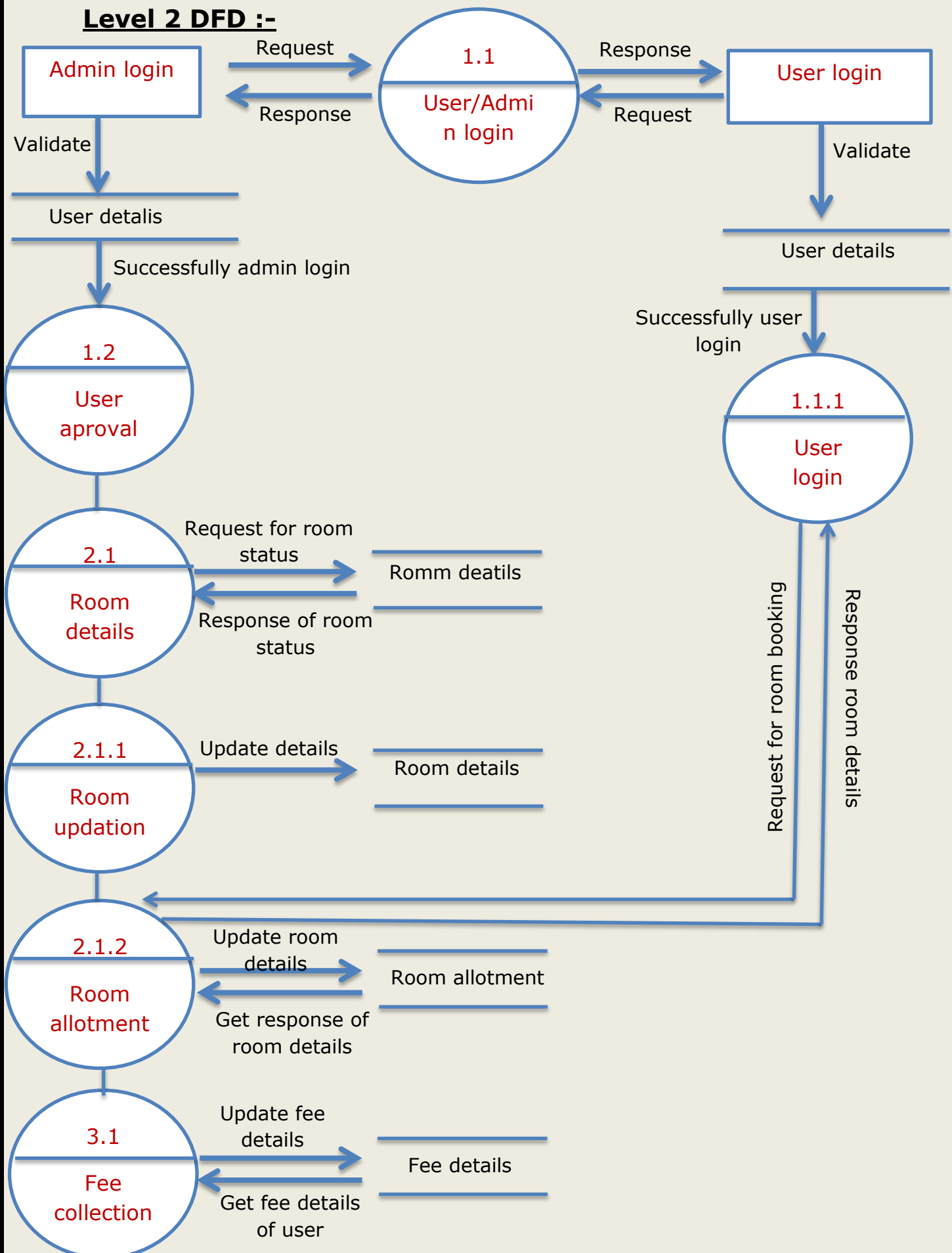
### Level 0 DFD :-



## Level 1 DFD :-



## Level 2 DFD :-



## **Future scope**

The Hostel Allotment Portal project holds significant potential for future expansion and enhancement. Here are some potential avenues for its future scope:

1. **Integration with Smart Technologies:** Incorporating smart technologies such as IoT (Internet of Things) for automated room access, energy management systems for optimizing resource consumption, and AI-driven chatbots for enhanced user support.
2. **Enhanced Analytics and Reporting:** Implementing advanced analytics capabilities to analyze data trends, predict demand for hostel accommodations, and generate insightful reports for decision-making purposes.
3. **Mobile Application Development:** Developing a dedicated mobile application for the Hostel Allotment Portal to provide students and administrators with on-the-go access to accommodation-related information, notifications, and updates.
4. **Expansion to Multiple Campuses:** Scaling the portal to cater to multiple campuses within the educational institution or even extending its functionality to accommodate accommodation management for affiliated institutions.
5. **Integrating Payment Gateways:** Integrating secure payment gateways within the portal to facilitate online payment of hostel fees, allowing for seamless and convenient transactions for students.
6. **Customization and Personalization:** Enhancing the portal's ability to customize accommodation options based on individual preferences, including room features, amenities, and roommate compatibility.
7. **Feedback Mechanisms and Continuous Improvement:** Strengthening feedback mechanisms to gather insights from students and administrators regarding their hostel experiences, enabling continuous improvement of services and processes.

8. **Incorporating Sustainability Initiatives:** Introducing sustainability initiatives within the portal, such as promoting eco-friendly practices in hostel operations, waste reduction measures, and energy-efficient infrastructure.
9. **Partnerships and Collaborations:** Collaborating with external stakeholders, such as accommodation providers, travel agencies, or local businesses, to offer additional services or benefits to students using the portal.

**THANK YOU**