



# Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri(W), Mumbai:400058, India  
(Autonomous College of Affiliated to University of Mumbai)

Team Member Name:	Team Member UID:
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EXPERIMENT NO:	4
AIM:	Sequence/Collaboration Diagram for Hostel ManagementSystem.

Problem Statement:	<p>The Hostel Management System (HMS) project addresses the challenges faced in efficiently managing hostels in today's world. With a focus on enhancing student satisfaction, the HMS aims to provide a comprehensive solution. It offers user management for administrators, students and visitors, simplifies room booking, facilitates smooth check-in/check-out processes, manages billing and payments, monitors room availability, maintains student profiles, and provides reporting and analytics tools. The system ensures data security and privacy compliance while offering a user-friendly interface accessible via a web app. By automating administrative tasks and optimizing room management, the HMS benefits hostel owners, while also improving the student experience and modernizing hostel operations.</p>
Sequence diagram for STUDENT LOGIN:	<pre>sequenceDiagram     participant Student     participant Hostel system     Student-&gt;&gt;Hostel system: Initiate login     Student-&gt;&gt;Hostel system: Enter credentials     Hostel system--&gt;&gt;Student: Validate credentials     Student-&gt;&gt;Hostel system: Grant access</pre>

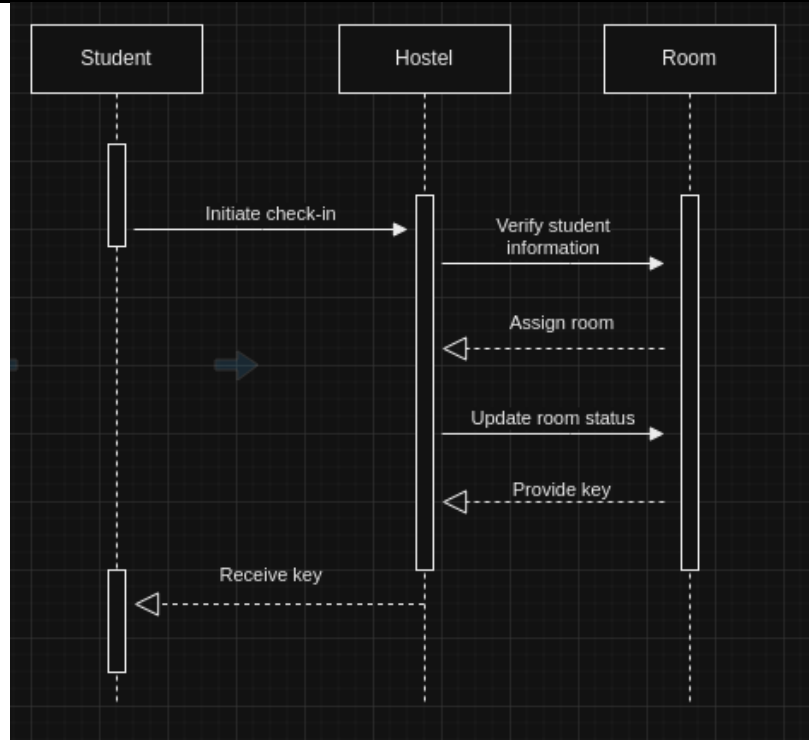


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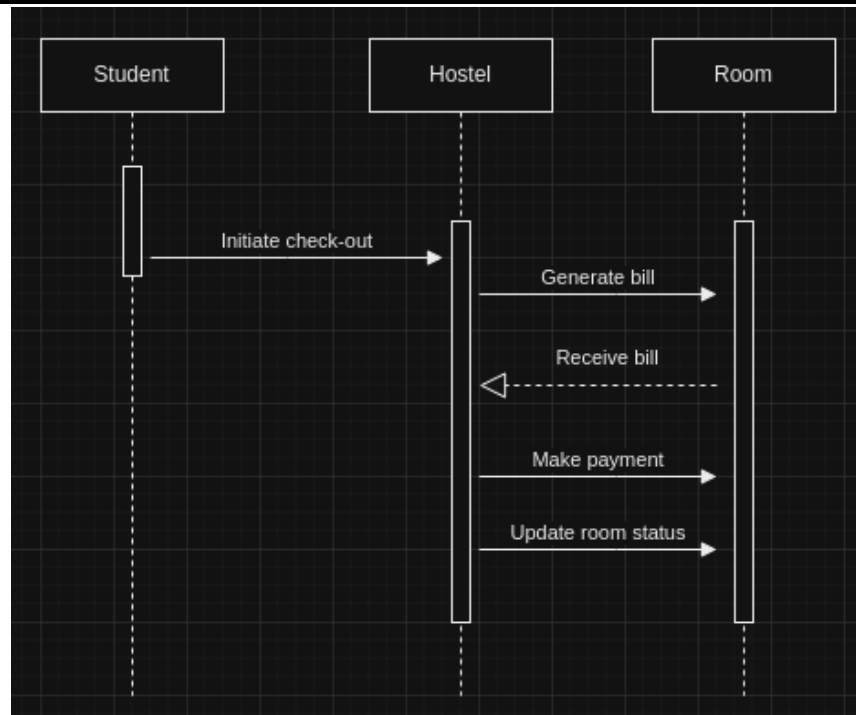
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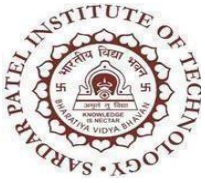
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Sequence diagram for  
**STUDENT CHECK-IN:**



Sequence diagram for  
**STUDENT CHECK-OUT:**



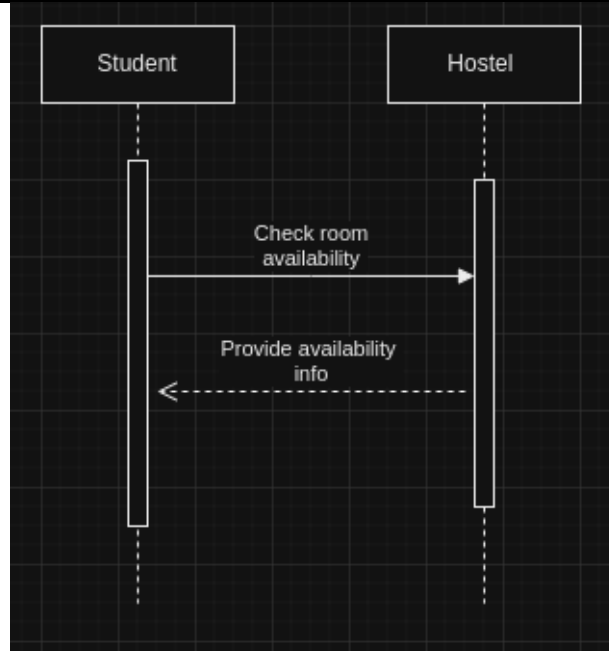


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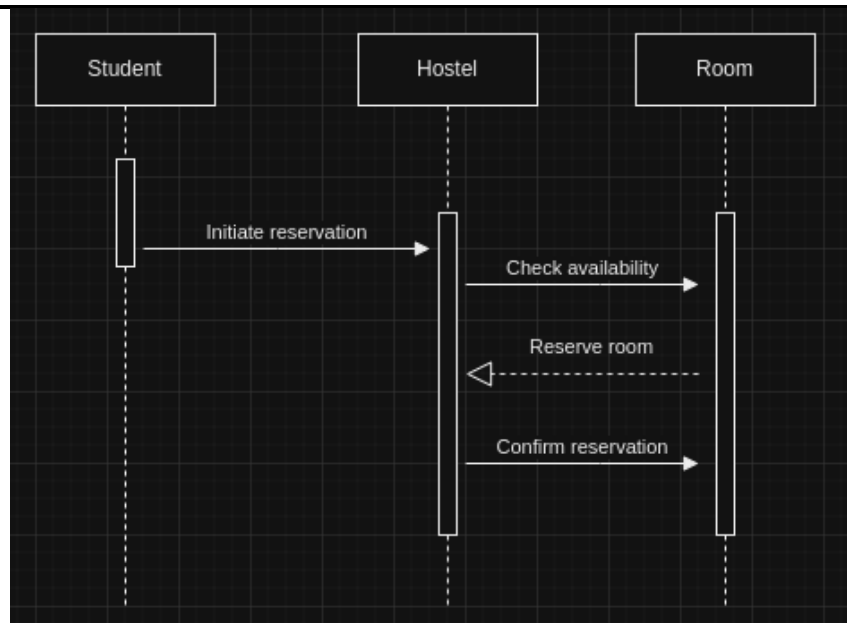
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Sequence diagram for  
**ROOM  
AVAILABILITY:**



Sequence diagram for  
**ROOM  
RESERVATION:**



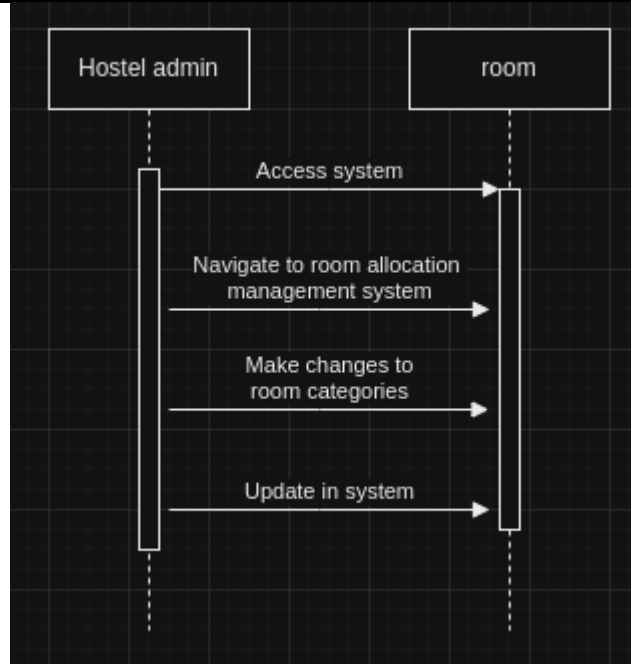


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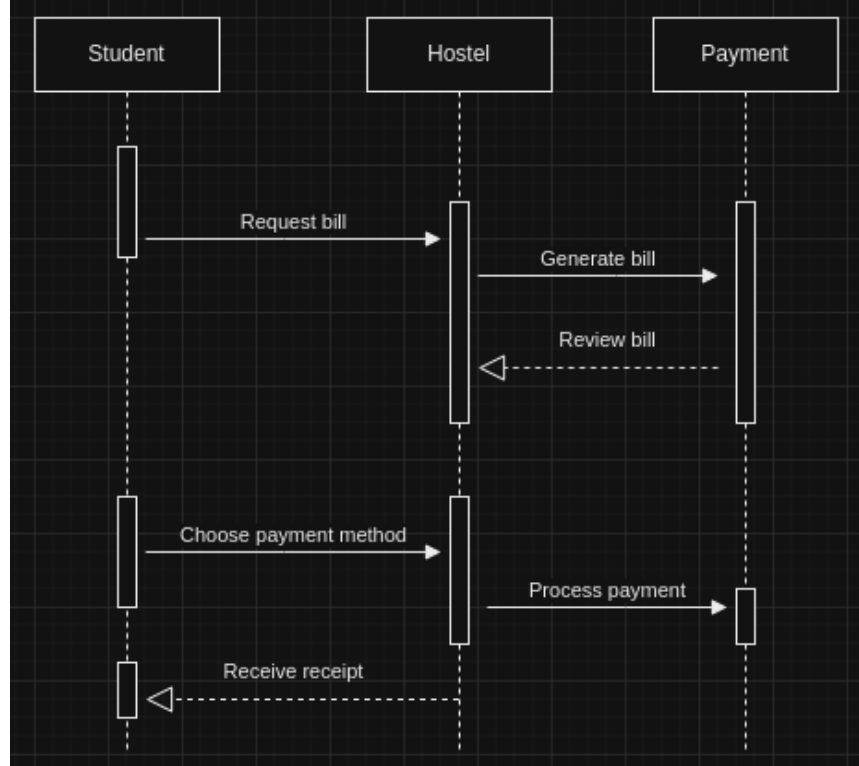
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Sequence diagram for  
**ROOM  
ALLOCATION:**



Sequence diagram for  
**BILLING AND  
PAYMENT:**



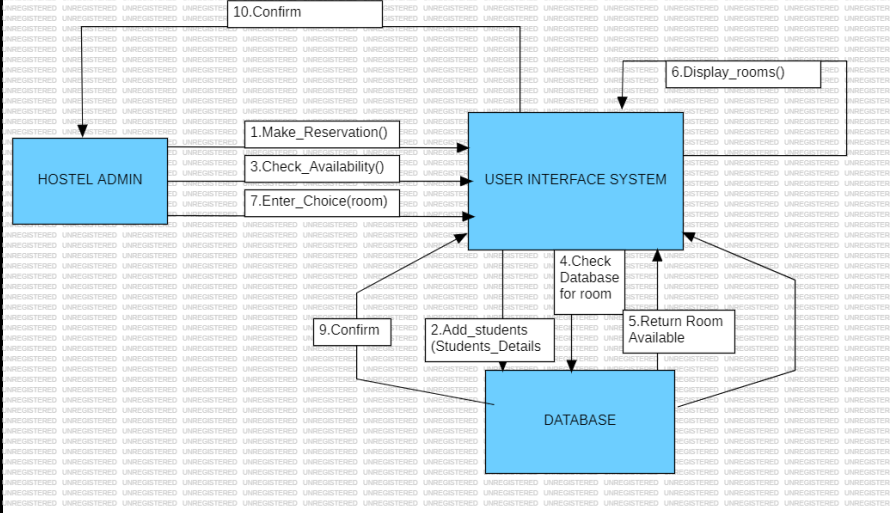


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## Collaboration diagram:



## Conclusion:

In conclusion, the collaboration diagram for the hostel management system gives the interactions and collaborations between different objects, such as students, hostel admin, room system and the database system, providing a high-level overview of the system's components and their relationships. On the other hand, the sequence diagram gives deeper interactions, showing the specific messages passed between objects during processes like room allocation, check-out and billing & payment, etc. Together, these diagrams offer an understanding of how various elements within the hostel management system collaborate and communicate to perform essential tasks, facilitating efficient management and user interactions.



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## Conclusion:

In summary, the Hostel Management System class diagram, incorporating classes such as, "Users," "Student," "Admission," "Hostel Administrator," "Rooms," "Payment," and "Allotment," serves as a visual blueprint for designing a robust and efficient hostel management system. It defines the core entities and their relationships, enabling effective management of student admissions, room allocations, payments, and user interactions within the system. This class diagram lays the foundation for building a comprehensive and user-friendly Hostel Management System to streamline hostel operations and enhance the overall hostel experience.