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UNIVERSITY OF MUMBAI
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A Project Report on

Chatbot for Efficient Resource Allocation and Management

Submitted in partial fulfillment of the degree of
Bachelor of Engineering(Sem-7)
in
INFORMATION TECHNOLOGY
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1. Project Conception and Initiation

1.1 Abstract

When considering an institution regardless, whether it is a school or university it is consequential that the students are edified in a congruous environment. This generalizes that the infrastructure should fascinate every requisite as cardinal or required by the students or the faculty in that environment.Present day process implies that all the work is done manually.

1.2 Objectives

- To automate the process of manual allotment.
- Overcome the manual errors that are ought to happen in the process.
- Save time of the end users.

1.3 Literature Review

Sr. No.	Title	Methodology	Advantages	Disadvantages
1.	Automatic timetable generator	Genetic Algorithm	Generates timetable for each class and teacher, in keeping with the availability calendar of teachers, availability and capacity of physical resources. It is developed to manage all periods automatically.	It is a messy system as large number of users are logged in.
2.	Timetable generation and Leave management system	Scheduling algorithm	Provides leave management for students as well as faculty.	Paid and costly application and had unwanted additional features.
3.	Automatic and effective allocation for examination seats	Parsing Algorithm	Developed to allot seats for students in which block they are assigned and a notification is send to students as well as faculties.	Maintenance of database becomes tedious.

4.	Timetable Generator	Rational Rose CASE tool, UML notation.	Generates all combinations of timetable.	The system was not feasible in universities more than 100 classrooms.
5.	Review of integrated applications with AIML based chatbot	AIML	Ease of use.	Cannot be used for large-sized projects.

1.4 Problem Definition

To provide a web based application for efficient allotment of infrastructure."Chatbot For Efficient Resource Allocation And Management" will be integrated with a Chatbot for utilized interaction.

1.5 Scope

- Proposed System will provide comfort to the manpower and will avoid hamper in academics.
- Provides with Chatbot in runtime of academics.
- It will avoid inconsistencies visually perceiving that no lab session is missed due to any reason by providing alternate infrastructure options.
- Additionally features provided like reservation and dynamic allocation due to any activities.

1.6 Technology stack

- Chatbot: HTML, CSS, PHP, Javascript.
- Website: HTML, CSS, PHP.
- Database: PhpMyAdmin, SQL.

1.7 Benefits for environment & Society

- Save time invested by faculties to find lab manually.
- Reduce manpower.
- Provide efficient infrastructure allotment.

2. Project Design

2.1 Proposed System
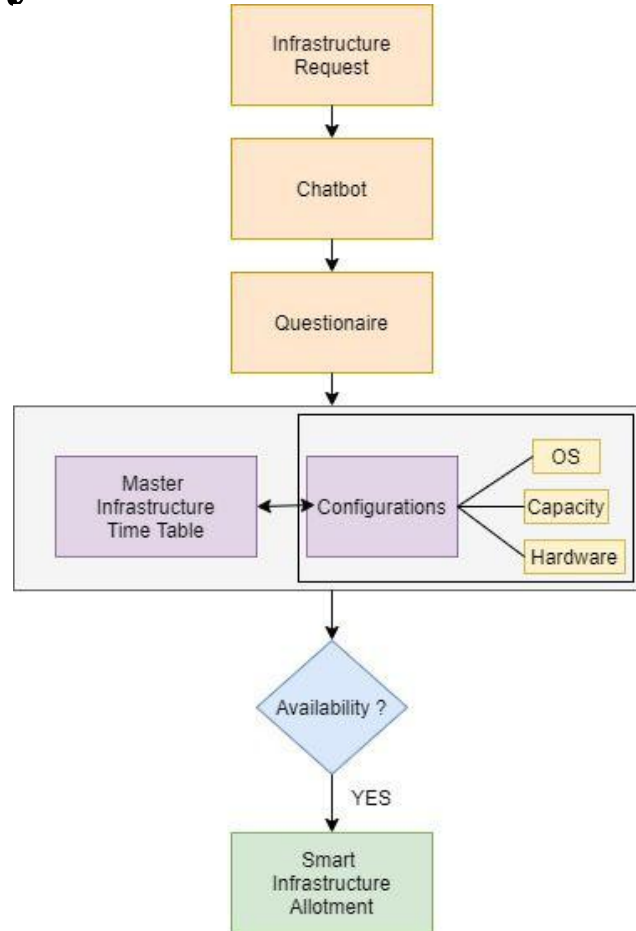
2.2 Design(Flow Of Modules)
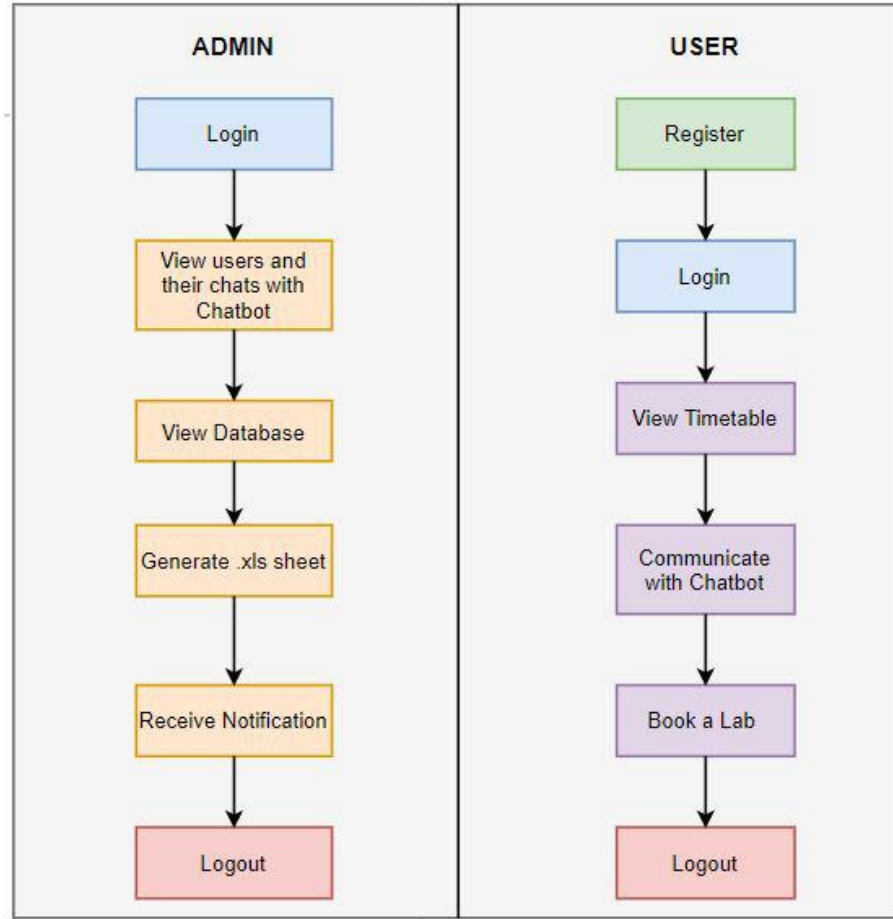
2.3 Description Of Use Case
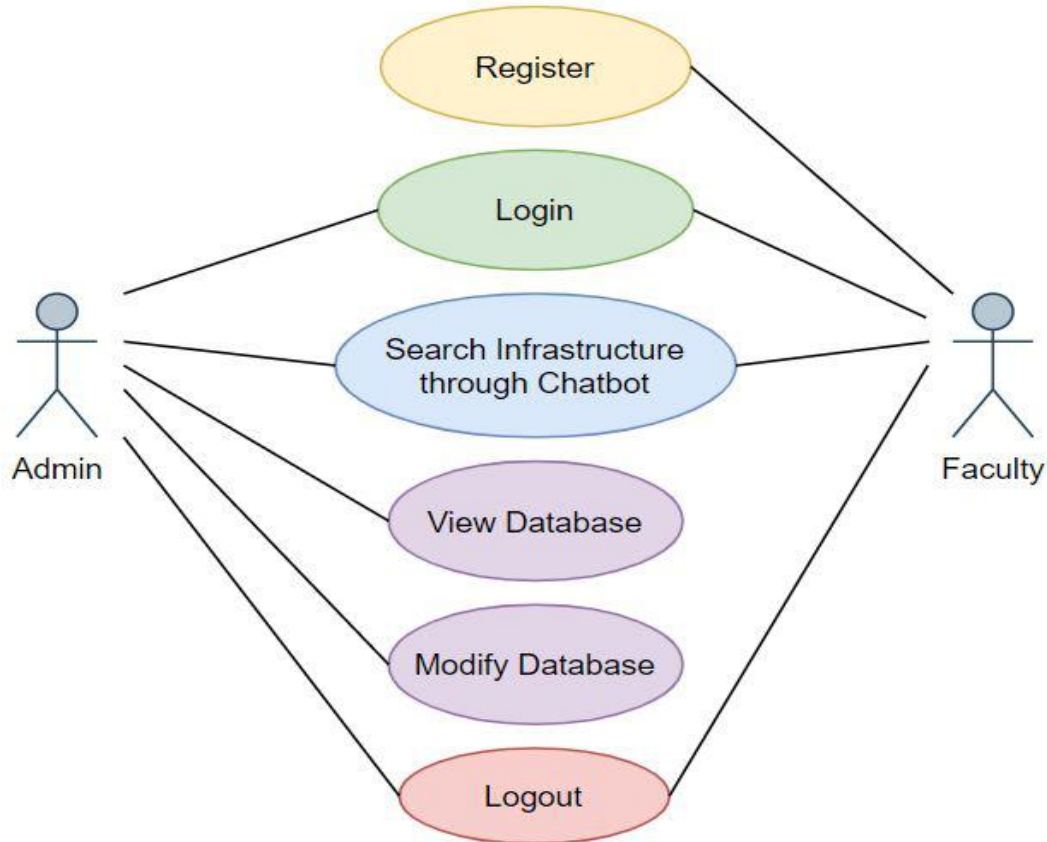
2.4 Activity diagram

USER ->
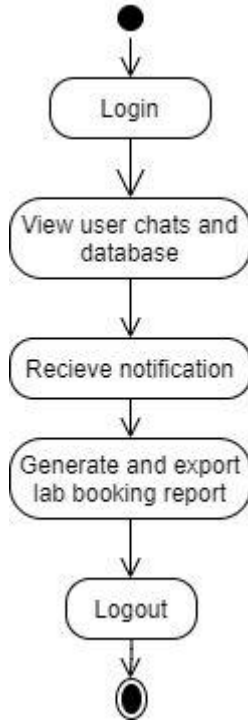
ADMIN ->
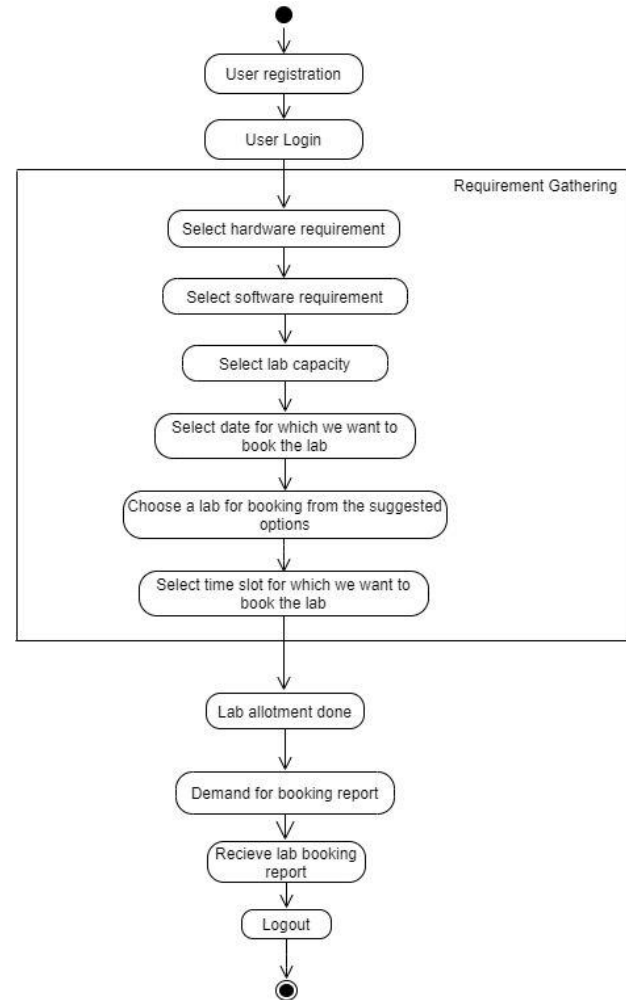
2.6 Module-1

2.5 Class Diagram

Module-2

Module-n

2.7 References

1. Saritha M, Pranav Kiran Vaze, Pradeep, Mahesh N   R,on"Automatic Time Table Generator",International   Journal of Advanced Research in Computer Science and Software Engineering,Volume7,Issue5,May2017,ISSN: 2277 128X.

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3.   Neelkanth Sharma, Abhishek Mahale, Ashwini   Andhale,Yogesh Joshi on "Automatic and Effective   Allocation for Examination Seats using Android Application" International Journal of Engineering Research and Management (IJERM) – Volume 3 Issue 5- May 2017.

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Future Scope

- In future, we can scale it by booking infrastructure not only for labs but also for lectures.
- Another functionality, we can add is notifying the concerned faculty after they book a lab.

Conclusion

Chatbot for efficient resource allocation and management not only curbs the problem of manual labour but also evades the inconsistencies that are present in the existing system. Our system considers academic requirements of the user such as hardware, software, capacity, etc. and provides and suitable option for infrastructure allotment. It also has a provisioning of slot reservation for further activities to avoid hustle in regular academic schedule.

Thank You