BANNARI AMMAN INSTITUTE OF TECHNOLOGY
An Autonomous Institution Affiliated to Anna University - Chennai, Accredited by NAAC with A+ Grade
Sathyamangalam - 638401 Erode District, Tamil Nadu, India

Software Requirement Specification

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Project ID: 23

Project Details:

Project Name	TIME TABLE GENERATOR
Domain	CAMPS
Stack	Lamp Stack

1. Problem statement:

Design a computerised framework to create the best possible Time Table in camps, making sure that there are no conflicts with scheduling, that teacher workloads are balanced, and that classroom usage is maximised.Additionally, the system ought to support unique needs like labs, elective courses, etc..

2. Introduction:

2.1 Purpose:

This system's goal is to make timetable management easier for both teachers and students. Class schedules are automatically created, guaranteeing the best use of available resources, preventing conflicts, and saving time. This increases efficiency in academic planning, strengthens organisation, and raises teacher and student productivity all around.

2.2 Product Scope:

The timetable generator creates class schedules without conflicts, including times, rooms, and teachers. It has secure logins, customizable options, and real-time updates, working on both computers and phones. It detects and fixes scheduling issues, connects with other college systems, and allows data sharing. The system provides reports for planning, offers support and updates, and keeps data safe, making scheduling easier and more efficient for everyone.

2.3 Product Value:

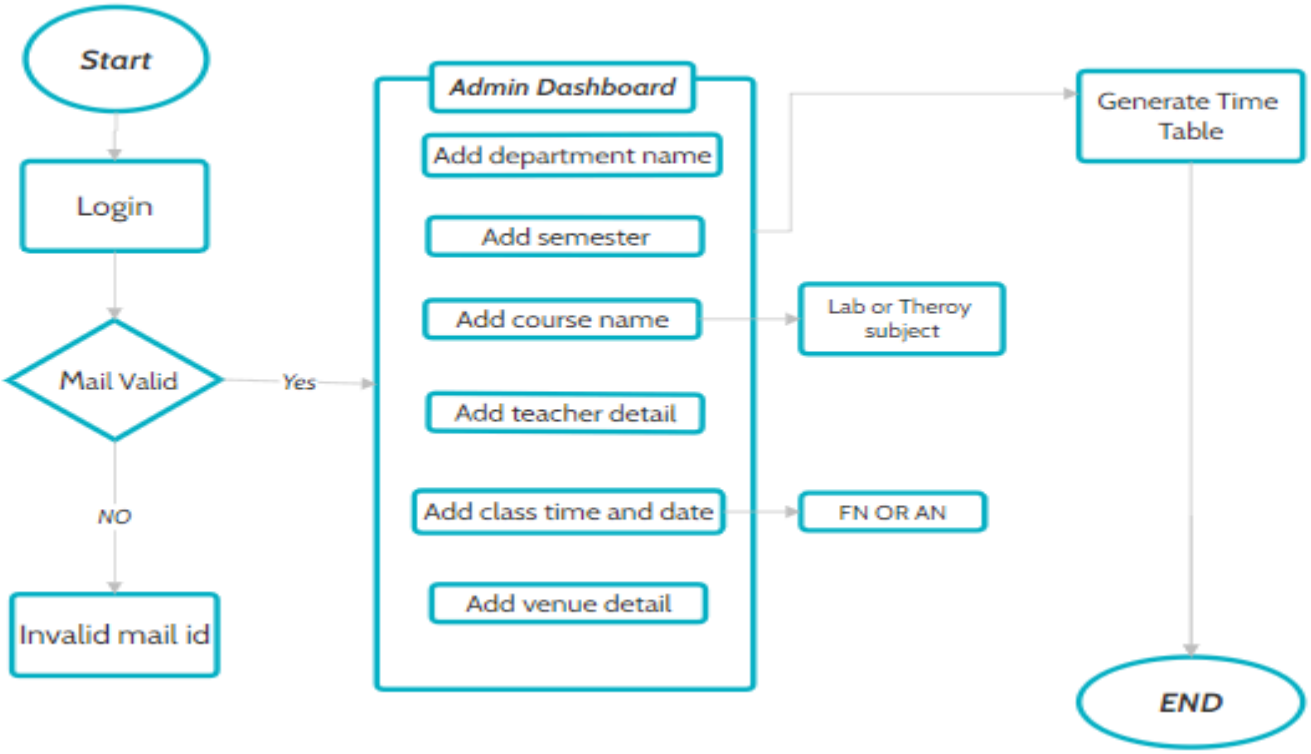
Process automation saves time and improves the overall project management experience for reviewers and administrators.The product significantly reduces administrative workload, minimises errors made by employees, and streamlines the timetable creation process. It guarantees the effective use of campus facilities, including labs and classrooms, resulting in ideal space management. Students and teachers are more satisfied when scheduling conflicts are resolved and special requirements are met. The system can grow with the institution and integrate seamlessly with other systems thanks to its scalability and integration capabilities.

3. System overview:

3.1 User's:

1.Administrator

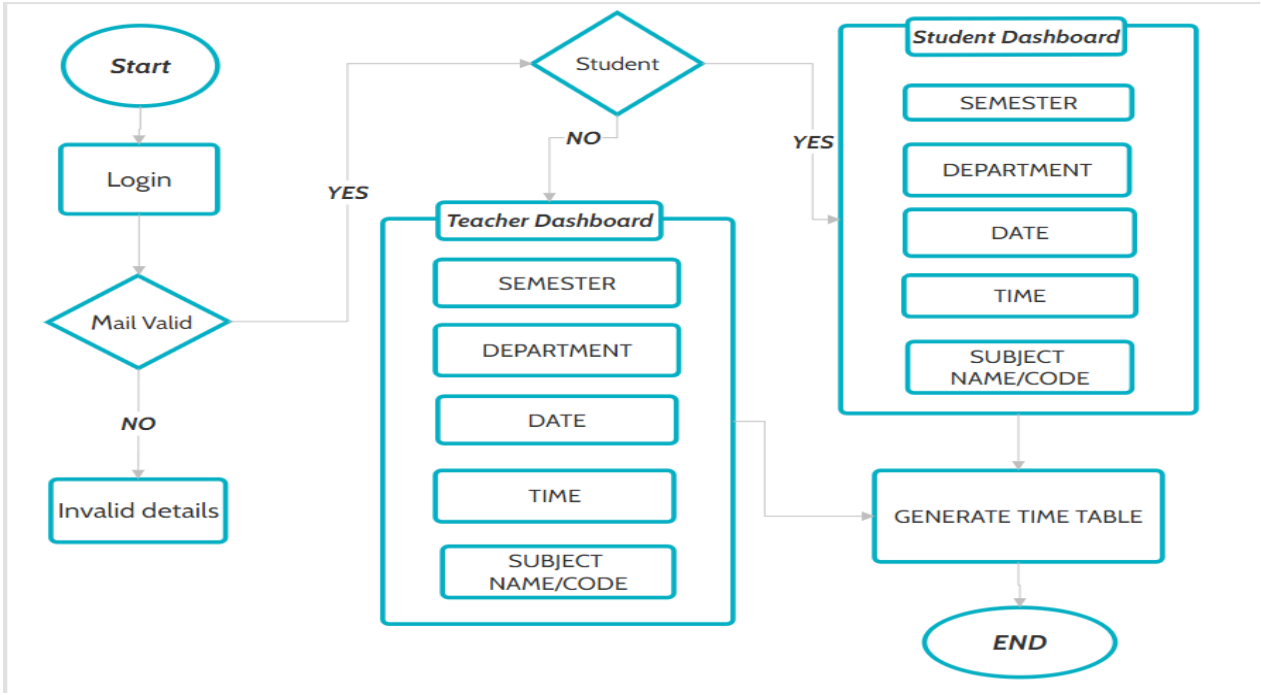
Users' accounts can be managed by administrators, who can also assign roles and access levels. They enter and maintain information on classes, rooms, and faculty availability, ensuring that records are up to date. They manage conflict detection and resolution, manually adjusting schedules as needed. Administrators handle real-time updates, communicate scheduling changes, ensure integration with college systems, provide technical support, troubleshoot problems, enforce data security, and ensure compliance with rules.



2.Reviewers:

Students can view their class schedules, room allocations, faculty assignments, and get real-time updates on schedule changes.

Teachers can view and manage their schedules, access classroom details and student rosters, and receive notifications for schedule changes.



4. Stack Architecture and Infrastructure:

Front-end	HTML, CSS, JavaScript
Back-end	Lamp
Database	MySQL
API	PHP

5. Dependencies:

5.1 Google Authentication:

This dependency involves seamless integration with Google's authentication services, such as OAuth, to securely log in with their Google accounts.

5.2 Proper Working and Performance of the Database:

Retrieval, storage, management of and Effective evaluation of venue and time are

ensured via a high-performing database. Create a well organised, normalised database design that can include all the necessary data pieces, including course,department, and lab classes.

5.3 Proper Hosting:

This involves selecting a hosting company that can accommodate the expected demand and usage rates of the platform with enough resources, scalability, and reliability. Additionally, sufficient security measures should be provided by the hosting environment to safeguard user data and stop illegal access.

6.Functional requirements:

- **User Management**:
  - Admin can log in with an account and have access to update venue,subject name,time ,date and faculty details.
  - Students and faculty can log in and have access to view the venue,faculty name,time,date and subject name.
- **Admin dashboard:**
  - The admin's dashboard shows various constraints such as semester,time,venue,department etc..
  - They can select a particular constraint to add in the time table.
  - They have the access to generate and edit a timetable.
- **Reviewer dashboard:**
  - students and faculty dashboard shows various constraints such as department,semester,time,date,course detail…
  - They have access to generate a time table .