SRM Institute of Science and Technology
Ramapuram Chennai
Faculty of Science & Humanities
(A Place for Transformation)
PG Department of Computer Applications

PRACTICAL RECORD

NAME :

REGISTER NUMBER :

COURSE : **MCA**

SEMESTER / YEAR : **II / I**

SECTION :

SUBJECT CODE : **PCA25D04J**

SUBJECT NAME : **SOFTWARE PROJECT MANAGEMENT**

APRIL 2026

SRM Institute of Science and Technology
Ramapuram Chennai
Faculty of Science & Humanities
(A Place for Transformation)
PG Department of Computer Applications

REGISTER NUMBER:

BONAFIDE CERTIFICATE

This is to certify that the bonafide work done by _____

in the subject **SOFTWARE PROJECT MANAGEMENT** **[PCA25D04J]** at, SRM Institute of Science and Technology, Ramapuram Chennai in **APRIL 2026**.

STAFF IN-CHARGE **HEAD OF THE DEPARTMENT**

Submitted for the University Practical Examination held at SRM Institute of Science and Technology, Ramapuram Chennai on _____

INTERNAL EXAMINER 1 **INTERNAL EXAMINER 2**

INDEX

EX NO:1 **NAME :**
DATE : **REG NO:**

DEVELOPING AN ONLINE EXAMINATION SYSTEM FOR A UNIVERSITY

Aim

To plan, schedule, monitor, and manage the development of an Online Examination System for a University using the Click Up project management tool, applying standard Software Project Management principles.

Software / Tools Required

- Click Up (Web version / Desktop App)
- Web Browser
- Internet Connection
- Project Requirements Document (SRS)

Project Description

The Online Examination System enables universities to conduct secure online exams, manage question banks, evaluate answers, and generate results. Click Up is used to manage project activities such as task allocation, scheduling, tracking progress, and collaboration among team members.

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it "Online Examination System – SPM **Project."**

Step2:

Create a **Space** inside the workspace named **"Online Examination System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, and Goals**.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all project activities.

Step4:

Create different **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, and Documentation.**

Step5:

Add tasks under the **Requirement Analysis** list such as gathering functional requirements, gathering non-functional requirements, preparing the SRS, and validating requirements.

Step6:

Add tasks under the **System Design** list including database design, UI/UX design, system architecture design, and security design.

Step7:

Add development tasks such as **user authentication module, question bank module, exam scheduling module, evaluation module, and result generation module.**

Step8:

Add testing tasks including **unit testing, integration testing, system testing, and bug fixing** to ensure the system works correctly.

Step9:

Create deployment tasks such as **server setup, application deployment, user acceptance testing, and go-live preparation.**

Step10:

Assign tasks to team members such as **Project Manager, Developer, Tester, and Documentation Lead**, and set priorities and due dates for each task.

Step11:

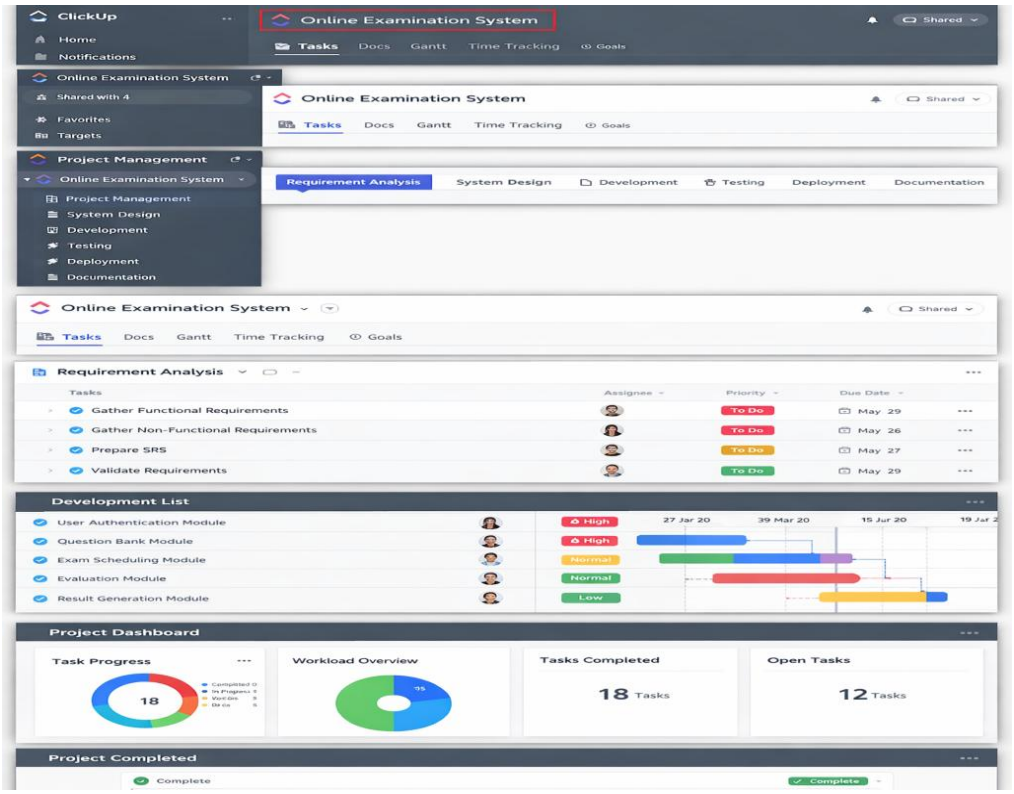
Use the **Gantt Chart view** and **Dashboard** to schedule tasks, monitor progress, track workload, and manage project timelines.

Step12:

Review the project, verify that all tasks are completed, prepare the final documentation, and close the project successfully.

Outcome

The Online Examination System project is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles



Result

Thus, the project management activities for developing an Online Examination System using Click Up were successfully performed.

EX NO:2 **NAME :**
DATE : **REG NO:**

BUILDING A MOBILE APP FOR SMART AGRICULTURE MONITORING

Aim

To plan, organize, schedule, monitor, and control the development of a Mobile Application for Smart Agriculture Monitoring using the ClickUp project management tool, following standard Software Project Management practices.

Software / Tools Required

- ClickUp (Web / Desktop version)
- Web Browser
- Internet Connection
- Project Requirement Specification

Project Description

The Smart Agriculture Monitoring Mobile App enables farmers to monitor soil moisture, temperature, humidity, crop health, and irrigation status using IoT sensors and mobile technology. ClickUp is used to manage project activities, including task scheduling, resource allocation, progress tracking, and documentation.

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Smart Agriculture Monitoring App – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Smart Agriculture App."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, and Time Tracking** for effective project management.

Step3:

Create a **Folder** named **"Project Planning & Management"** inside the space to organize all the project tasks related to different development phases.

Step4:

Create **Lists** representing the software development life cycle phases such as **Requirement Analysis, System Design, Mobile App Development, IoT Integration, Testing & Validation, Deployment & Maintenance, and Documentation.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying functional requirements, identifying non-functional requirements, analyzing sensor data requirements, and preparing the Software Requirement Specification (SRS).

Step6:

Add design-related tasks such as **mobile app UI/UX design, database schema design, system architecture design, and cloud & IoT integration design** under the System Design list.

Step7:

Add development tasks such as **user authentication module, dashboard visualization module, sensor data monitoring module, alert and notification module, and weather forecast integration** under the Mobile App Development list.

Step8:

Create tasks related to **IoT Integration** such as sensor data acquisition, API integration, real-time data synchronization, and data security implementation.

Step9:

Add testing tasks such as **unit testing, integration testing, mobile app performance testing, sensor data validation, and bug fixing** to ensure the system works properly.

Step10:

Create deployment tasks including **cloud deployment, mobile app publishing, user acceptance testing, and maintenance planning** to prepare the system for real-world usage.

Step11:

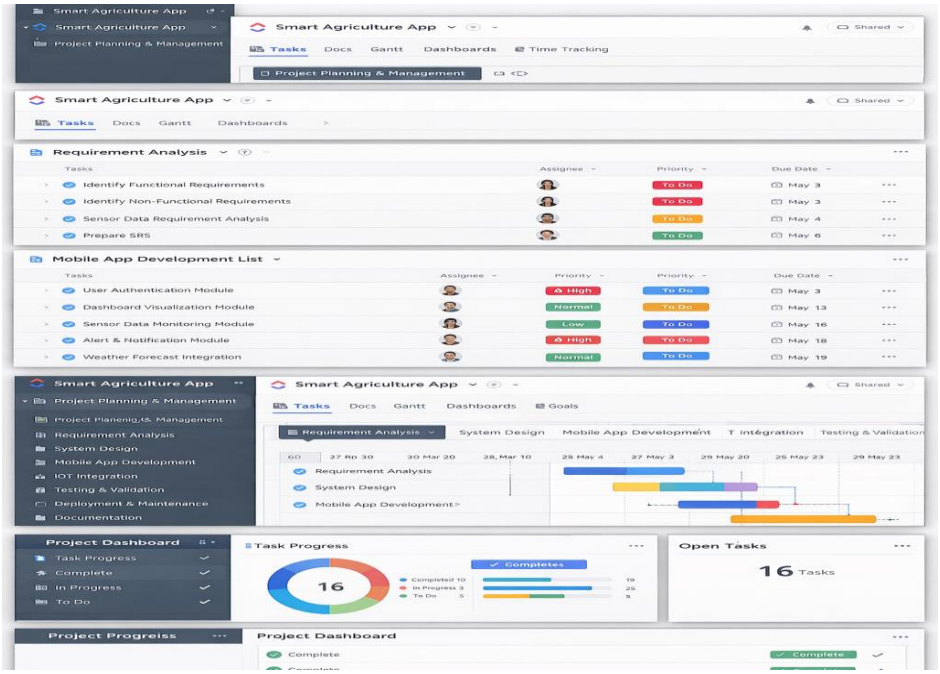
Assign tasks to team members such as **Project Manager, Mobile App Developer, IoT Engineer, Tester, and Documentation Team**, and set task priorities and due dates for proper scheduling.

Step12:

Use **Gantt Chart and Dashboards** to schedule tasks, monitor project progress, track workload, and finally review the project, verify completion of all tasks, and close the project successfully.

Outcome

The Smart Agriculture Monitoring Mobile App project is systematically planned, managed, and monitored using ClickUp, demonstrating effective use of Software Project Management techniques.



Result

Thus, the project management activities for building a Smart Agriculture Monitoring Mobile App using ClickUp were successfully performed.

EX NO:3 **NAME:**
DATE : **REG NO:**

DEVELOPING A HOSPITAL MANAGEMENT SYSTEM (HMS)

Aim

To plan, schedule, monitor, and control the development of a **Hospital Management System (HMS)** using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Hospital Management System includes the following modules:

- Patient Registration
- Appointment Scheduling
- Doctor Management
- Inpatient & Outpatient Management
- Billing and Payment
- Pharmacy Management
- Laboratory Management
- Report Generation
- Admin Dashboard

The system improves hospital efficiency and reduces manual errors.

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Hospital Management System – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Hospital Management System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to manage the project effectively.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all the project activities related to the system development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, defining system constraints, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, UI/UX design, system architecture design, security design, and role-based access design**.

Step7:

Add development tasks such as **patient registration module, appointment scheduling module, doctor management module, billing module, pharmacy module, laboratory module, report generation module, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the system functions properly.

Step9:

Create deployment tasks such as **server setup, database deployment, application**

deployment, user acceptance testing, and go-live preparation.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Developer, Tester, Database Administrator, and Documentation Lead**, and set task priorities and due dates.

Step11:

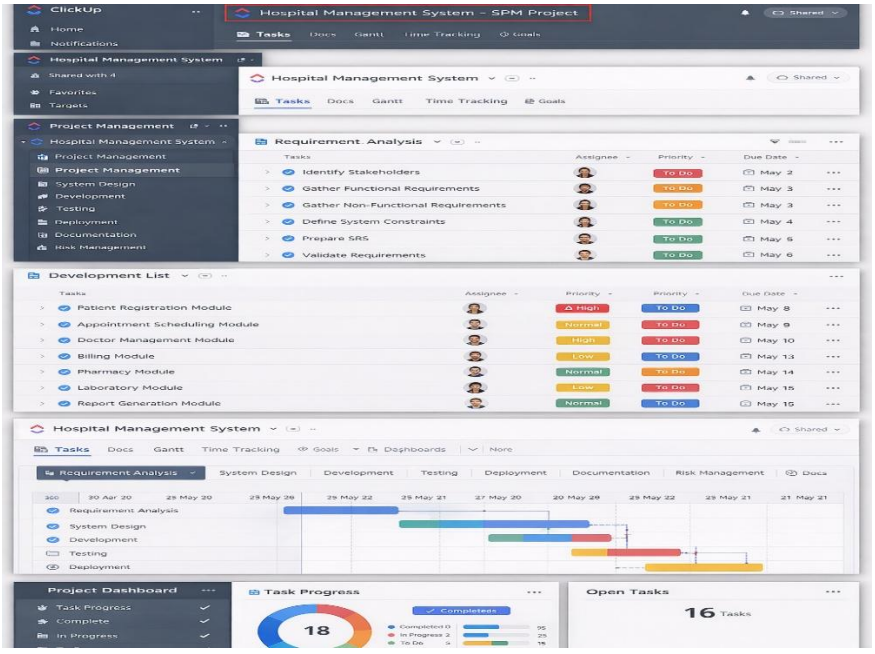
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track workload distribution, and identify delayed tasks.

Step12:

Review the project by verifying that all tasks are completed, prepare the final documentation and reports, archive completed tasks, and close the project successfully.

Outcome

The Hospital Management System project is successfully planned, scheduled, monitored, and controlled using ClickUp by applying Software Project Management principles.



Result

Thus, the project management activities for developing a Hospital Management System using ClickUp were successfully completed and verified.

EX NO:4 **NAME:**
DATE : **REG NO:**

IMPLEMENTING AN E-GOVERNANCE PORTAL FOR A MUNICIPALITY

Aim

To plan, schedule, monitor, and control the implementation of an E-Governance Portal for a Municipality using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Municipal E-Governance Portal aims to digitize municipal services and provide transparent, efficient, and user-friendly online access to citizens.

Key modules include:

- Citizen Registration and Login
- Service Request Management
- Online Payment System
- Complaint Management System
- Document Upload & Verification
- Admin Dashboard
- Reports and Analytics

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"E-Governance Portal – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Municipal E-Governance Portal."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** for effective project management.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all the project activities related to system development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, analyzing legal and compliance requirements, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, UI/UX design, system architecture design, security design, role-based access control design, and payment gateway integration design**.

Step7:

Add development tasks such as **citizen registration and login module, service request module, online payment integration, complaint management system, document upload system, notification system, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the system works properly.

Step9:

Create deployment tasks such as **server configuration, database deployment, application deployment, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Frontend Developer, Backend Developer, Database Administrator, Tester, and Documentation Lead**, and set priorities and due dates for each task.

Step11:

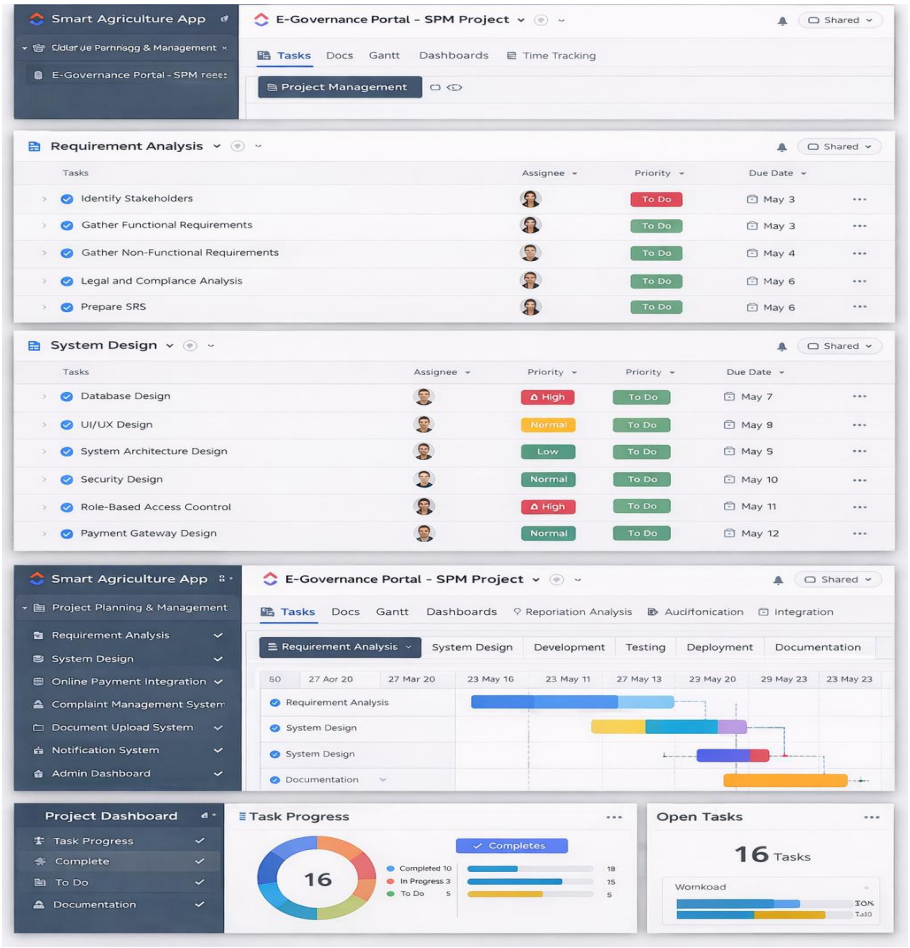
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track workload distribution, and identify delayed tasks.

Step12:

Review the project by verifying that all tasks are completed, prepare final documentation and reports, archive completed tasks, and close the project successfully.

OUTCOME

The E-Governance Portal project for the Municipality is successfully planned, scheduled, monitored, and controlled using ClickUp by applying Software Project Management principles.



Result

Thus, the project management activities for implementing an E-Governance Portal for a Municipality using ClickUp were successfully completed and verified

EX NO:5 **NAME:**

DATE : **REG NO:**

BUILDING A CLOUD-BASED LEARNING MANAGEMENT SYSTEM (LMS)

Aim

To plan, schedule, monitor, and control the development of a **Cloud-Based Learning Management System (LMS)** using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document
- Cloud Platform (AWS / Azure / GCP – for reference)

Project Description

The Cloud-Based LMS includes the following modules:

- User Registration and Authentication
- Course Management
- Content Upload (Video, PDF, PPT)
- Assignment Submission
- Online Assessment
- Grading and Feedback

- Discussion Forum
- Notifications
- Admin Dashboard
- Reporting and Analytics

The system supports Students, Faculty, and Administrators.

Procedure

Step1:
Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Cloud-Based LMS – SPM Project."**

Step2:
Create a **Space** inside the workspace named **"Learning Management System (LMS)."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to support project management activities.

Step3:
Create a **Folder** named **"Project Management"** inside the space to organize all project tasks related to the LMS development.

Step4:
Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:
Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, analyzing cloud hosting requirements, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:
Add design tasks under the **System Design** list including **database design, UI/UX design, cloud architecture design, API design, security and authentication design, and scalability design**.

Step7:

Add development tasks such as **user authentication module, course management module, content upload module, assignment submission module, online examination module, grading system, discussion forum, notification system, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the system works efficiently.

Step9:

Create deployment tasks such as **cloud server setup, database deployment, application deployment, load testing, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Frontend Developer, Backend Developer, Cloud Engineer, Database Administrator, Tester, and Documentation Lead**, and set task priorities and due dates.

Step11:

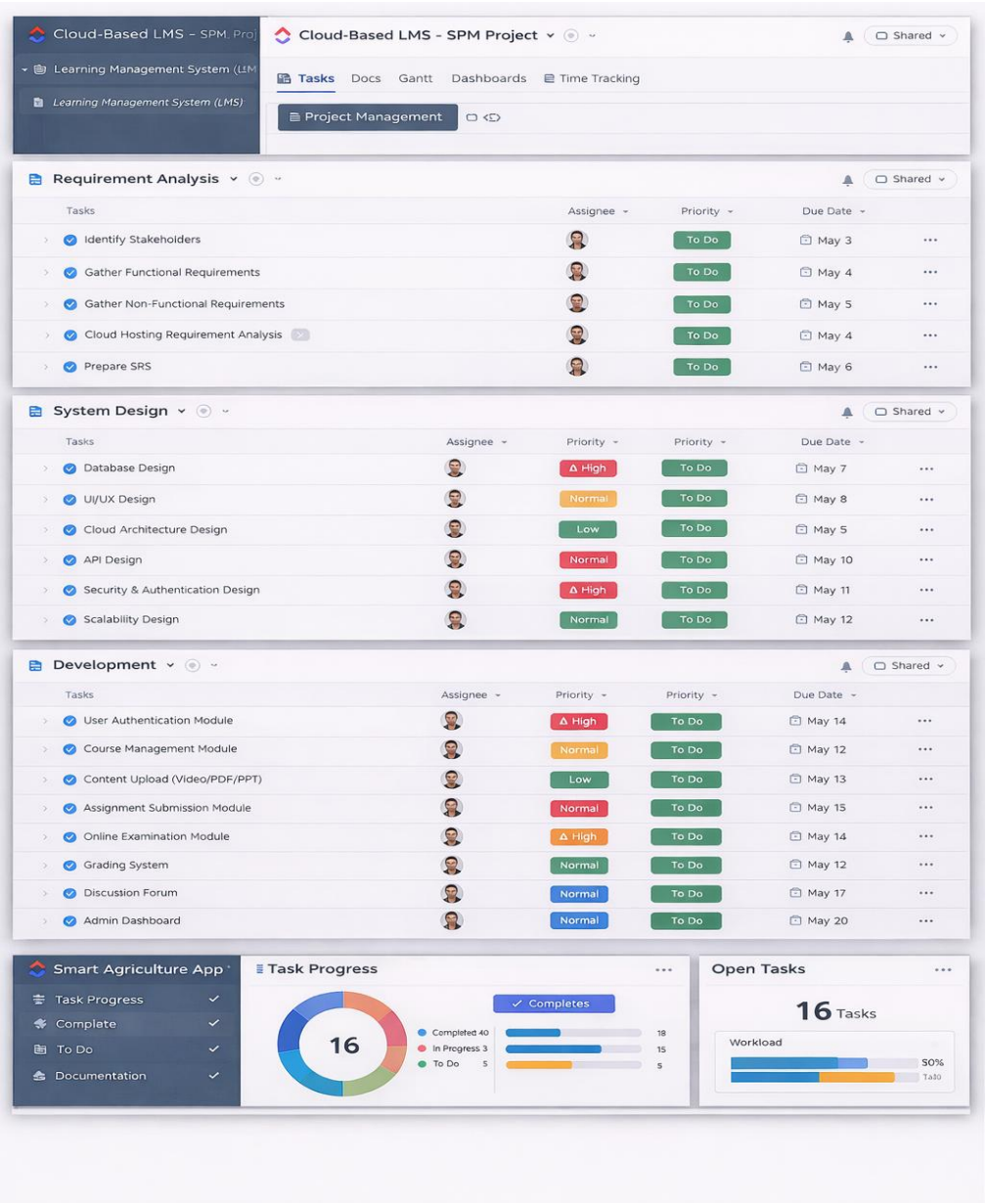
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track team workload, and manage project timelines.

Step12:

Finally, review the project to ensure all tasks are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The Cloud-Based Learning Management System project is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective Software Project Management practices.



Result

Thus, the project management activities for building a Cloud-Based Learning Management System using ClickUp were successfully completed and verified.

EX NO:6 **NAME:**

DATE: **REG NO:**

DEVELOPING A STUDENT ATTENDANCE AND PERFORMANCE MONITORING SYSTEM FOR A UNIVERSITY

Aim

To plan, schedule, monitor, and control the development of a **Student Attendance and Performance Monitoring System (SAPMS)** for a university using the ClickUp project management tool by applying standard Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Student Attendance and Performance Monitoring System enables universities to:

- Record daily student attendance
- Track internal assessment marks
- Monitor academic performance trends
- Generate attendance and performance reports

Provide dashboards for students, faculty, and administrators

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Student Attendance & Performance Monitoring – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Student Attendance and Performance Monitoring System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to manage the project effectively.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all project tasks related to system development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, defining attendance rules and evaluation criteria, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, UI/UX design, system architecture design, role-based access design, and security and data privacy design**.

Step7:

Add development tasks such as **student registration module, faculty management module, attendance recording module, performance evaluation module, report generation module, notification system, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the system functions correctly.

Step9:

Create deployment tasks such as **server setup, database deployment, application deployment, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Developer, Tester, Database Administrator, and Documentation Lead**, and set task priorities and due dates.

Step11:

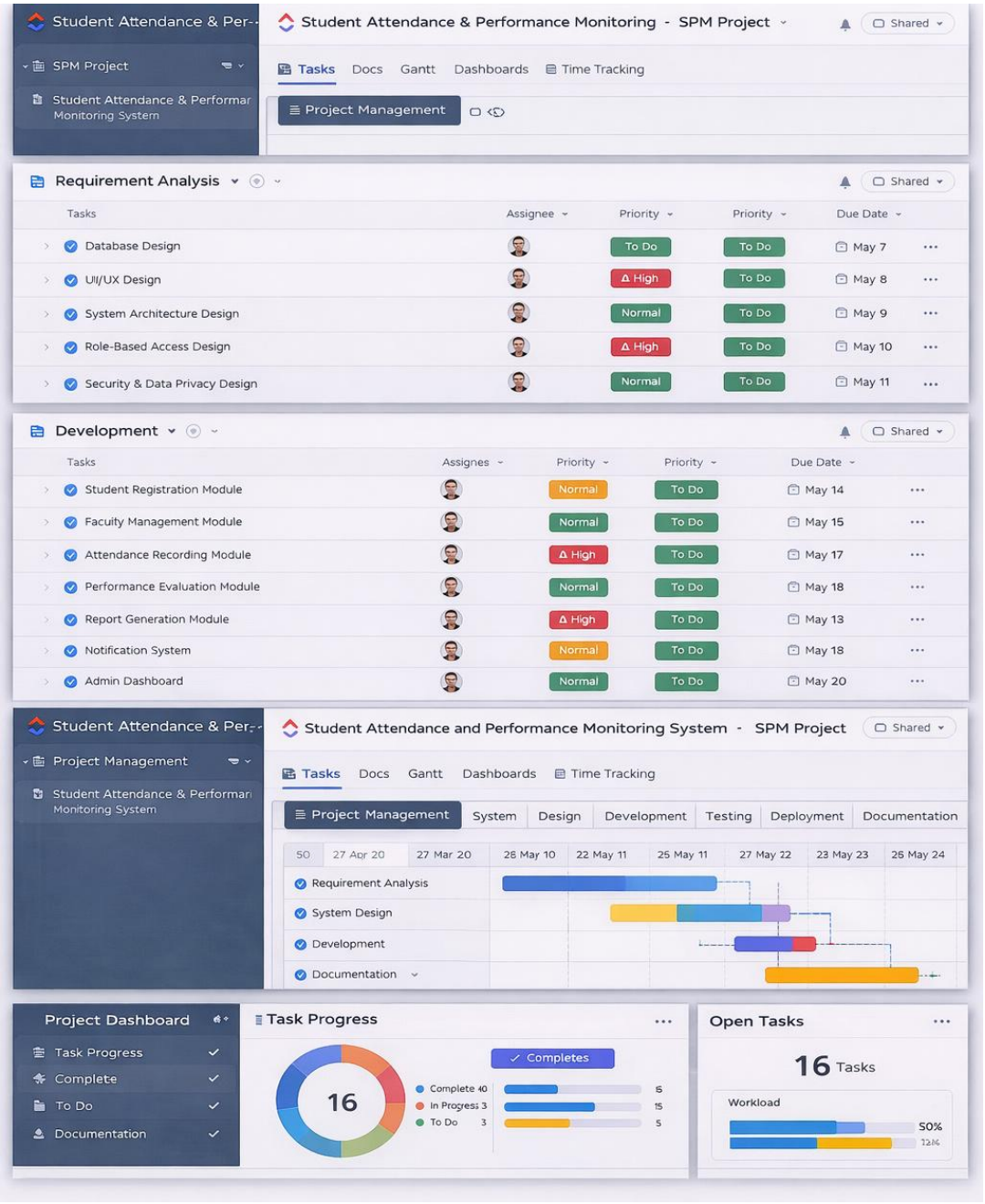
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track team workload, and manage project timelines.

Step12:

Finally, review the project to ensure that all tasks are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The Student Attendance and Performance Monitoring System project is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles.



Result

Thus, the project management activities for developing a **Student Attendance and Performance Monitoring System for a University** using ClickUp were successfully completed and verified.

EX NO:7 **NAME:**

DATE : **REG NO:**

DEVELOP A MOBILE E-COMMERCE APPLICATION THAT SUPPORTS PRODUCT LISTINGS, USER AUTHENTICATION, PAYMENT GATEWAY INTEGRATION AND REAL-TIME ORDER TRACKING.

Aim

To plan, schedule, monitor, and control the development of a **Mobile E-Commerce Application** that supports product listings, user authentication, payment gateway integration, and real-time order tracking using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Mobile E-Commerce Application provides an online shopping platform with the following functionalities:

- User registration and login
- Product browsing and search
- Shopping cart management
- Secure payment processing
- Order placement and real-time tracking
- Notifications and order history

Admin dashboard for product and order management

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Mobile E-Commerce Application – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Mobile E-Commerce Application."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to support project management activities.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all project tasks related to system development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, analyzing payment and security requirements, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, mobile app UI/UX design, system architecture design, API design, payment gateway integration design, and security and encryption design**.

Step7:

Add development tasks such as **user authentication module, product listing and search module, shopping cart module, payment gateway integration, order management module, real-time order tracking module, notification system, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the application works efficiently.

Step9:

Create deployment tasks such as **server setup, database deployment, mobile application deployment, payment gateway testing, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Mobile App Developer, Backend Developer, Database Administrator, Tester, and Documentation Lead**, and set task priorities and due dates.

Step11:

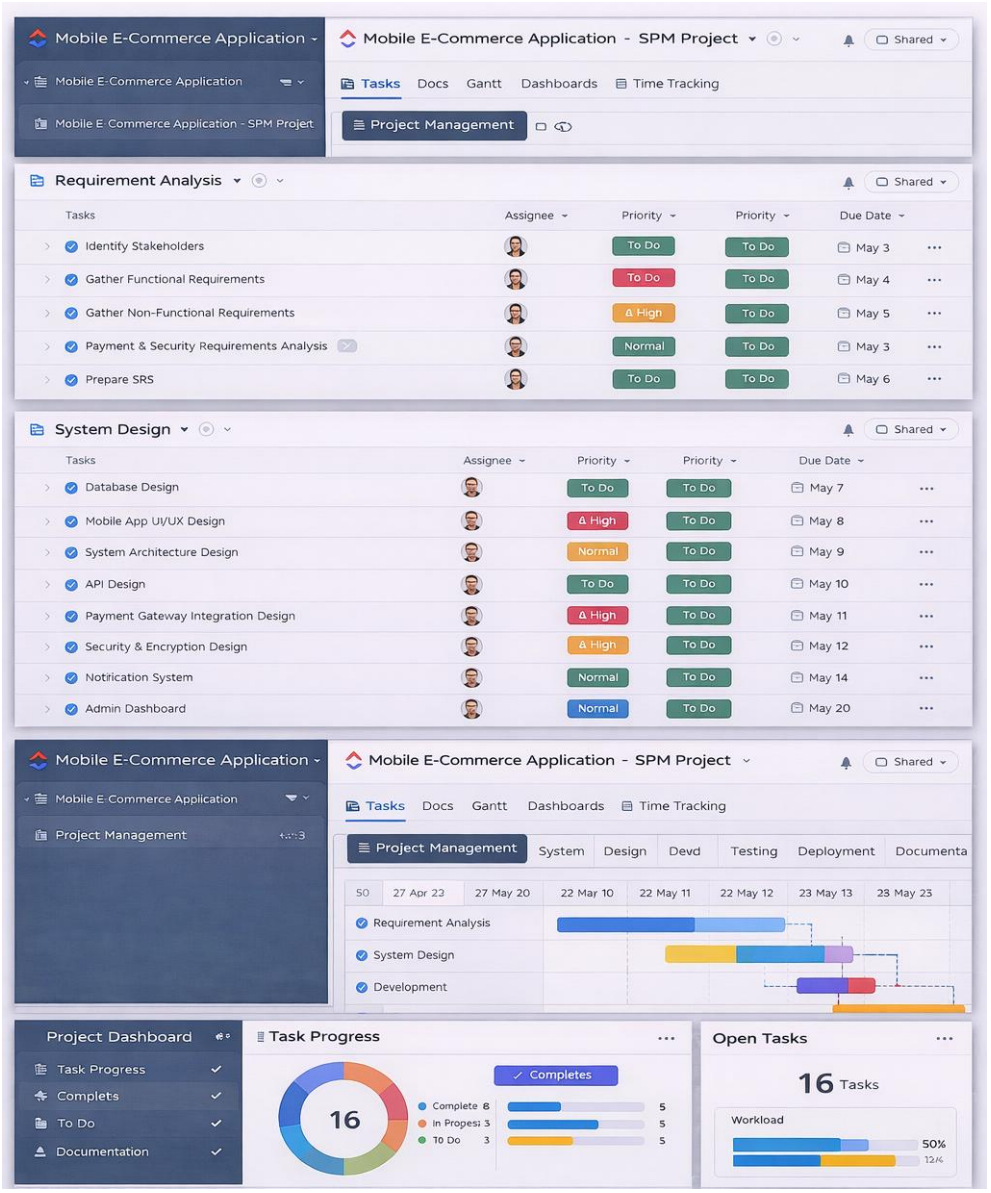
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track team workload, and manage project timelines.

Step12:

Finally, review the project to ensure that all tasks are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The Mobile E-Commerce Application project is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles.



Result

Thus, the project management activities for developing a **Mobile E-Commerce Application** using ClickUp were successfully completed and verified.

EX NO:8 **NAME:**
DATE : **REG NO:**

DEVELOPING AN ONLINE EXAMINATION SYSTEM FOR A GOVERNMENT EDUCATION BOARD

Aim

To plan, schedule, monitor, and control the development of an **Online Examination System (OES)** for a Government Education Board using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Online Examination System for a Government Education Board provides a centralized platform to conduct entrance exams, board exams, and recruitment tests with high security and scalability.

Major Modules

- Candidate Registration & Authentication
- Examination Scheduling
- Question Bank Management
- Secure Online Examination Interface
- Automated Evaluation
- Result Processing & Publishing
- Reports and Analytics
- Admin Dashboard

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Online Examination System – Government Board (SPM Project)."**

Step2:

Create a **Space** inside the workspace named **"Government Online Examination System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to manage project activities effectively.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all tasks related to the project development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, analyzing legal and security requirements, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, UI/UX design for the examination interface, system architecture design, secure authentication design, question bank management design, and audit logging design**.

Step7:

Add development tasks such as **candidate registration and login module, exam scheduling module, question bank management module, secure online examination interface, automated evaluation module, result processing module, notification system, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, load and performance testing, security testing, and bug fixing** to ensure the system operates securely and efficiently.

Step9:

Create deployment tasks such as **server and infrastructure setup, database deployment, application deployment, mock examination testing, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Backend Developer, Frontend Developer, Security Specialist, Tester, Database Administrator, and Documentation Lead**, and set task priorities and due dates.

Step11:

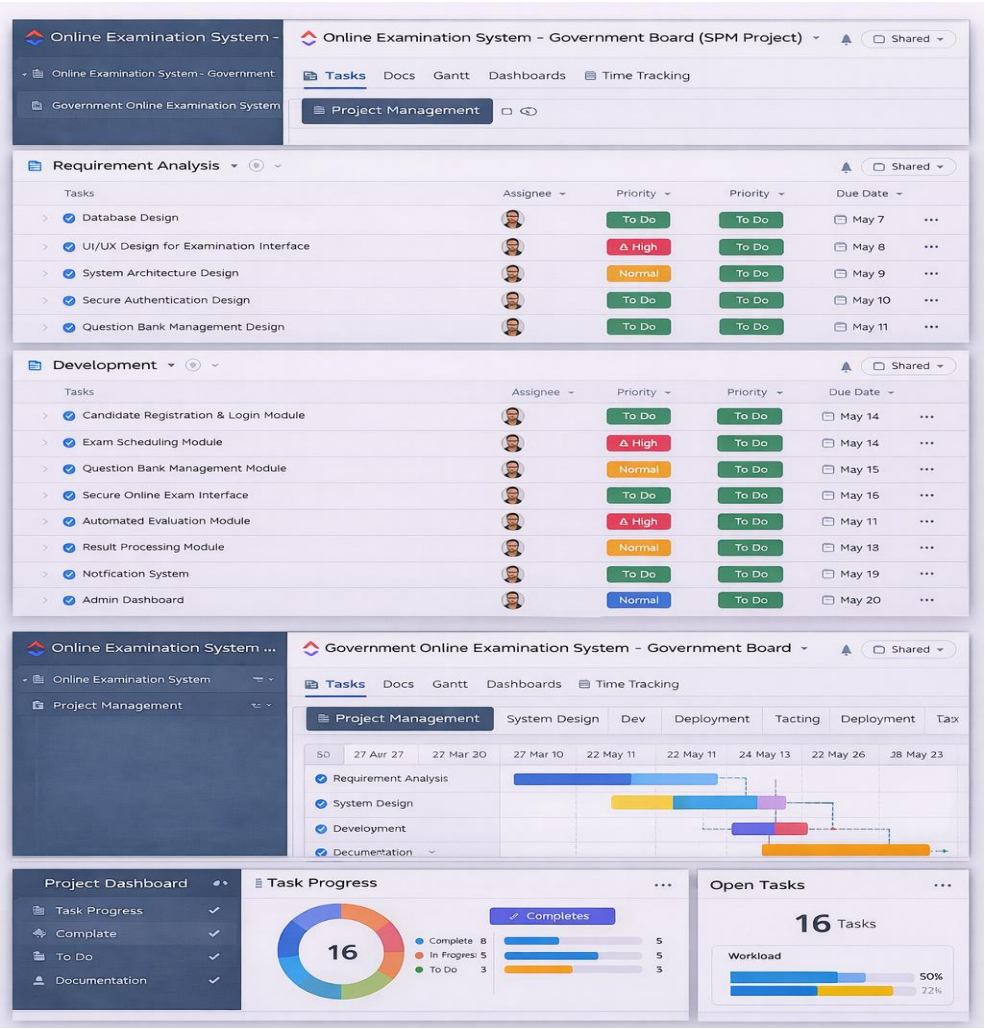
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track team workload, and manage the overall project timeline.

Step12:

Finally, review the project to ensure that all tasks are completed successfully, generate final reports, archive completed tasks, and close the project.

Outcome

The Online Examination System for a Government Education Board is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles.



Result

Thus, the project management activities for developing an **Online Examination System for a Government Education Board** using ClickUp were successfully completed and verified.

EX NO:9 **NAME:**

DATE: **REG NO:**

MANAGING THE DEVELOPMENT OF A LIBRARY AUTOMATION SYSTEM FOR A UNIVERSITY

Aim

To plan, schedule, monitor, and control the development of a **Library Automation System (LAS)** for a university using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Library Automation System provides a centralized platform to manage university library resources and services.

Major Modules

- User Registration and Authentication
- Book Catalog Management
- Issue and Return Management
- Reservation and Renewal
- Fine Calculation
- Search and Reporting
- Admin Dashboard

Procedure

Step1:

Open the ClickUp website using a web browser and create a new account or log in with an existing account. Create a new workspace and name it **"Library Automation System – SPM Project."**

Step2:

Create a **Space** inside the workspace named **"Library Automation System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard** to manage project activities effectively.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all project tasks related to system development.

Step4:

Create **Lists** representing the software development phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management.**

Step5:

Add tasks under the **Requirement Analysis** list such as identifying stakeholders, gathering functional and non-functional requirements, studying the existing library process, preparing the Software Requirement Specification (SRS), and validating the requirements.

Step6:

Add design tasks under the **System Design** list including **database design, UI/UX design, system architecture design, search and indexing design, and security and access control design**.

Step7:

Add development tasks such as **user authentication module, book catalog management module, issue and return module, reservation and renewal module, fine calculation module, report generation module, and admin dashboard**.

Step8:

Add testing tasks such as **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure the system works correctly.

Step9:

Create deployment tasks such as **server setup, database deployment, application deployment, user acceptance testing, and go-live preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Software Developer, Database Administrator, Tester, and Documentation Lead**, and set task priorities and due dates.

Step11:

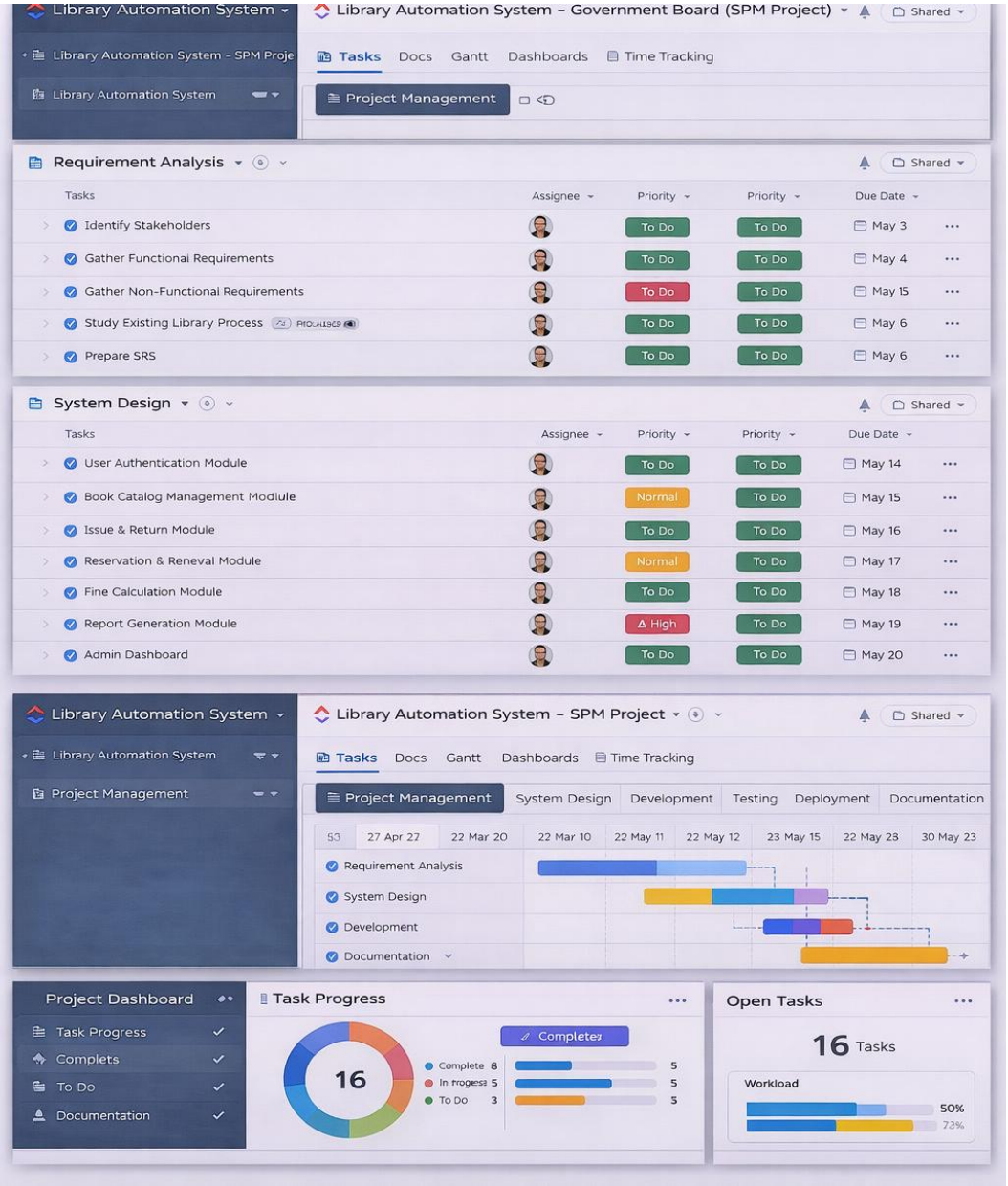
Use **Gantt Chart and Dashboard views** to schedule tasks, monitor project progress, track team workload, and manage the overall project timeline.

Step12:

Finally, review the project to ensure that all tasks are completed successfully, generate final reports, archive completed tasks, and close the project.

Outcome

The Library Automation System project is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles.



Result

Thus, the project management activities for managing the development of a **Library Automation System for a University** using ClickUp were successfully completed and verified.

EX NO:10 **NAME:**
DATE : **REG NO:**

DEVELOPING A REAL-TIME TRAFFIC MONITORING SYSTEM FOR A METROPOLITAN CITY

Aim

To plan, schedule, monitor, and control the development of a **Real-Time Traffic Monitoring System (RTTMS)** for a metropolitan city using the ClickUp project management tool by applying Software Project Management (SPM) principles.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Document

Project Description

The Real-Time Traffic Monitoring System provides a centralized platform for city authorities to monitor and manage traffic conditions.

Major Modules

- Traffic Data Collection
- Real-Time Traffic Analysis
- Congestion Detection
- Incident & Accident Detection
- Traffic Signal Monitoring
- Route Optimization & Alerts
- Reports and Analytics
- Admin Dashboard

Procedure

Step1:

Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"Real-Time Traffic Monitoring System – SPM Project."**

Step2:

Create a **Space** named **"Real-Time Traffic Monitoring System."** Enable features such as **Tasks, Gantt Chart, Docs, Time Tracking, Goals, and Dashboard**.

Step3:

Create a **Folder** named **"Project Management"** inside the space to organize all project activities.

Step4:

Create **Lists** representing the project phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management**.

Step5:

Add tasks under **Requirement Analysis** such as identifying stakeholders, gathering functional and non-functional requirements, analyzing real-time data requirements, preparing the **SRS document**, and validating requirements.

Step6:

Add tasks under **System Design** including **database design, UI/UX design, system architecture design, data streaming and analytics design, integration with sensors and cameras, and security design**.

Step7:

Add development tasks such as **traffic data collection module, real-time traffic analysis module, congestion detection module, incident and accident detection module, route optimization and alert module, reporting and analytics module, and admin dashboard**.

Step8:

Add testing tasks including **unit testing, integration testing, system testing, performance and load testing, security testing, and bug fixing** to ensure system reliability.

Step9:

Create deployment tasks such as **server and cloud infrastructure setup, database deployment, application deployment, pilot testing in selected zones, user acceptance testing, and city-wide deployment preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Backend Developer, Frontend Developer, Data Engineer, Tester, System Administrator, and Documentation Lead**.

Step11:

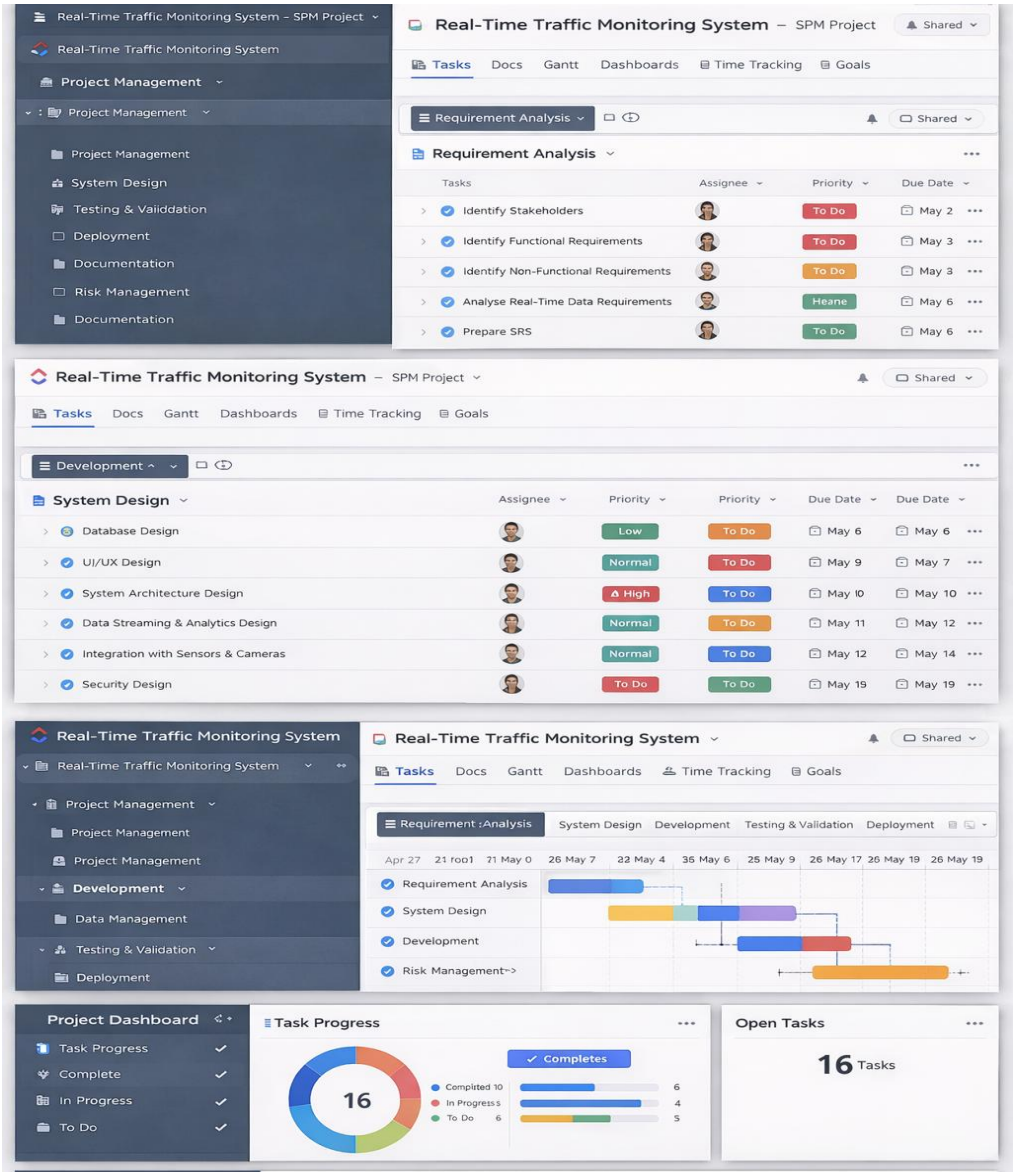
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, monitor progress, track team workload, and manage project timelines.

Step12:

Finally, review the project to ensure all tasks are completed, generate final reports, archive completed tasks, and close the project.

Outcome

The Real-Time Traffic Monitoring System for a metropolitan city is successfully planned, scheduled, monitored, and controlled using ClickUp, demonstrating effective application of Software Project Management principles.



Result

Thus, the project management activities for developing a **Real-Time Traffic Monitoring System for a Metropolitan City** using ClickUp were successfully completed and verified.

EX NO:11 **NAME:**

DATE: **REG NO:**

DEVELOPMENT OF A SMART CITY INFRASTRUCTURE MANAGEMENT SYSTEM (SCIMS) USING IoT AND CLOUD TECHNOLOGIES

Aim

To plan, schedule, monitor, and control the development of a **Smart City Infrastructure Management System (SCIMS)** that integrates **water supply, street lighting, and waste management** using **IoT and cloud technologies**, by applying Software Project Management (SPM) principles with the ClickUp tool.

Software / Tools Required

- ClickUp (Web/Desktop)
- Web Browser
- Internet Connection
- Cloud Platform (Conceptual): Amazon Web Services / Microsoft Azure
- IoT Devices (Conceptual): Sensors, Smart Meters, Controllers
- Software Requirement Specification (SRS) Template

Project Description

The SCIMS provides a unified dashboard for municipal authorities to manage multiple city utilities.

Major Integrated Modules

- **Water Supply Monitoring** (Flow, Leakage, Consumption)
- **Smart Street Lighting** (Auto ON/OFF, Energy Monitoring)
- **Waste Management** (Bin Level Monitoring, Route Planning)
- **IoT Data Collection Layer**
- **Cloud Data Storage & Analytics**
- **Admin Dashboard & Alerts System**
- **Reports and Predictive Maintenance**

Procedure

Step1:

Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"Smart City Infrastructure Management System – SPM Project."**

Step2:

Create a **Space** named **"Smart City Infrastructure Management System."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, Time Tracking, and Goals**.

Step3:

Create a **Folder** named **"Project Lifecycle Management"** inside the space to organize all project management activities.

Step4:

Create **Lists** representing project phases such as **Requirement Analysis, System Design, IoT & Cloud Architecture, Development, Testing, Deployment, Documentation, and Risk Management**.

Step5:

Add tasks under **Requirement Analysis** such as identifying stakeholders, gathering functional and non-functional requirements, analyzing IoT data requirements, defining cloud storage needs, and preparing the **Software Requirement Specification (SRS)** document.

Step6:

Add tasks under **System Design** including **system architecture design, database schema design, dashboard UI/UX design, communication protocol design, and security and access control design**.

Step7:

Add development tasks such as **water supply monitoring module, smart street lighting control module, waste management monitoring module, IoT data ingestion service, cloud analytics module, and admin dashboard development**.

Step8:

Add testing tasks including **unit testing, integration testing with IoT data, system testing, performance testing, security testing, and bug fixing**.

Step9:

Create deployment tasks such as **cloud infrastructure setup, IoT device registration, application deployment, pilot testing in selected city zones, user acceptance testing, and city-wide deployment planning**.

Step10:

Assign tasks to team members such as **Project Manager, System Analyst, IoT Engineer, Cloud Engineer, Backend Developer, Frontend Developer, Tester, DevOps Engineer, and Documentation Lead**.

Step11:

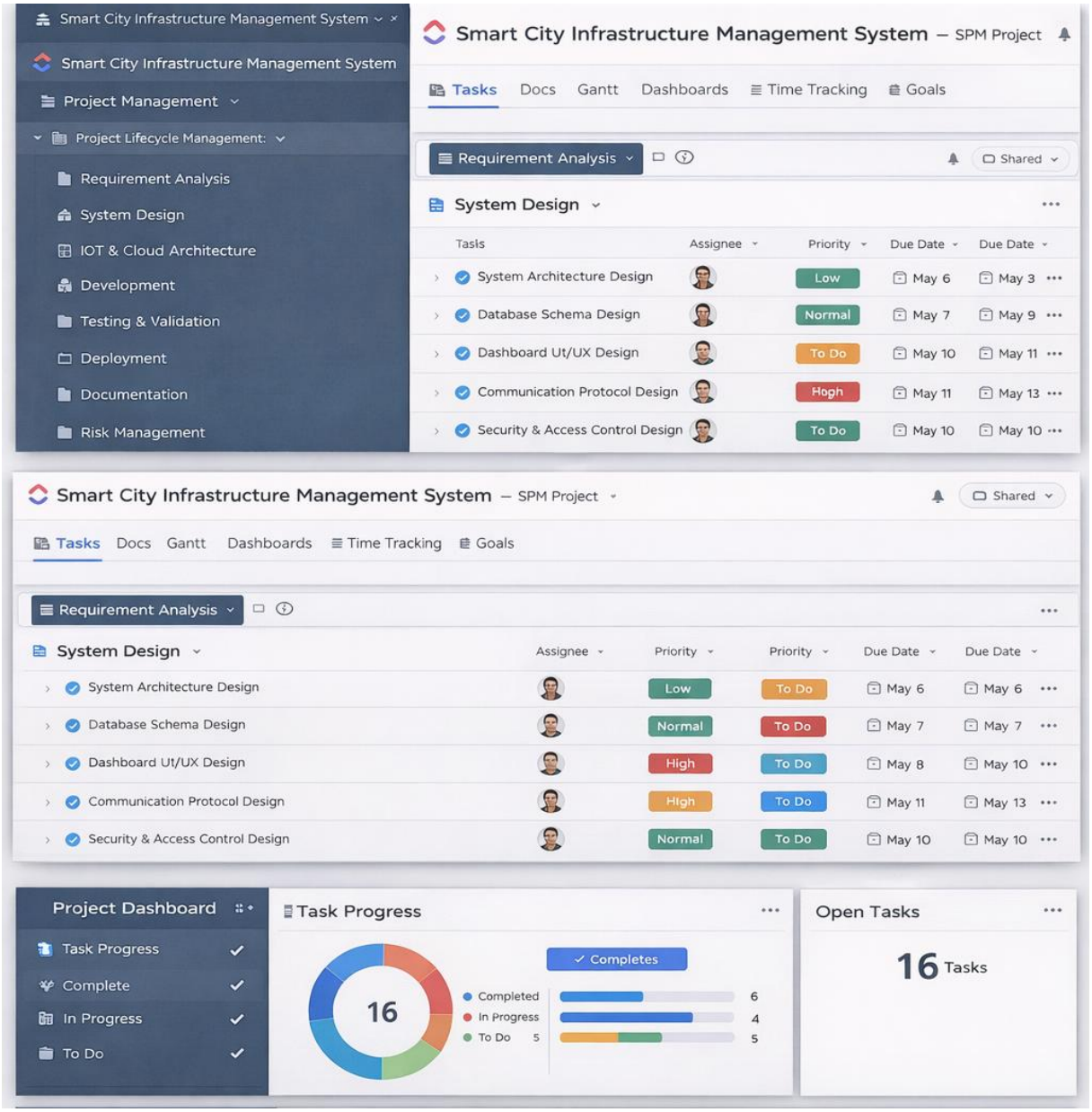
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, monitor project progress, track team workload, and manage timelines effectively.

Step12:

Finally, review the project to verify that all deliverables are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The Smart City Infrastructure Management System integrating water supply, street lighting, and waste management is successfully planned and managed using Software Project Management techniques.



Result

Thus, the development and management of a **Smart City Infrastructure Management System using IoT and Cloud Technologies** were successfully carried out using ClickUp.

EX NO:12 **NAME:**

DATE: **REG NO:**

DEVELOPMENT OF AN E-COMMERCE WEBSITE FOR A CLIENT

Aim

To plan, schedule, monitor, and control the development of an **E-Commerce Website for a client** by applying **Software Project Management (SPM)** principles using the ClickUp tool.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Software Requirement Specification (SRS) Template
- UI Wireframing Tool (conceptual)

Project Description

The project aims to develop a scalable and secure **E-Commerce Website** tailored to the client's business needs.

Major Modules

- User Registration & Authentication
- Product Catalog Management
- Shopping Cart
- Payment Gateway Integration
- Order Management
- Delivery & Order Tracking
- Admin Panel
- Reports & Analytics

Procedure

Step1:

Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"E-Commerce Website Development – SPM Project."**

Step2:

Create a **Space** named **"E-Commerce Website Project."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, and Time Tracking**.

Step3:

Create a **Folder** named **"Project Lifecycle"** inside the space to organize the entire project workflow.

Step4:

Create **Lists** representing project phases such as **Requirement Analysis, System Design, Development, Testing, Deployment, Documentation, and Risk Management**.

Step5:

Add tasks under **Requirement Analysis** such as conducting client meetings, gathering functional and non-functional requirements, identifying business rules, defining payment and security requirements, and preparing the **Software Requirement Specification (SRS)** document.

Step6:

Add tasks under **System Design** including **system architecture design, database schema design, UI/UX wireframe design, security and access control design, and payment workflow design**.

Step7:

Add development tasks such as **user authentication module, product catalog module, shopping cart module, payment gateway integration module, order and delivery management module, and admin panel development**.

Step8:

Add testing tasks including **unit testing, integration testing, system testing, security testing, performance testing, and bug fixing** to ensure system quality.

Step9:

Create deployment tasks such as **server setup, database deployment, application deployment, test environment validation, client review and approval, and production release**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Backend Developer, Frontend Developer, Tester, DevOps Engineer, and Documentation Lead**.

Step11:

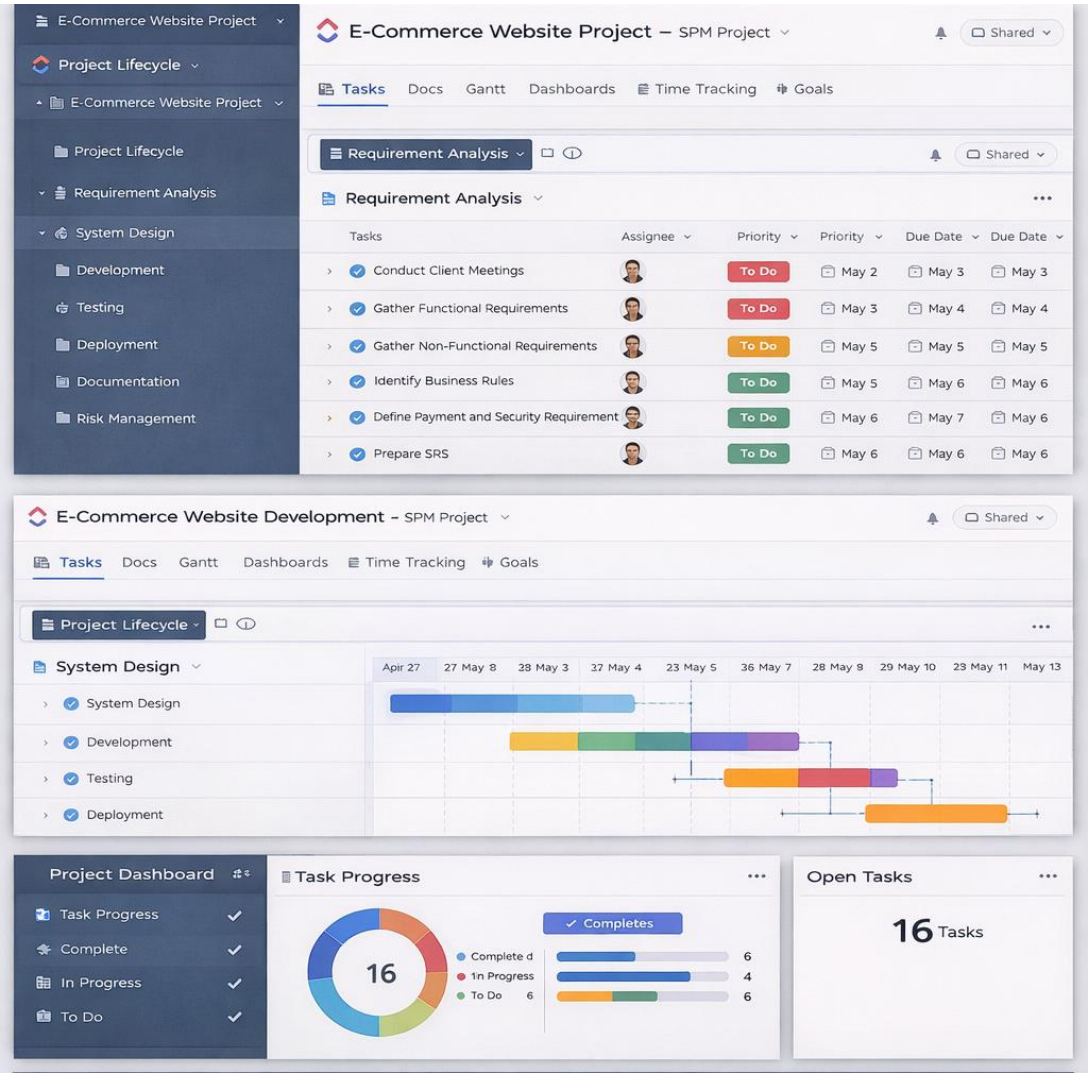
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, track project progress, monitor team workload, and manage project timelines.

Step12:

Finally, review the project to verify that all deliverables are completed, obtain client acceptance, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The E-Commerce Website project is successfully planned, scheduled, monitored, and controlled using Software Project Management techniques.



Result

Thus, the project management activities for developing an **E-Commerce Website for a client** were successfully completed using ClickUp.

EX NO:13 **NAME:**
DATE: **REG NO:**

BUILT THE MULTINATIONAL SOFTWARE FIRM, TO MANAGING A GLOBAL PROJECT TO DEVELOP A CLOUD-BASED HEALTHCARE PLATFORM INVOLVING TEAMS FROM THE U.S AND INDIA

Aim

To plan, coordinate, schedule, monitor, and control a **global software project** for developing a **cloud-based healthcare platform** in a **multinational software firm**, involving distributed teams from the United States and India, using **Software Project Management (SPM)** principles and the ClickUp tool.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Cloud Platform (Conceptual): Healthcare Cloud Environment
- Video Conferencing Tool (for global coordination – conceptual)
- Software Requirement Specification (SRS) Template

Project Description

The project aims to develop a **secure, scalable cloud-based healthcare platform** managed by a multinational software firm.

Major Functional Modules

- User Authentication & Role Management
- Electronic Health Records (EHR)
- Appointment Scheduling
- Telemedicine & Video Consultation
- Billing & Insurance Processing
- Analytics & Reports
- Admin Dashboard

Procedure

Step1:

Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"Global Healthcare Platform – SPM Project."**

Step2:

Create a **Space** named **"Cloud-Based Healthcare Platform."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, and Time Tracking** to manage the global project activities.

Step3:

Create a **Folder** named **"Global Project Management"** inside the space to organize the entire project workflow.

Step4:

Create **Lists** representing project phases such as **Global Requirement Analysis, System & Cloud Architecture, Development (India Team), Integration & Testing, Deployment & Release, Documentation, and Risk & Compliance Management**.

Step5:

Add tasks under **Global Requirement Analysis** such as identifying stakeholders, gathering functional and non-functional requirements, analyzing healthcare compliance requirements, preparing the **Software Requirement Specification (SRS)** document, and validating the requirements.

Step6:

Add tasks under **System & Cloud Architecture** including **global system architecture design, cloud infrastructure design, database and security design, API and integration design, and authentication and access control design**.

Step7:

Add development tasks such as **user authentication module, electronic health records (EHR) module, appointment scheduling module, telemedicine module, billing and insurance module, and admin dashboard development**.

Step8:

Add testing tasks including **integration testing, system testing, performance testing, security and compliance testing, and bug tracking and resolution**.

Step9:

Create deployment tasks such as **cloud environment setup, application deployment, data migration if required, user acceptance testing, and global release planning**.

Step10:

Assign tasks to team members such as **Global Project Manager, Product Owner, System Architect, Backend Developers, Frontend Developers, QA Engineers, DevOps Engineer, and Documentation Lead**.

Step11:

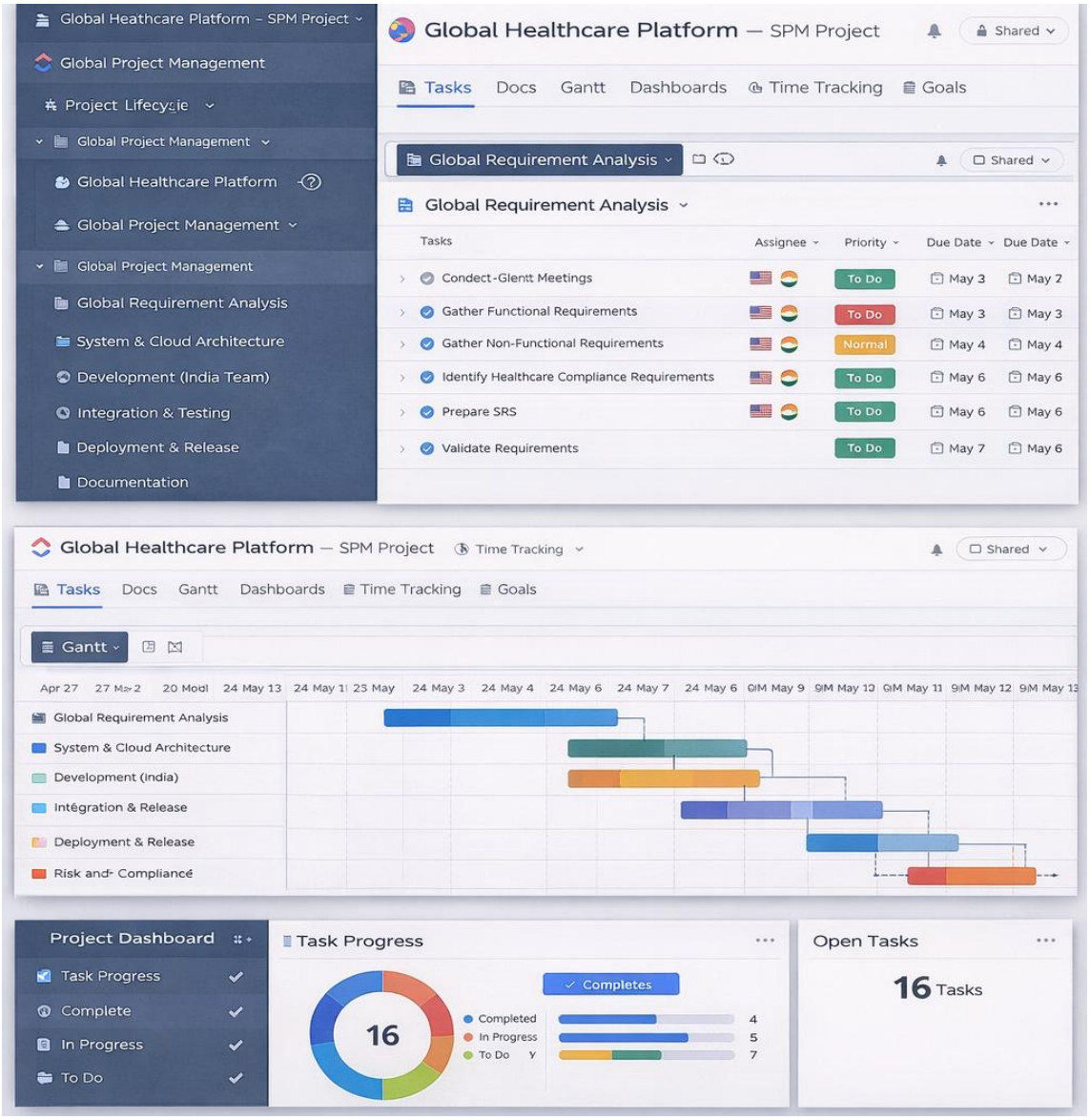
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, coordinate work between the U.S. and India teams, monitor progress, and track team workload.

Step12:

Finally, review the project to verify that all deliverables are completed, obtain stakeholder approval, generate final reports, archive project artifacts, and close the project successfully.

Outcome

The multinational project for developing a **cloud-based healthcare platform** was successfully planned and managed by coordinating global teams using Software Project Management practices.



Result

Thus, the global project management activities for a **cloud-based healthcare platform involving teams from the U.S. and India** were successfully completed using ClickUp.

EX NO:14 **NAME:**

DATE: **REGNO:**

DEVELOPMENT OF A CLOUD-BASED PROJECT MANAGEMENT TOOL FOR REMOTE TEAM COLLABORATION

Aim

To plan, schedule, monitor, and control the development of a **cloud-based project management tool** designed to help **remote teams collaborate efficiently**, by applying **Software Project Management (SPM)** principles using the ClickUp tool.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Cloud Platform (Conceptual)
- Software Requirement Specification (SRS) Template
- Collaboration Tools (conceptual: chat, video, notifications)

Project Description

The project aims to develop a **cloud-based project management tool** that supports seamless collaboration among remote and distributed teams across different time zones.

Major Functional Modules

- Team & Role Management
- Task Creation and Assignment
- Project Planning & Scheduling
- Real-Time Collaboration & Notifications
- File Sharing & Document Management
- Progress Tracking & Reports
- Admin Dashboard

Procedure

Step1:

Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"Cloud-Based Project Management Tool – SPM Project."**

Step2:

Create a **Space** named **"Remote Collaboration Project Tool."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, and Time Tracking**.

Step3:

Create a **Folder** named **"Project Lifecycle Management"** inside the space to organize the project activities.

Step4:

Create **Lists** representing the project phases such as **Requirement Analysis, System Design, Cloud Architecture, Development, Testing, Deployment, Documentation, and Risk Management**.

Step5:

Add tasks under **Requirement Analysis** such as identifying stakeholders, gathering functional and non-functional requirements, defining collaboration and notification requirements, identifying integration needs, and preparing the **Software Requirement Specification (SRS)** document.

Step6:

Add tasks under **System Design** including **system architecture design, database schema design, UI/UX design for the web dashboard, role-based access control design, and collaboration workflow design**.

Step7:

Add development tasks such as **user authentication module, project and task management module, collaboration and notification module, file sharing and document management module, reporting and analytics module, and admin dashboard development**.

Step8:

Add testing tasks including **unit testing, integration testing, system testing, performance testing, security testing, and bug fixing** to ensure system reliability.

Step9:

Create deployment tasks such as **cloud server setup, database deployment, application deployment, user acceptance testing, and production release**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Cloud Architect, Backend Developer, Frontend Developer, QA Engineer, DevOps Engineer, and Documentation Lead**.

Step11:

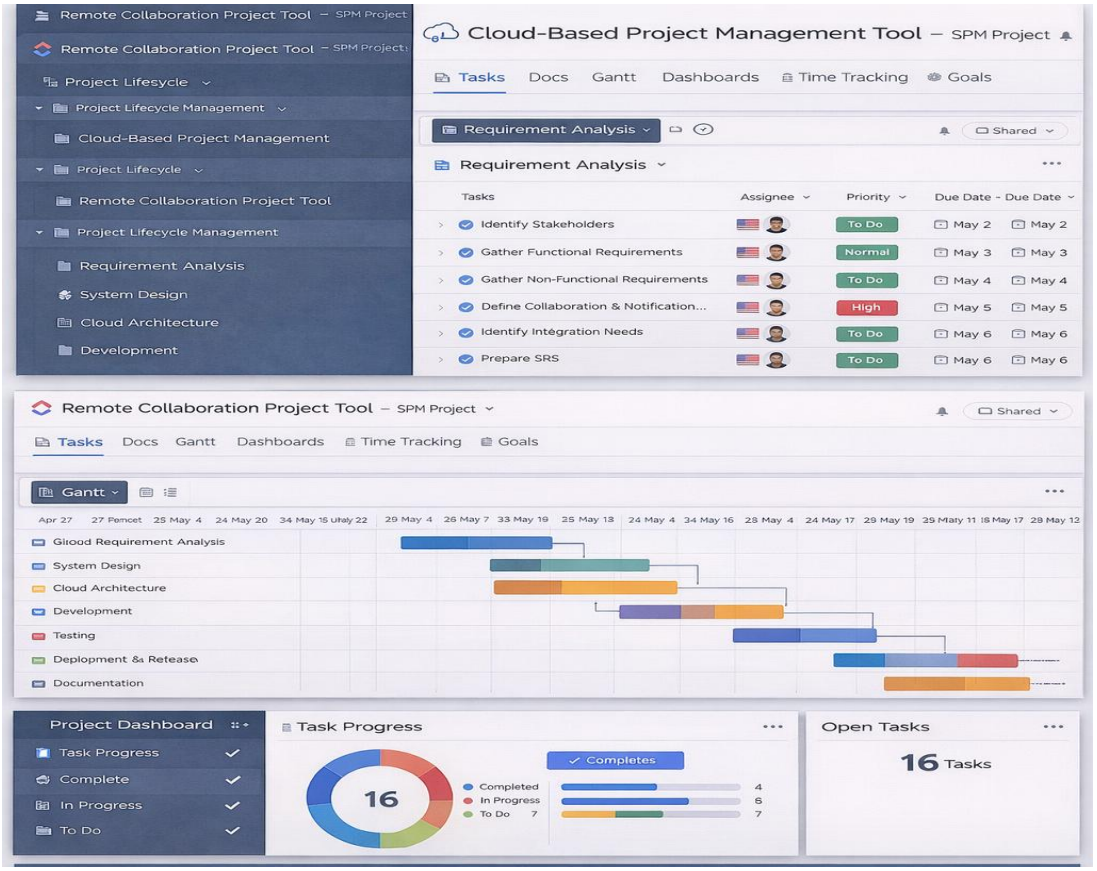
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, monitor project progress, track team workload, and manage timelines effectively.

Step12:

Finally, review the project to ensure all deliverables are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The cloud-based project management tool for remote collaboration was successfully planned, scheduled, and managed using Software Project Management techniques.



Result

Thus, the project management activities for developing a **cloud-based project management tool to support efficient remote team collaboration** were successfully completed using ClickUp.

EX NO:15 **NAME:**
DATE: **REG NO:**

DEVELOPMENT OF A MOBILE WELLNESS TRACKING APPLICATION FOR A NON-PROFIT ORGANIZATION

Aim

To plan, schedule, monitor, and control the development of a **mobile application for tracking personal wellness goals** for a **non-profit organization**, by applying **Software Project Management (SPM)** principles using the ClickUp tool.

Software / Tools Required

- ClickUp (Web/Desktop Version)
- Web Browser
- Internet Connection
- Mobile Application Development Environment (conceptual)
- Software Requirement Specification (SRS) Template
- UI Wireframing Tool (conceptual)

Project Description

The project aims to develop a **mobile wellness tracking application** that allows users to monitor personal wellness goals and view progress over time.

Major Functional Modules

- User Registration & Profile Management
- Wellness Goal Setting

- Daily Activity Tracking
- Reminders & Notifications
- Progress Visualization (Charts & Reports)
- Educational Content (Health Tips)
- Admin & Content Management Panel

Procedure

Step1:
Open a web browser and visit the ClickUp website. Sign in or create a new account and create a workspace named **"Wellness Tracking Mobile App – SPM Project."**

Step2:
Create a **Space** named **"Mobile Wellness Application."** Enable features such as **Tasks, Gantt Chart, Docs, Dashboards, and Time Tracking**.

Step3:
Create a **Folder** named **"Project Lifecycle Management"** inside the space to organize the project workflow.

Step4:
Create **Lists** representing the project phases such as **Requirement Analysis, System Design, Mobile App Development, Testing, Deployment, Documentation, and Risk Management**.

Step5:
Add tasks under **Requirement Analysis** such as identifying stakeholders, gathering functional and non-functional requirements, analyzing data privacy and user consent requirements, validating requirements, and preparing the **Software Requirement Specification (SRS)** document.

Step6:
Add tasks under **System Design** including **mobile application architecture design, database design for user data, UI/UX design, notification workflow design, and security and authentication design**.

Step7:

Add development tasks such as **user registration and login module, wellness goal tracking module, daily activity logging module, reminder and notification module, progress reports and charts module, and admin content management module**.

Step8:

Add testing tasks including **unit testing, integration testing, system testing, usability testing, performance testing, and bug fixing**.

Step9:

Create deployment tasks such as **mobile app build generation, deployment to app store, beta testing, user acceptance testing, and final release preparation**.

Step10:

Assign tasks to team members such as **Project Manager, Business Analyst, Mobile App Developer, UI/UX Designer, Tester, DevOps/Release Engineer, and Documentation Lead**.

Step11:

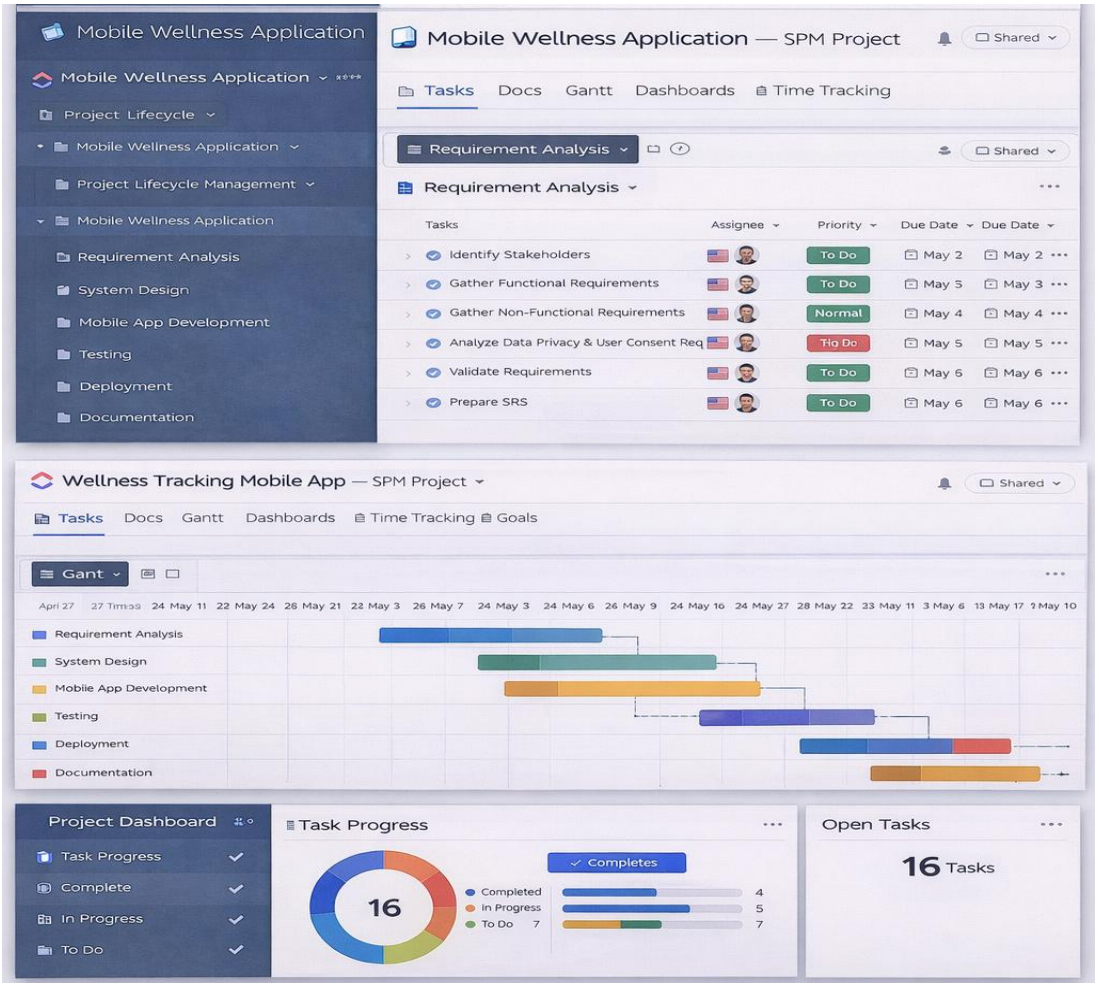
Use **Gantt Chart and Dashboard views** in ClickUp to schedule tasks, monitor project progress, track team workload, and manage project timelines.

Step12:

Finally, review the project to verify that all deliverables are completed, generate final reports, archive completed tasks, and close the project successfully.

Outcome

The mobile wellness tracking application project for a non-profit organization was successfully planned, scheduled, monitored, and managed using Software Project Management techniques.



Result

Thus, the project management activities for developing a **mobile application to track personal wellness goals** were successfully completed using ClickUp.