

A
PROJECT REPORT
ON
“GRIEVANCE REDRESSAL SYSTEM FOR INSTITUTE”



Submitted by

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Year

(2020-21)

GOVERNMENT POLYTECHNIC KOLHAPUR



CERTIFICATE

This is to certify that,

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Student of Third year Information Technology, Government Polytechnic, Kolhapur have satisfactorily completed the project work on the subject

“GRIEVANCE REDRESSAL SYSTEM FOR INSTITUTE”

Under my supervision and guidance in satisfactory manner in the academic year 2020/21.

Place: Kolhapur

Date: / /20

Guide

H.O.D

Principal

(Prof. S.A.Nadgeri)

(IT Department)

(Government Polytechnic, Kolhapur)

Internal Examiner

External Examiner

ACKNOWLEDGEMENT

The present work will only be complete expressing our sincere regards & gratefulness to those who helped us in our project.

It is our privilege to express our sincerest regards to our project coordinator, Prof.S.A.Nadgeri for their valuable inputs, able guidance, encouragement, whole-hearted cooperation and constructive support throughout the duration of our project. We thank our project coordinator for encouraging and allowing us to present the project on the topic “Grievance Redressal System For Institute” at our department premises. We take this opportunity to thank all our lecturers who have directly or indirectly helped our project.

I would also like to thanks all staff members of IT department for timely help and encouragement of fulfilment of project work.

ABSTRACT

In colleges if anyone wants to Grievance/Complaint about something we need to write it down on a paper and submit it in complaint box. So for solving this problem we are creating a Online Grievance/Complaint Redressal System for institute. Here anyone related to collage or any other person can just easily login and submit his Grievance/complaint. This Grievance/complaint letter will be solved by respective Head of dept and committee members. In this system the facility of managing User and their data related to their Complaints and their profile is also easily managed. This data can be easily viewed and modified whenever required. This Grievance/Complaint Redressal System also provides the functionality of providing a Weekly & Monthly report which will used to maintain information about how many complaints are solved in a particular month. It also provides the validation of Users.

The purpose of this project is to provide optimized solutions for the student grievances. The proposed model for the Grievance/Complaint Redressal System will have ability to minimize student's dissatisfaction we try to improve the relationship between student and University by presenting the model of e-complaint web based system. This system will give solution to the User's (Student, Faculty staff and Parents)Grievances. The existing system has manual processing through committee members, Head of dept and Principal. The proposed system had capable to complete the process automatically by using our application..

Keywords:

- Validation,
- User's Grievance
- Profile
- Committee member

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INTRODUCTION

1.1. Overview of Project-

➤ GRS

We are developing an online Grievance/Complaint Redressal System for submitting complaints online by using Grievance/complaint Redressal System a user can upload/post his complaint from anywhere by using this website on his phone or PC Online. Complaint Box is easy and secure way as compare to other previous methods. Due to an online compliant box manual effort and wastage of paper is decrease. User can submit his complaint by easily creating his/her own profile also User can check the current status of their complaints and can view that what kind of action is taken of his/her complaint. Online Grievance/complaint Redressal System shows the current status of the complaint that whether it is in processes or closed. It is based on centralize management only the Res. Head of dept & Committee members can check or solve the complaint. Admin having the authority to remove a User. Centralized management for checking current status of complaint and updating status of complaints. Admin can generate a report of this system in between selected date of his own choice.

The Grievance Redressal System for Institute is a web based application. The application is developed mainly for the use of Students, Faculty staff and other user's for submitting their grievance to various dept.

➤ MODULE

The project is based on three users: Admin, User and Committee Members. User is mainly focused on submitting their grievance. Admin can assign the Committee Members, to which, user can submit their complaint. The Resp. Heads or Committee members will first approve the complaint and solves the user complaint. The Student's nowadays face a lot of problem to give their complaints to the Institute. They have to directly meet the higher authorities, which takes lots of time. By using this system, instead of going directly, Users can submit their grievance through online.

The complaint that is registered by the user will be received by the respective Committee members. The particular member of that department will resolve the problem.

This project has three modules: Admin, User and Committee Member's. Admin can login to the system with username and password. He can view all the user profiles registered. The admin has the rights to add the Members of each department to which grievances can be send. Admin can view whole report of total grievances received and those that are solved. First of all, user has to register into the system to submit the complaint. User can login to the system using username and password. They have the option to update their profile. Users can select the particular department for which they have complaint and then register their grievance by filling the form. They can also check the status of the complaint. The Committee Members can login to the system and view the grievance that has been received.

Committee members has to approve the complaint first. Then a complaint/Application id will be send to the user. After processing the complaint he can change the status of the complaint.

1.2 Objectives of Project

- The objective of the Grievance Cell is to develop a responsive and accountable attitude among all the stakeholders in order to maintain a harmonious educational atmosphere in the institute. A Grievance Cell is constituted for the redressal of the problems reported by the Students of the College with the following objectives: Upholding the dignity of the College by ensuring strife free atmosphere in the College through promoting cordial Student-Student relationship and Student-teacher relationship etc.
- Encouraging the Students to express their grievances / problems freely and frankly, without any fear of being victimized. Suggestion / complaint Box is installed in front of the Administrative Block in which the Students, who want to remain anonymous, put in writing their grievances and their suggestions for improving the Academics / Administration in the College. Advising Students of the College to respect the right and dignity of one another and show utmost restraint and patience whenever any occasion of rift arises.
- Advising All the Students to refrain from inciting Students against other Students, teachers and College administration Advising all staffs to be affectionate to the Students and not behave in a vindictive manner towards any of them for any reason. Ragging in any form is strictly prohibited in and outside the institution. Any violation of ragging and disciplinary rules should be urgently brought to the notice of the Principal.

1.3 Project Features

GRS has been created in the college to resolve issues related to student's problems, develop a responsive and accountable attitude among the all stakeholders in order to maintain a harmonious educational atmosphere in Institute. Following are the important Features of GRS.

- To develop an organizational framework to resolve Grievances of Students and other stakeholders.
- To provide the students access to immediate, hassle free recourse to have their Grievances redressed.
- To enlighten the students on their duties and responsibilities to access benefits due under the policies.
- To establish structured interactions with students to elicit information on their expectations.
- To identify systemic flaws in the design and administration of various general insurance products and to seek solutions thereon
- To institute a monitoring mechanism to oversee the functioning of the Grievance Redressal Policy.
- Encouraging the Students to express their grievances / problems freely and frankly, without any fear of being victimized.
- Suggestion / complaint Box will be installed in the Administrative Block in which the Students, who want to remain anonymous, put in writing their grievances and their suggestions for improving the Academics / Administration in the College.
- Ragging in any form is strictly prohibited in and outside the institution. Any violation of ragging and disciplinary rules should be urgently brought to the notice of the Principal.

NEED OF PROPOSAL SYSTEM

2.1 Study of Existing system-

In current system, complaints can be written in complaints box and it was time consuming process. Sometime there should be problem that responsible people didn't resolve the complaints on time and higher authorities don't have idea about it.

So the proposed system overcomes the existing system by providing easy way to register complaint and track, monitor complaint. It also reduce processing time, improve user service and organization standard.

Existing system having following drawbacks:

1. To maintain complaint book
2. More manual efforts
3. Requires more time for process
4. Every time went to complaint registration office

2.2 Need of Proposed System-

This current system is very helpful in resolving dissatisfaction of person by handling complaint in timely and cost efficient way. It gives the information that will be helpful in improving services by organization. Therefore it preserve user right and raise concerns about their dealings with organization.

The proposed solutions for the existing system are as follows:-

- User Friendly: This web application is user friendly so user can easily use this system.
- Complaint tracking functionality: User can track status of the system and the admin can easily identify the problematic area in the organization.
- Easy to maintain: This web application is useful to maintain and handle complaints easily.
- Reduce the time: Within specific time constraint and cost-effective way it resolves problems of users.

REQUIREMENTS ANALYSIS

3.1 Software Requirements:-

Need Of Components	Specification
Language	<ul style="list-style-type: none"> • HTML • CSS • JS • PYTHON
Database	FIREBASE
IDE	<ul style="list-style-type: none"> • Visual Studio code • Pycharm • Bootstrap
Text Editor	<ul style="list-style-type: none"> • Notepad++ • Sublime Text
Desktop Operating System	Windows 7 or Higher
Android Operating System	Android 5.0 Lollipop or Higher
Android API Level	23 – 27
Browser	<ul style="list-style-type: none"> • Google Chrome 70 • Safari 12 • Microsoft Edge 17 • Firefox 62 • Internet Explorer 11

3.2 Hardware Requirements-

Name of Component	Specification
Processor	Intel i3 or higher(2.3 GHz)
Computer architecture bit widths	64-bits
RAM	3GB or higher
Hard disk space	2 GB
Internet Connection	Required
Anti Virus	For security

REQUIREMENT SPECIFICATION

Grievance Redressal System uses these ways of feasibility study such as Technical feasibility, Economic feasibility, Legal feasibility, Operational feasibility and Scheduling feasibility.

Technical feasibility

The system should be technically feasible. The system should be designed and developed by the person with good technical knowledge. The Grievance Redressal System meets all technical aspects need for the system. It uses front end as HTML, CSS,JS,PHP and PYTHON back end as MySQL. It uses Visual Studio Code as the IDE and Windows 7/8/10 as operating system. This application needs an internet connection to use processor Pentium 4 and RAM with 1GB or more.

Economic feasibility

The system should be economically feasible. The cost for the development of the system is low for the Institute. The development process is achieved by using the needed resources, so Institute need not invest more and so, the system can be considered as economically feasible. Grievance Redressal system is a low cost Web application that is developed for the purpose of users Grievances. It is useful for the Users(students, faculty staff,parents,etc).

Legal feasibility

The system is legally feasible. It checks whether the proposed system conflicts the legal requirements. The security level of the application is checked.

Operational feasibility

This system describes all the operational aspects in each level. Since it is a web based system, it can be operated anywhere with internet connection.

Schedule feasibility

Schedule feasibility is mainly based on the time period taken to complete the development of the system. Grievance Redressal System have been completed within the decided time period.

Functionality of Proposed System

❖ Functions

- The cases will be attended promptly on receipt of online grievances from the students.
- The cell formally will review all cases and will prepare statistical reports about the number of cases received.
- The cell will give report to the authority about the cases attended to and the number of pending cases, if any, which require direction and guidance from the higher authorities.

❖ Powers

- In case of any grievance the members of the cell are empowered to sort out the problems at their level through discussion with students. In case the members fail to find out any solution then the matter is referred to the principal for final comment on the matter.
- Considering the nature and depth of the grievances due inquiry is made by the members of the cell and through personal discussion the matter is solved.
- If anybody is found to be guilty for any kind of nuisance, he or she is given punishment with due consideration with the principal.
- The nature of punishment includes verbal as well as written warning, information to the parents, financial punishment, information to the police (if situation arises for so) and expelling from the college as per the rule of the university.

❖ Purpose

The GRS of college functions with following purposes:

- To ensure a democratic environment in the campus,
- To acquaint all teacher-trainees about their rights and duties,
- To solve the various personal and educational related grievances of the teacher-trainee,
- To make the institute student friendly, and
- To ensure the qualitative as well as quantitative development of institution through GRS.

❖ Scope

The GRS deals with Grievances received in online from students about any of the following matters:

- Academic matters: Related to timely use of duplicate mark sheet (DMC), transfer certificate, conduct certificate and other examination related matters.
- Financial matters: Related to dues and payments for various items from fee clerk, library, hostels, etc.
- Library matters: Issue and return of books, syllabus, photocopy, university question papers.
- Accommodation matters: Related to hostels.
- Other matters: Related to certain misgivings about conditions of sanitations, preparation of food, availability of transport, victimization by teachers etc.

TOOLS AND TECHNOLOGY USED

❖ HTML

1. The full form for HTML is for Hyper Text Markup Language.
2. HTML is used to describe the structure of webpages.
3. It is a standard markup language used for creating web application. The main building blocks of HTML pages are the HTML components.
4. HTML cannot be used to write programs because it is not a programming language. Instead, scripting languages such as javascript programs can be embedded within HTML.

❖ CSS

1. **CSS** stands for **Cascading Style Sheets**
2. CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**
3. CSS **saves a lot of work**. It can control the layout of multiple web pages all at once
4. External style sheets are stored in **CSS files**.

❖ JS

1. JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification.
2. JavaScript is high-level, often just-in-time compiled, and multi-paradigm.
3. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation, and first-class functions.

❖ Python

- Python is an interpreted, high-level and general-purpose programming language.
- Python's design philosophy emphasizes code readability with its notable use of significant whitespace.
- Python is a general-purpose programming language, so it can be used for many things. Python is used for web development, AI, machine learning, operating systems, mobile application development, and video games.
- Python is a relatively easy programming language to learn and follows an organized structure. This, combined with its versatility and simple syntax, makes it a fantastic programming language for all sorts of projects.
- Python is a go-to for complex web development projects, as its flexibility makes it possible to create sophisticated web utilities with relative ease. HTML and JavaScript are the primary languages for building the front end of a program. But you can use Python-based web frameworks like Django to smooth the process of handling backend or server-side functionality.
- Giant websites and platforms like YouTube and Google rely heavily on Python for critical infrastructure. This has further enhanced its reputation as a solid component in the web developer's toolkit.

❖ Firebase

- Store and sync data with our NoSQL cloud database. Data is synced across all clients in realtime, and remains available when your app goes offline.
- The Firebase Realtime Database is a cloud-hosted database. Data is stored as JSON and synchronized in realtime to every connected client. When you build cross-platform apps with our iOS, Android, and JavaScript SDKs, all of your clients share one Realtime Database instance and automatically receive updates with the newest data.
- The Realtime Database provides a flexible, expression-based rules language, called Firebase Realtime Database Security Rules, to define how your data should be structured and when data can be read from or written to. When integrated with Firebase Authentication, developers can define who has access to what data, and how they can access it.

Approach for Handling the Presented Issue

- To design and implement GRS, the entire process is divided into study and analysis phase and design phase. The former phase includes the development of questionnaire made to know the facilities and problem encountered by the student indifferent institutions. In the design phase, identification of the entities and their relationships is done along with designing numerous UML diagrams of the proposed system. The logical model of the system has been designed, normalizing the relations. Data flow diagram of the whole system has been constructed. Flow chart of each process of DFD is constructed for better flow of data and its verification(included in project report). The proposed model is the physical design of the system defining the software and hardware requirements.
- The coding phase may be considered as a deployment stage for GRS. The design of the system is implemented through actual code. Proper validation of data is used.
- Proper validation on important fields is provided. The user does not need to have the knowledge of the code, and the output is defined user-friendly.
- Testing phase can also be followed on various test cases and data set. Testing could be done by taking different use cases. A record is updated every time a student enters details. Update when a complaint is registered. Records are managed when a student checks the complaint status.

Modeling of Grievance Redressal System

- The modeling of proposed GRS system requires a completely automated system ,thus helping the user retrieve the information as soon as possible. The backup plans are provided in the form of the database helping avoiding data in case of catastrophic situations. Hence, the system is reliable to perform in adverse situations.
- The system is scalable and can be expanded and customized to meet the needs of the firms for which it will be implemented. Moreover, the system provides a user-friendly interface with a realistic view.
- The system provides search facilities to search a specific entry matching in the database, and this system consists of an auditor as a supreme body to monitor the entire system's performance. The system consists of an administrator and a collector within whom the tasks can even be passed at the time of encountering someone not proficient in handling the given task, and thus the system works smoothly without further delays. Victim's authentication is done beforehand in order to avoid the nuisance which might arise in the manual system.
- The aim of the proposed GRS (prototype in Fig. 2) is to address the issues present in the current system, implement validation techniques (with respective stakeholders, as shown in Fig. 3) that will help reduce the margin of error in operations, providing adequate data backup facilities in order to ensure system restart even after a calamity and ensures consistency. It is a foolproof system that simulates and replaces the present manual system.

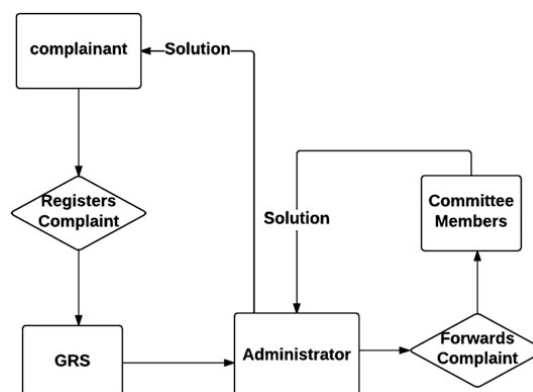


Fig. 2 Prototype of the proposed system

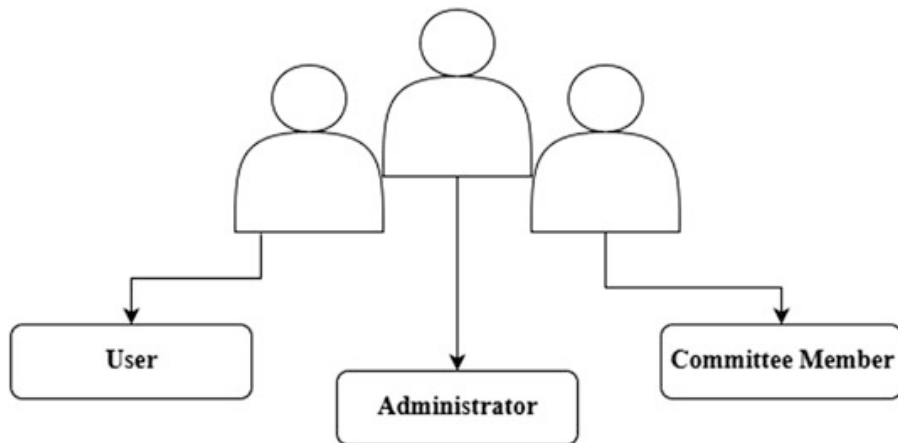


Fig. 3 Stakeholders involved in the GRS

Flow of Data in GRS

To develop a working GRS, the flow of data from one component of the system to other is depicted by Fig. 4.

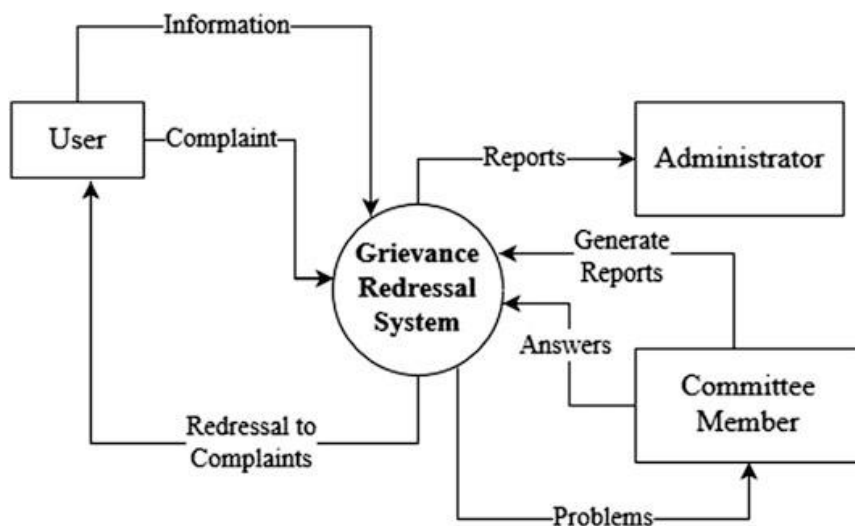


Fig. 4 Context flow of grievance redressal system

DATA FLOW DIAGRAM

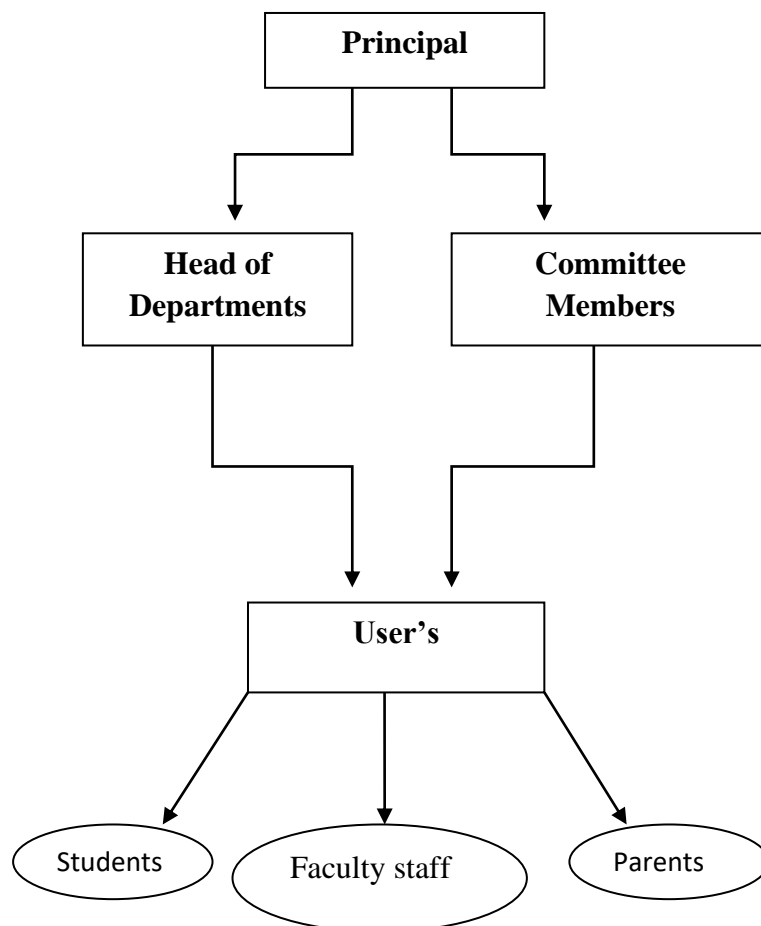


Diagram no 1. Overall data specification diagram

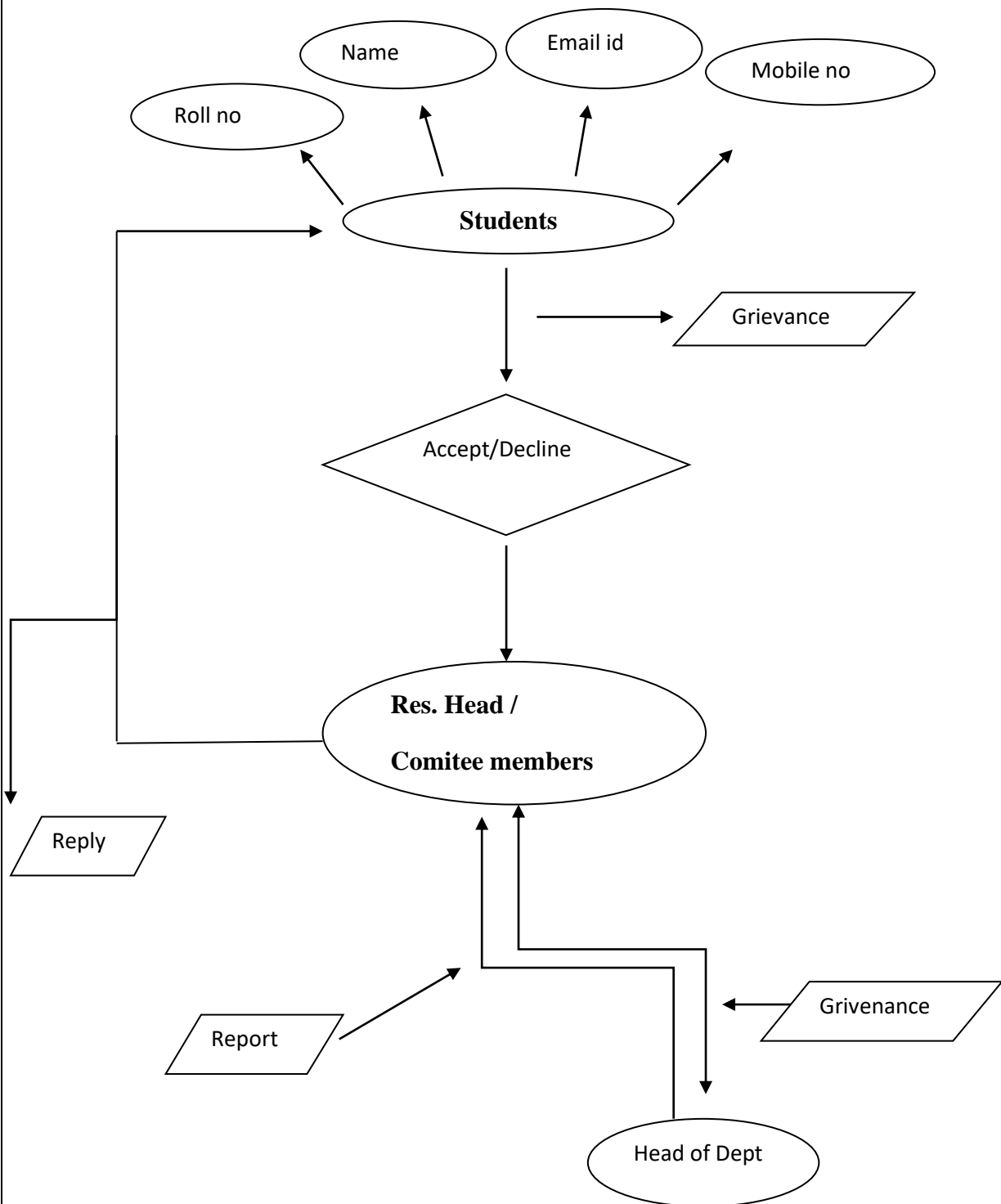


Diagram no 2. **Student Grievance solving Structure**

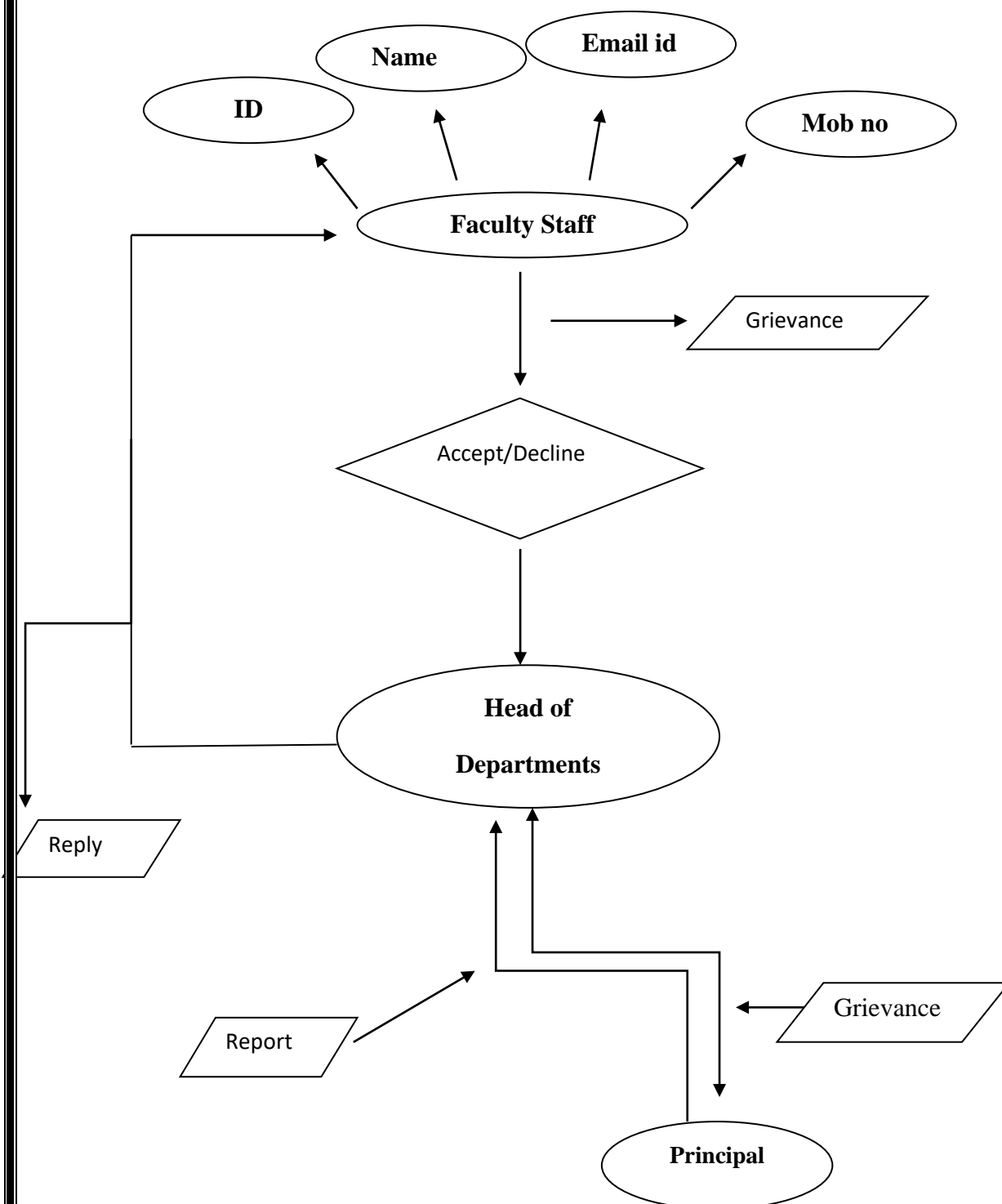


Diagram no 3. **Faculty staff Grievances solving Structure**

UML Diagrams

UML, which stands for Unified Modeling Language, is a way to visually represent the architecture, design, and implementation of complex software systems. When you're writing code, there are thousands of lines in an application, and it's difficult to keep track of the relationships and hierarchies within a software system. UML diagrams divide that software system into components and subcomponents.

Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

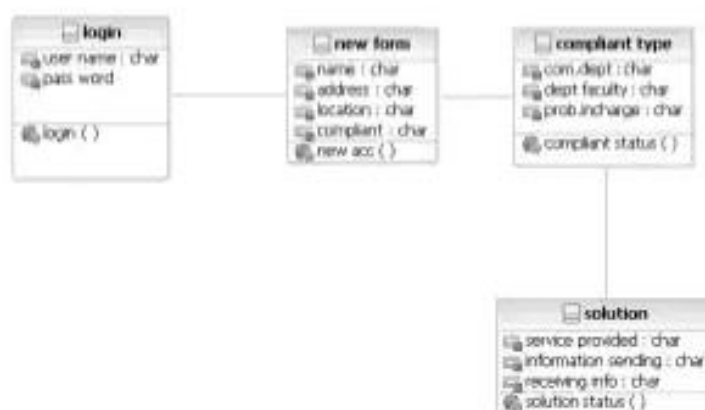
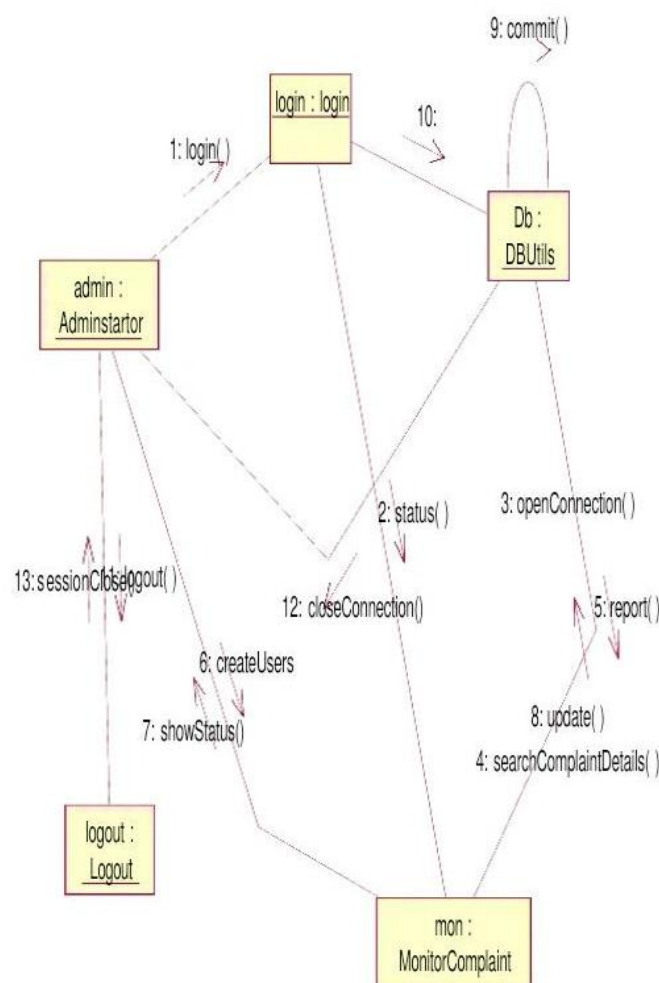


Figure1: Class Diagram

Collaboration Diagram

The collaboration diagram is used to show the relationship between the objects in a system. Both the sequence and the collaboration diagrams represent the same information but differently. Instead of showing the flow of messages, it depicts the architecture of the object residing in the system as it is based on object-oriented programming. An object consists of several features. Multiple objects present in the system are connected to each other. The collaboration diagram, which is also known as a communication diagram, is used to portray the object's architecture in the system.



Sequence Diagrams

A sequence diagram simply depicts interaction between objects in a sequential order i.e. the order in which these interactions take place. We can also use the terms event diagrams or event scenarios to refer to a sequence diagram. Sequence diagrams describe how and in what order the objects in a system function. These diagrams are widely used by businessmen and software developers to document and understand requirements for new and existing systems.

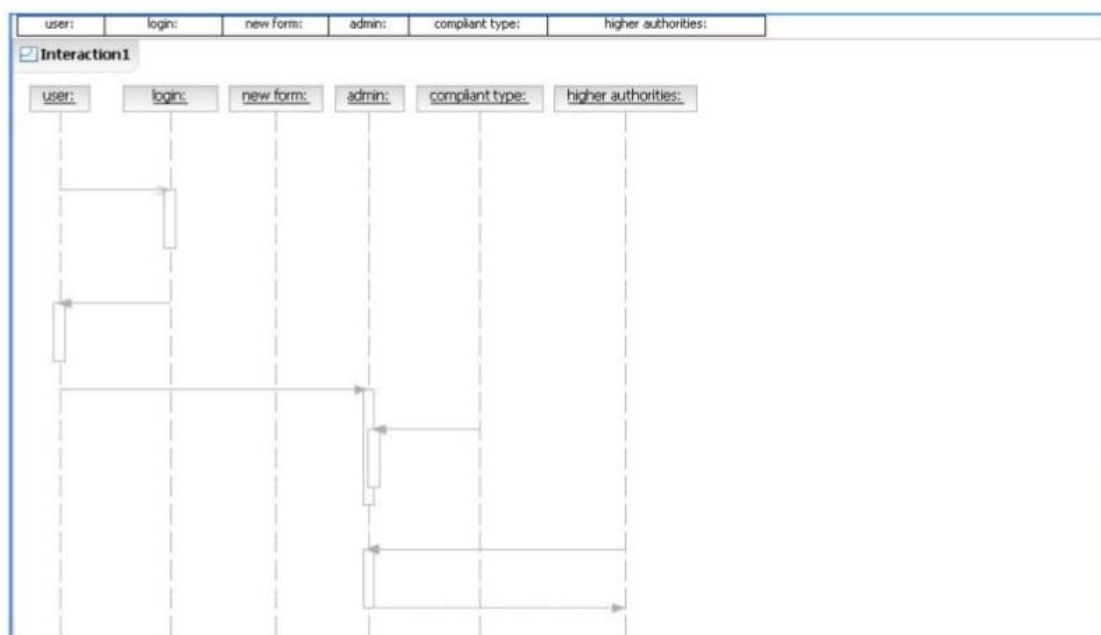
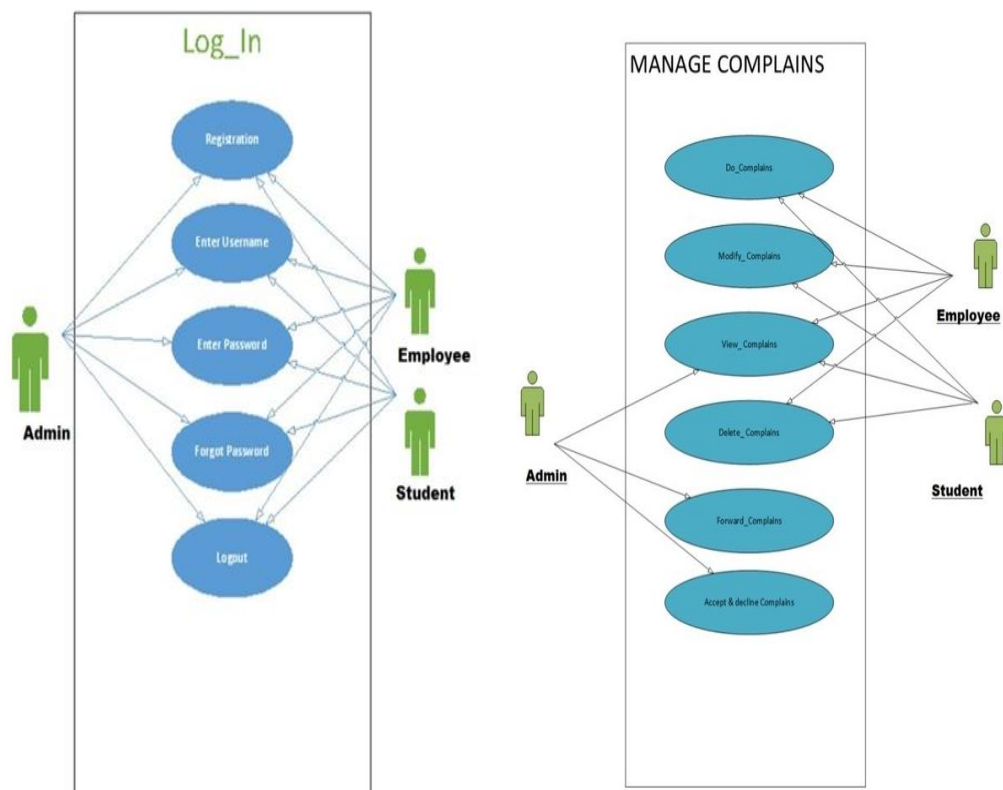


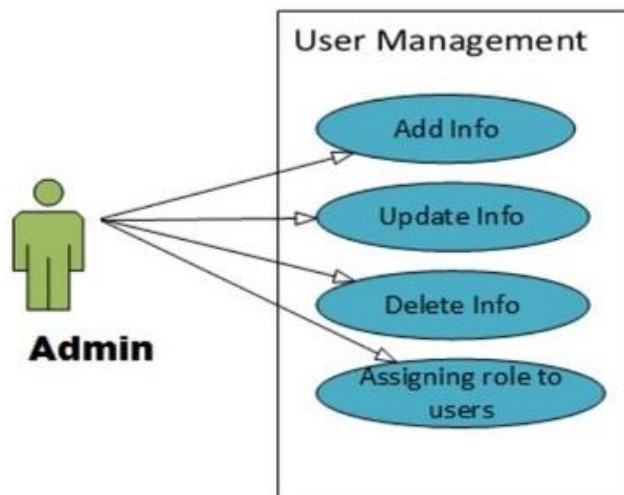
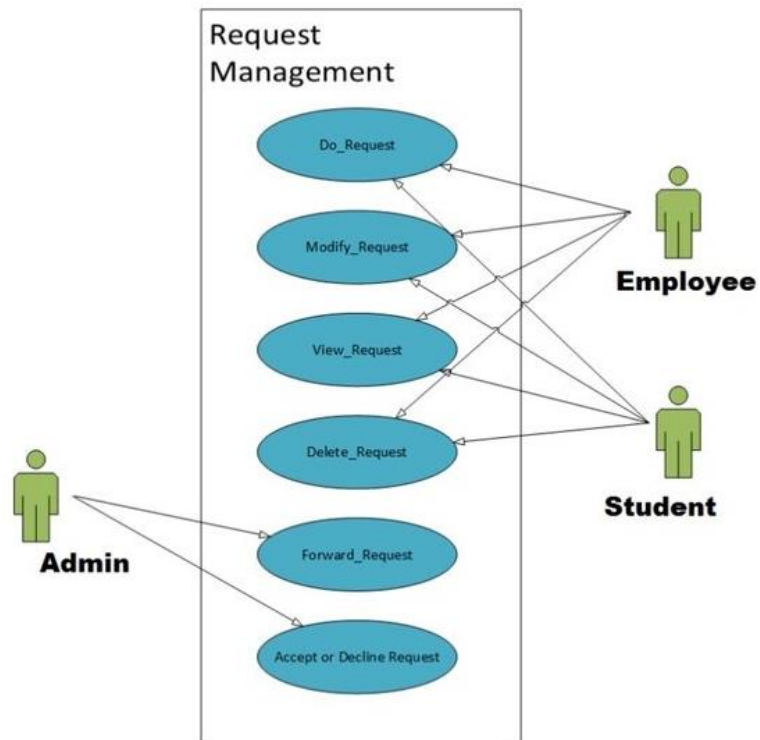
Figure 3: Sequence Diagram

Activate Windows

USE CASE

The purpose of use case diagram is to capture the dynamic aspect of a system. However, this definition is too generic to describe the purpose, as other four diagrams (activity, sequence, collaboration, and Statechart) also have the same purpose. We will look into some specific purpose, which will distinguish it from other four diagrams.

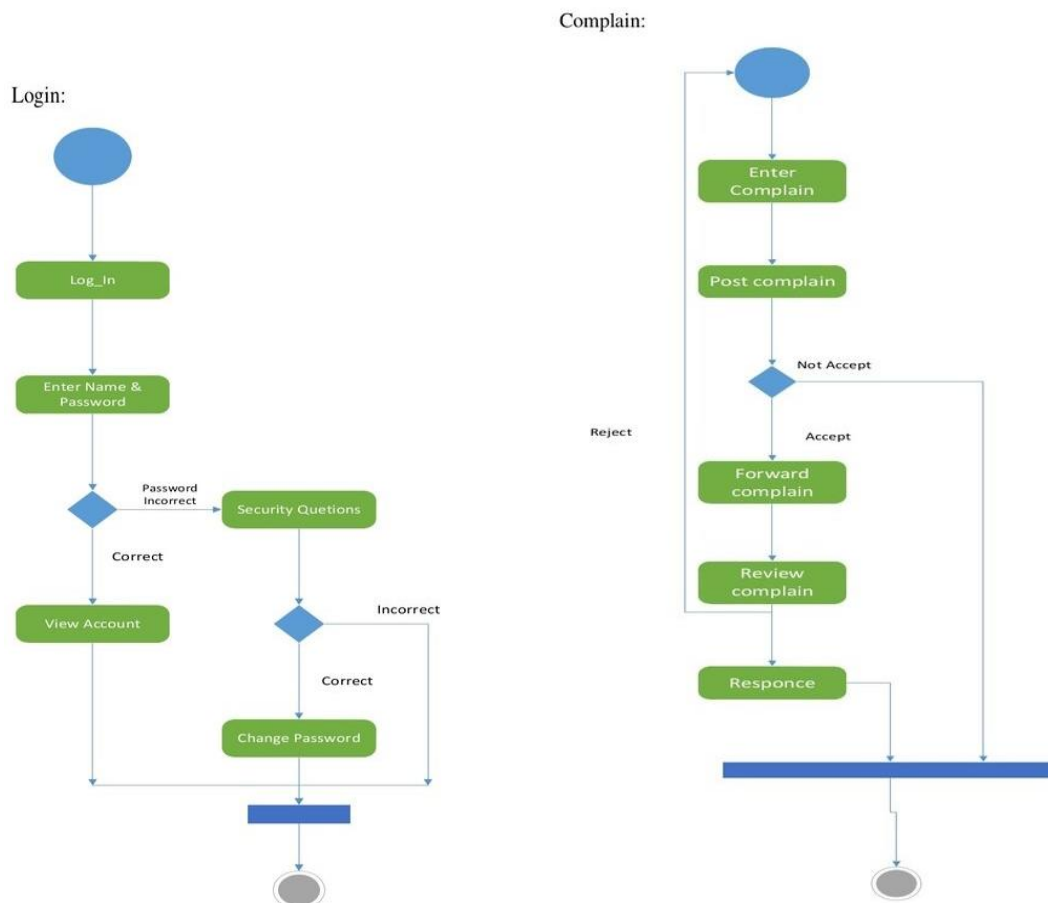




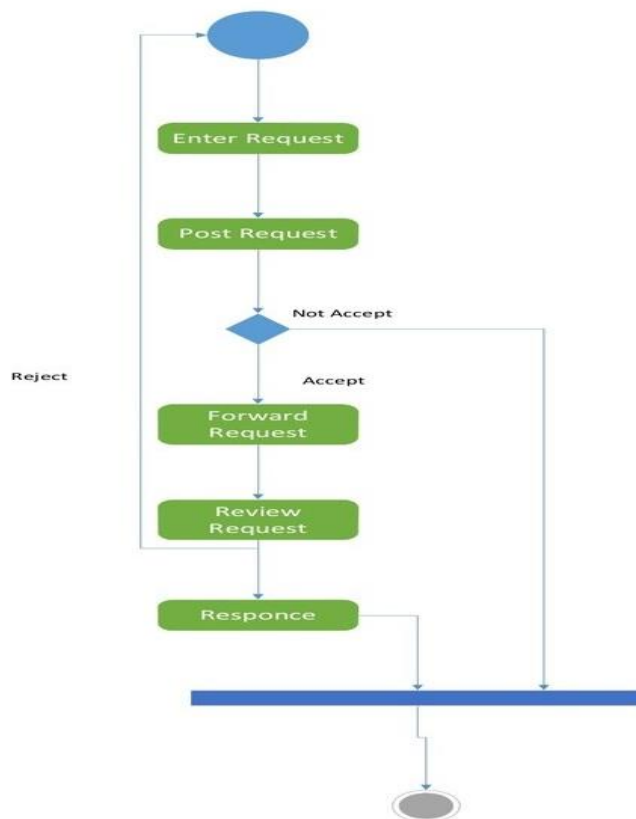
ACTIVITY DIAGRAM

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

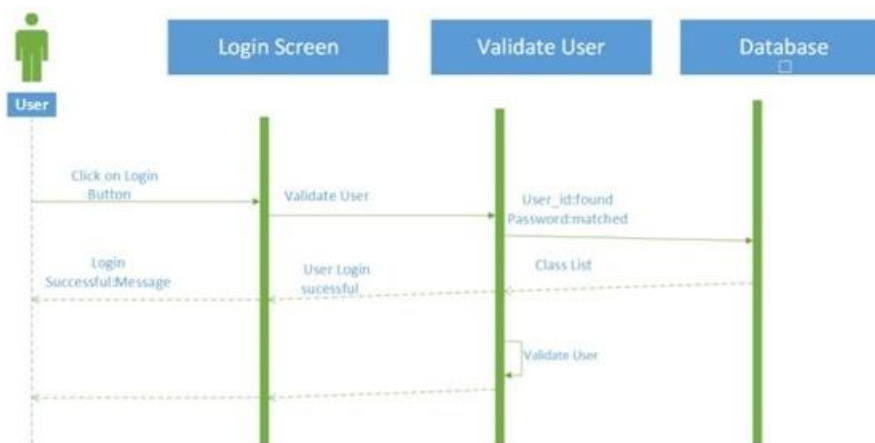
The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc



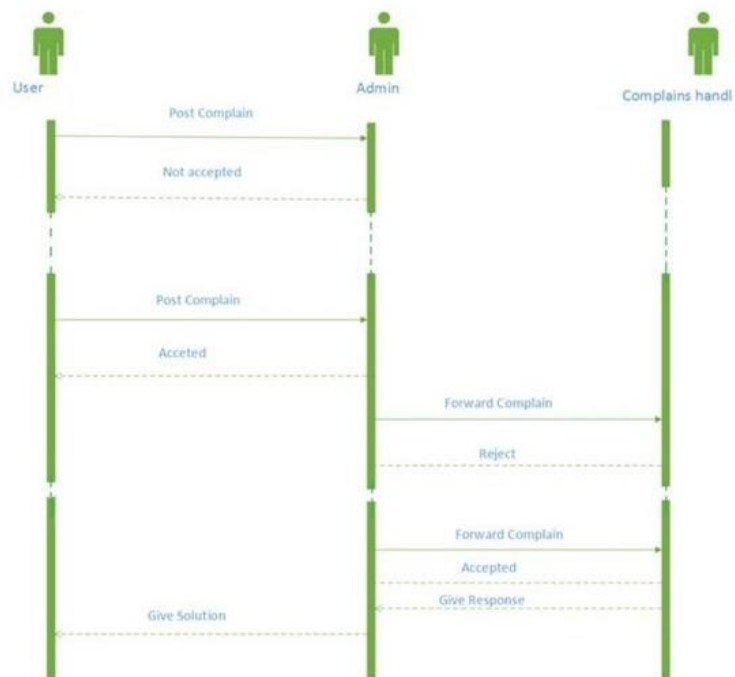
Request:



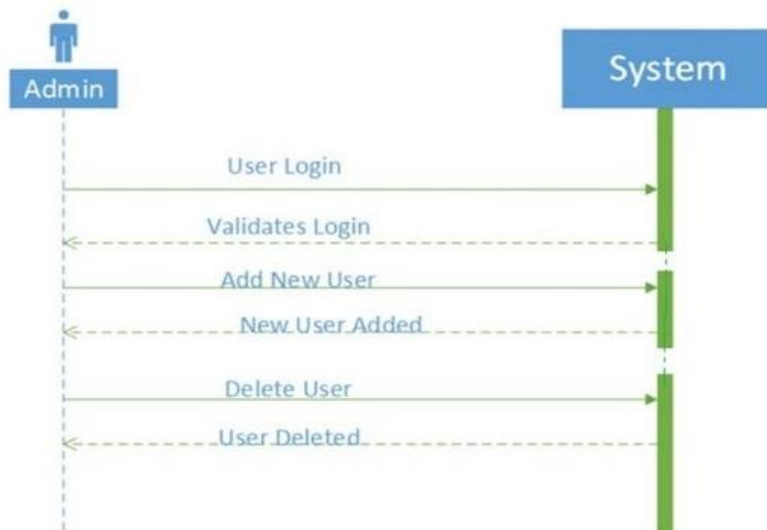
Log_in:



Complain:



User Management:



Implementation

Home Page

GRIEVANCE REDRESSAL SYSTEM

In colleges if anyone wants to Grievance/Complaint about something we need to write it down on a paper and submit it in complaint box. So for solving this problem we are creating a Online Grievance/Complaint Redressal System for institute. Here anyone related to collage or any other person can just easily login and submit his Grievance/complaint. This Grievance/complaint letter will be solved by respective Head of dept and committee members. In this system the facility of managing User and their data related to their Complaints and their profile is also easily managed. This data can be easily viewed and modified whenever required. This Grievance/Complaint Redressal System also provides the functionality of providing a Weekly & Monthly report which will used to maintain information about how many complaints are solved in a particular month. It also provides the validation of Users.

The purpose of this project is to provide optimized solutions for the student

STRUCTURE

```

graph TD
    Principal --> HeadOfDepartments[Head of Departments]
    Principal --> CommitteeMembers[Committee Members]
    HeadOfDepartments --> GrievanceRedressalSystem[Grievance Redressal System]
    CommitteeMembers --> GrievanceRedressalSystem
    
```

LOGIN OPTION

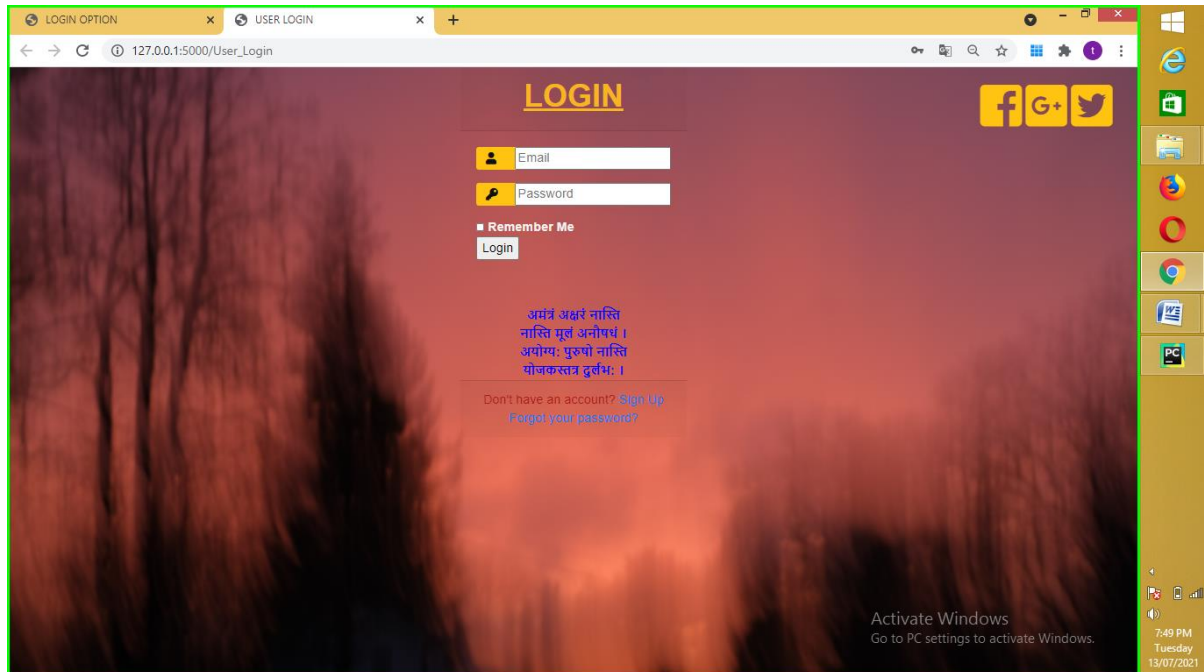
Select Section

USER

COMMITTEE MEMBER

« Previous

Login Page



The screenshot shows a web browser window with two tabs: 'LOGIN OPTION' and 'USER LOGIN'. The address bar shows '127.0.0.1:5000/User_Login'. The page has a dark red background with a tree silhouette. The 'LOGIN' form includes fields for 'Email' and 'Password', a 'Remember Me' checkbox, and a 'Login' button. Social media icons for Facebook, Google+, and Twitter are in the top right. A quote in Sanskrit is centered below the form. At the bottom right, there is an 'Activate Windows' watermark and a system clock showing 7:49 PM on Tuesday, 13/07/2021.

LOGIN

Email

Password

☐ Remember Me

Login

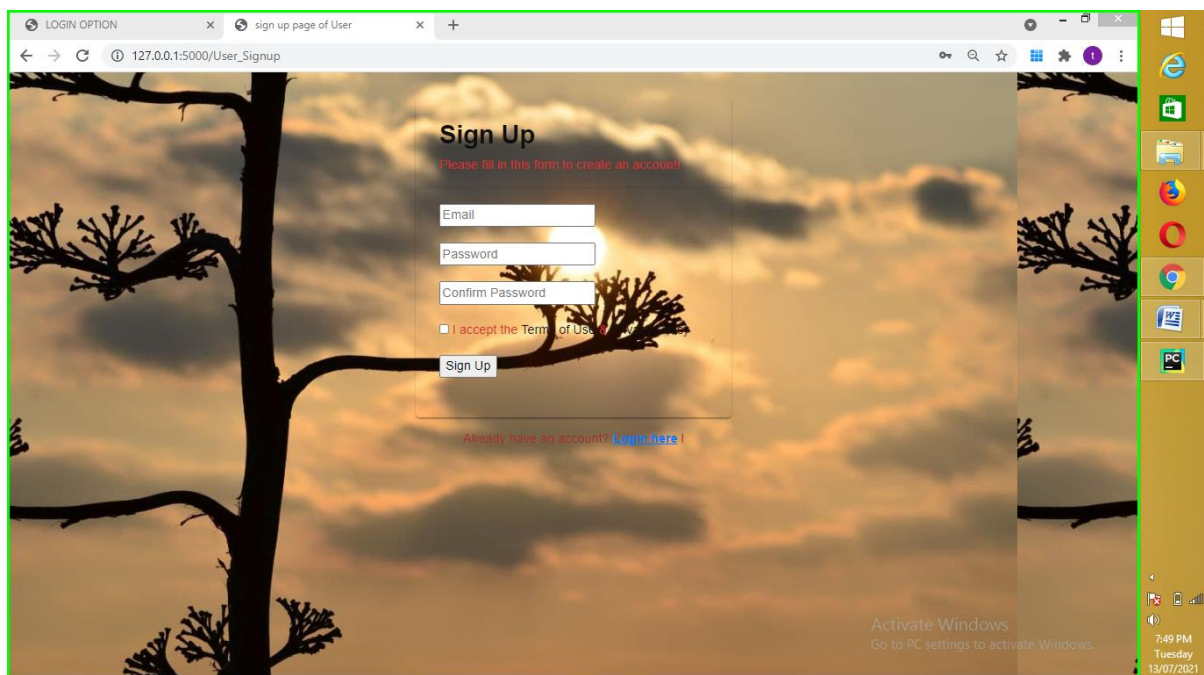
असंज्ञं अक्षरं नास्ति
नास्ति मूलं अनौपथं ।
अयोम्यः पुरुषो नास्ति
योजकस्तत्र दुर्लभः ।

Don't have an account? [Sign Up](#)
Forgot your password?

Activate Windows
Go to PC settings to activate Windows.

7:49 PM
Tuesday
13/07/2021

Signup Page



The screenshot shows a web browser window with two tabs: 'LOGIN OPTION' and 'sign up page of User'. The address bar shows '127.0.0.1:5000/User_Signup'. The page has a light background with a tree silhouette and a sunset sky. The 'Sign Up' form includes fields for 'Email', 'Password', and 'Confirm Password', a checkbox for 'I accept the Terms of Use', and a 'Sign Up' button. A link for 'login here' is at the bottom. At the bottom right, there is an 'Activate Windows' watermark and a system clock showing 7:49 PM on Tuesday, 13/07/2021.

Sign Up

Please fill in this form to create an account!

Email

Password

Confirm Password

☐ I accept the Terms of Use

Sign Up

Already have an account? [login here](#)

Activate Windows
Go to PC settings to activate Windows.

7:49 PM
Tuesday
13/07/2021

Add a New Grievance Page

LOGIN OPTION x USER Grievance x Student Grievance x +

127.0.0.1:5000/Stud_Grievance

GRIEVANCE REDRESSAL SYSTEM Government Polytechnic Kolhapur An Autonomous Institute of Government of Maharashtra

LOGOUT

Add a New Grievance

Your full name

Roll Number

Email Address

Dept:

Types:

Subject

Description

Activate Windows
Go to PC settings to activate Windows.

7:50 PM
Tuesday
13/07/2021

View Grievance page

LOGIN OPTION x USER Grievance x LOGIN OPTION x View Grievance x LOGIN OPTION x +

127.0.0.1:5000/Read_G

GRIEVANCE REDRESSAL SYSTEM Government Polytechnic Kolhapur An Autonomous Institute of Government of Maharashtra

LOGOUT Reply Report

View Grievance

User:

Type:

Dept:

1. {\'Department\': \'IT\', \'Description\': \'Nothing\', \'Email\': \'mohitesai2713@gmail.com\', \'Employee_ID\': \'176034\', \'Name\': \'sainath mohite\', \'Subject\': \'Exam Form\', \'Types\': \'Academic\'}

Activate Windows
Go to PC settings to activate Windows.

7:52 PM
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13/07/2021

Reply Page

LOGIN OPTION x USER Grievance x LOGIN OPTION x Reply x LOGIN OPTION x

127.0.0.1:5000/Reply

Reply

Email
Your email..

Status
Write something..

Description
description

Send

Activate Windows
Go to PC settings to activate Windows

7:53 PM
Tuesday
13/07/2021

Report Page

LOGIN OPTION x USER Grievance x LOGIN OPTION x Report x LOGIN OPTION x

127.0.0.1:5000/Report

Report

To
Enter email..

No Of Total Grievances

No Of Solved Grievances

No Of Pending Grievances

Submit

Activate Windows
Go to PC settings to activate Windows

7:54 PM
Tuesday
13/07/2021

About Us Page

LOGIN OPTION x USER Grievance x LOGIN OPTION x ABOUT US x LOGIN OPTION x

127.0.0.1:5000/About_Us

HOME Users Committee Members Admin

About Us

Grievance Redressal System

Designed By Trident

Our Team

Sainath Mohite 176034 mohitesai2713@gmail.com	Soham Jagtap 186024 sohamvjagtap9750@gmail.com	Shivani Karande 186029 karandeshivani119@gmail.com
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7:55 PM
Tuesday
13/07/2021

Contact Us Page

LOGIN OPTION x USER Grievance x LOGIN OPTION x CONTACT US x LOGIN OPTION x

127.0.0.1:5000/Contact_Us

HOME Users Committee Members Admin

Contact Us

Name
Your full name..

Email
Your email..

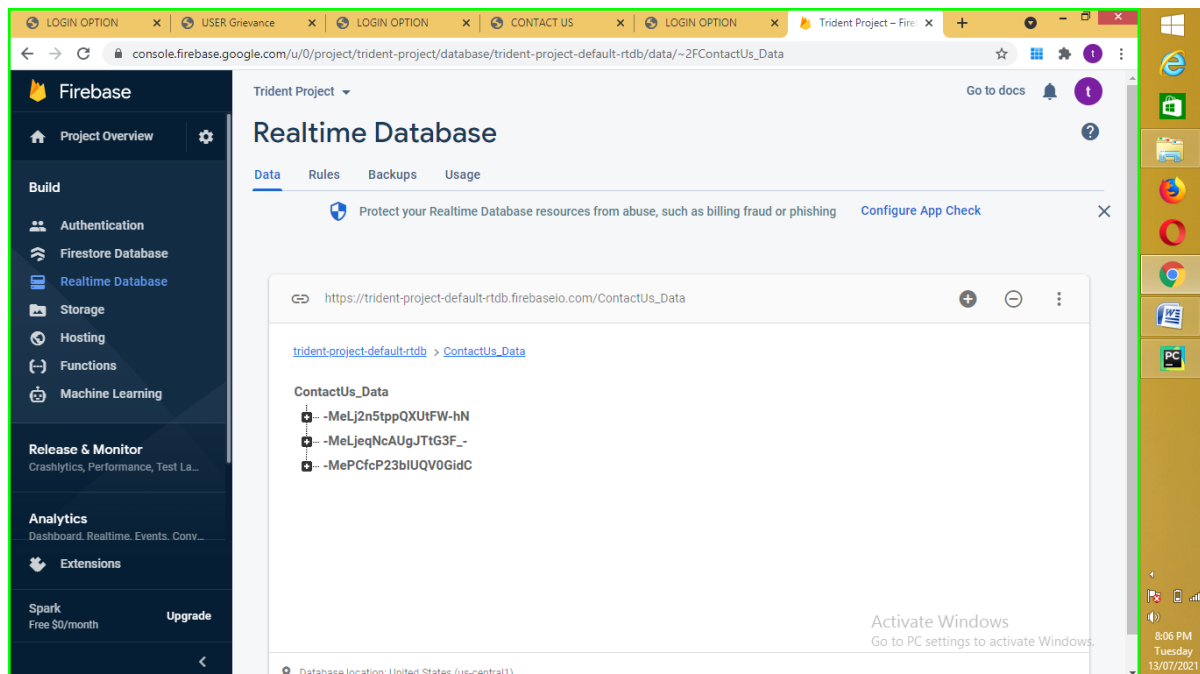
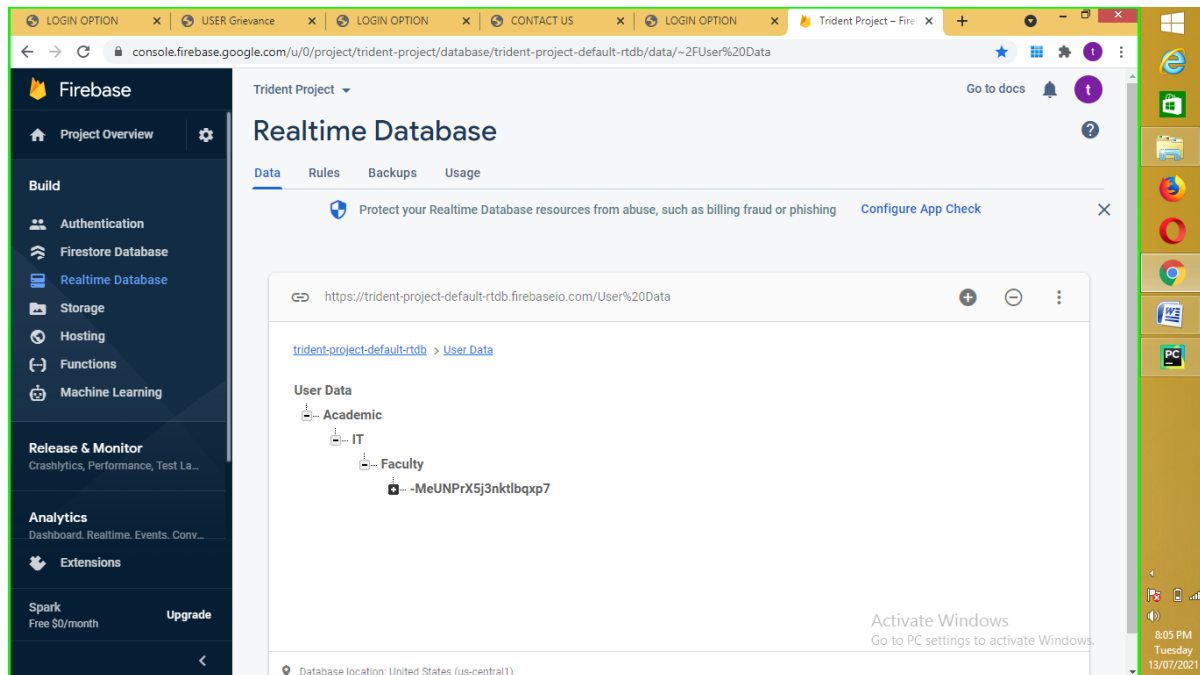
Comment
Write Comment here like hello, hi

Submit

Activate Windows
Go to PC settings to activate Windows

7:56 PM
Tuesday
13/07/2021

Database Snapshot



Testing

Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. In fact, testing is the one step in the engineering process that could be viewed as destructive rather than constructive.

A strategy for software testing integrates software test case design methods into a well-planned series of steps that result in the successful construction of software. Testing is the set of activities that can be planned in advance and conducted systematically. The underlying motivation of program testing is to affirm software quality with methods that can economically and effectively apply to both strategic to both large and small scale systems.

Types of Testing

- White Box Testing
- Black Box Testing

White Box Testing

White Box Testing is software testing technique in which internal structure, design and coding of software are tested to verify flow of input-output and to improve design, usability and security. In white box testing, code is visible to testers so it is also called Clear box testing, Open box testing, Transparent box testing, Code-based testing and Glass box testing.

It is one of two parts of the Box Testing approach to software testing. Its counterpart, Blackbox testing, involves testing from an external or end-user type perspective. On the other hand, White box testing in software engineering is based on the inner workings of an application and revolves around internal testing.

Black Box Testing

Black Box Testing is a software testing method in which the functionalities of software applications are tested without having knowledge of internal code structure, implementation details and internal paths. Black Box Testing mainly focuses on input and output of software applications and it is entirely based on software requirements and specifications. It is also known as Behavioral Testing.

Testing done at different levels

Unit Testing

- Verification of code
- Checking of internal logical errors

Testing method- White Box Testing

Although this level of testing was performed parallel with coding. It was assured that another round of testing shall make modules error-free. We've used Pycharm Debugger to test logic and coding.

Integration testing

- Uniformly between all modules
- Error free integration

Testing Method- White box and Black box testing

Since the system units were developed as modules between all three partners the level of testing was crucial for us. The integration testing was performed for this system when all the modules were to make it a complete system. After Integration the Project works successfully.

System Testing

At this level of testing system as a whole was tested for various errors like

- Field level validations
- Blank and mandatory validations

Testing Method- Black box testing

Our system has been tested by using validation testing and found to be working satisfactory.

For ex, In this project validation testing is performed in User Login module. This module is tested with the following valid and invalid inputs for different fields like Name, Email Id, Mobile no, etc.

Acceptance Testing

Acceptance testing is formal testing conducted to determine whether or not a system satisfies its acceptance criteria (the criteria the system must satisfy to be accepted by a client) and to enable the customer to determine whether or not to accept the system

Testing Method- Black box testing

So for the data was used were relevant and dummy but at this level of testing the original data of the client was taken into consideration. The project gave successful Response.

Sr no	Test case	Expected result	Actual result
1	User Login	If email and password valid then user logged in . If not error msg displayed.	As Expected
2.	Forgot Password	If password is forgotten then u have to reset password then reset link is provided through mail	As Expected
3.	CM Login	If email and password valid then user logged in . If not error msg displayed.	As Expected
4.	Request	If users enters Invalid complaint it will show msg	As Expected

Pros and Cons

- The pros and cons of the proposed GRS system primarily includes human negligence since the system, though an automatic prototype to redress the complaints of the students/victims, will be handled by humans who could be negligent at times in forwarding complaints to the respective committee member or while providing solutions to the respective administrator.
- Another shortcoming includes a poor network which could persist at times; as a result, the system of forwarding and resolving the complaints in the form of sending back the answers to the respective administrators and then to the respective students could get delayed, the proposed GRS system being based on simple mail transfer mechanism.

Future Enhancements

The GRS working on the pretext of the grievance redressal for the students currently works as a Web application among the various members and the targeted audience. To extend this further to fulfill various requirements, following enhancements are suggested:

- Though many future enhancements of the system worked upon are possible, the prime focus includes the development of a mobile application in order to increase the mobility of the application since the future demarcates the usage of mobile applications and as seen portable devices are ubiquitous which will facilitate the receiving of all the notifications in the cell phone by the members and students associated with the application further increasing the reliability of the system and the rate of problem-solving.
- The mobile application is targeted to enhance the user experience by providing the user with additional features for uploading the pictures the proofs in the form of audio or video files, which might enhance the case solving ability especially in such cases with a high rate of severity.
- Above all, a tracker could be added as a part of the future perspectives in order to track the performance of various committee members involved into the process on the pretext of the provided feature of the report generation.

CONCLUSION

The “Web Application for Online Grievance Tracking and Resolving” system overcomes problems of the existing system by providing easy way of solving the problems which are faced by the user. It also reduces processing time; improve user services and organization standard. This proposed system is very helpful in reduce dissatisfaction of person by handling complaint timely. This system provides less paper work, better insight to problem, easy to track complaints, locate the problem areas in the organization, resource utilization, less processing time, managing records, ease of access, and concern of organization towards the users. Up to this stage we created basic GUI for user registration, complaint registration and done the database connectivity.

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