PROJECT REPORT

ON

Student Council Android and Web App

SUBMITTED TO THE

UNIVERSITY OF MUMBAI

FOR THE DEGREE OF

BACHELOR OF ENGINEERING

IN

COMPUTER ENGINEERING 2021-2022

Submitted by

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DON BOSCO INSTITUTE OF TECHNOLOGY
(ENGINEERING COLLEGE)
PREMIER AUTOMOBILES ROAD, KURLA (W) – 200070

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2021-2022

CERTIFICATE

This is to certify that the project report entitled “**Student Council Android and Web App”** is a bonafide work of **Ayushman Pandita Roll No. 77 and Austin Abraham Roll No. 78** submitted to the University of Mumbai in partial fulfilment of the requirement for the award of the Degree of Bachelor of Engineering in the Computer Engineering.

Name of Supervisor
Supervisor

Dr. Phiroj Shaikh	**Dr. P. Nambiar**
Head of Department	Principal

Project Report Approval for B. E.

This project report entitled **Student Council Android and Web App** by **Ayushman Pandita and Austin Abraham** is approved for the degree of Computer Engineering course of Bachelor of Engineering.

Examiners

1.______________________________

2.______________________________

Date:

Place:

DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

1. Ayushman Pandita, 77 ---

(Signature)

2. Austin Abraham, 78

(Signature)

Date:

ABSTRACT

This student council application is mainly designed for the Don Bosco Institute of technology students council. This web application involves all the basic features which students need to easily access the app and make it less time consuming.

We have developed this project that simplifies the coordinating and advising system by automating some of the activities that are done manually. This project will show the design of the project and the information of the tools and techniques that were used to document the project and implementation tools of this system.

And we try to put sample UI and sample algorithm Our system will have a centralized database and each user will have a user account that enables them to do some tasks such that votes check their status is vote or not, the candidate also checks the current point during the election.

We have tried to connect all the portals in the web app where a student can easily connect with a staff member or any council member.

CONTENTS

LIST OF FIGURES

ABBREVIATION

Sr. No	Abbreviation	Full form
1	USD	Use Case Diagram
2	DFD	Data Flow Diagram
3	SQL	Structured Query Language
4	OpenCV	Open-Source Computer Vision Library
5	API	Application programming interface
6	DBIT	Don Bosco Institute of Technology
7	DFD	Data Flow Diagram
8	DB	Database
9	LTV	Lifetime Value
10	PHP	Hypertext Preprocessor
11	IDE	Integrated Development Enviroment

1. PROJECT OVERVIEW

1.1 Introduction

This application will help students to communicate with faculty and administration for their respective doubt and queries. In this system there are three entities namely, Admin, Faculty and Students. Admin can login using credentials. Admin can add, update, delete and view student. They can also assign student by year, section and department. Admin can Add, update, delete and view and assign department. They can Upload for all. Faculty can login using credentials. Faculty will get link to chat page for Department and college. Faculty can view recent chats with students and also search student. They will get Notification for chats. Student can login using credentials. Student will get link to chat page for Department, Section, year and college. Students can view chats with students and search student. Students can view recent chats with faculty and can search faculty. They will get Notification for chats.

1.2 Scope and Objective

Student faces many problems while communicating to faculty and administration. They have to wait in queue for long time or have to take appointments, but with help of this application they can directly get into touch with faculty and solve their problems easily. They don't have to wait in long queues and daily visit administration. They don't even have to keep checking notice boards they will get instant notifications of the notice.

1.3 Modules and their Description

The system comprises of 2 major modules with their sub-modules as follows:

1. Admin

- **Login:** Admin can login using credentials.
- **Manage Student:** Admin can add, update, delete and view student. They can also assign student by year, section and department
- **Manage Faculty:** Admin can Add, update, delete and view and assign department.

- **Upload Events/Circulars:** They can Upload for all.

2. Faculty

- **Login:** Faculty can login using credentials.
- **Home:** Faculty will get link to chat page for Department and college.
- **Students:** Faculty can view recent chats with students and also search student.
- **Notification:** They will get Notification for chats.

3. Student

- **Login:** Student can login using credentials.
- **Home:** Student will get link to chat page for Department, Section, year and college
- **Student:** Students can view chats with students and search student.
- **Faculty:** Students can view recent chats with faculty and can search faculty
- **Notification:** They will get Notification for chats

1.4 Existing System & Proposed System

Problem with current scenario

- Students have to keep on visiting teachers for queries.
- They have to keep on checking notice boards for important notice so that they can't miss the notice related to submission exam or events.
- Students have to look for the events to register, over many different WhatsApp groups.

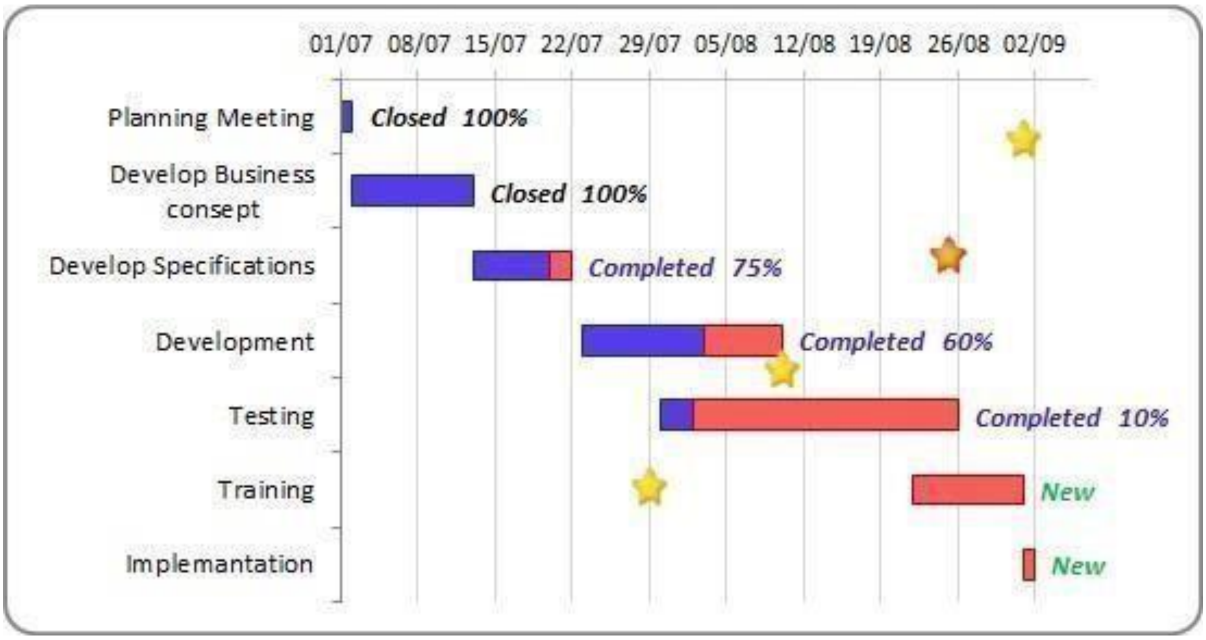
Drawbacks of the existing system

- Maintenance of the system is very difficult.
- There is a possibility for getting inaccurate results.
- User friendliness is very less.
- It consumes more time for processing the task.

2. PROPOSED SYSTEM

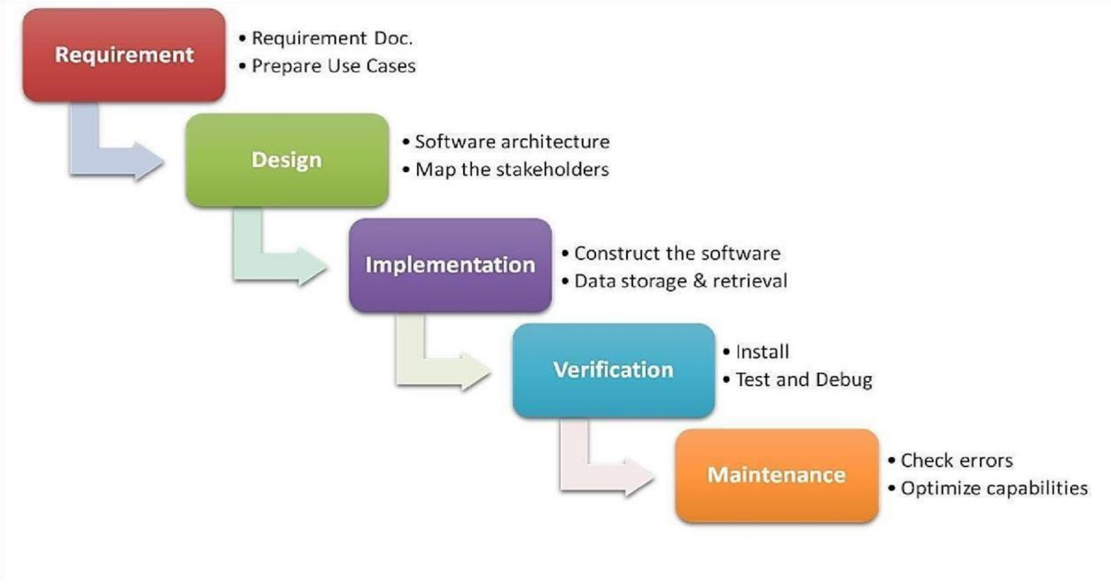
- Considering the anomalies in the existing system computerization of the whole activity is being suggested after initial analysis.
- The android application is developed using Android Studio with JAVA as a programming language.
- Proposed system is accessed by three entities namely, Admin, Faculty and Student.
- Admin need to login with their valid login credentials first in order to access the android application.
- After successful login, admin can access all the modules and perform/manage each task accurately.
- Admin can perform task such as Admin can add, update, delete and view student.
- They can also assign student by year, section and department. Admin can Add, update, delete and view and assign department. They can Upload for all. Faculty can login using credentials.
- Faculty will get link to chat page for Department and college. Faculty can view recent chats with students and also search student.
- They will get Notification for chats.
- Student can login using credentials. Student will get link to chat page for Department, Section, year and college.
- Students can view chats with students and search student. Students can view recent chats with faculty and can search faculty. They will get Notification for chats.

2.1 Gantt Chart



3. Project Lifecycle Details

Waterfall Model

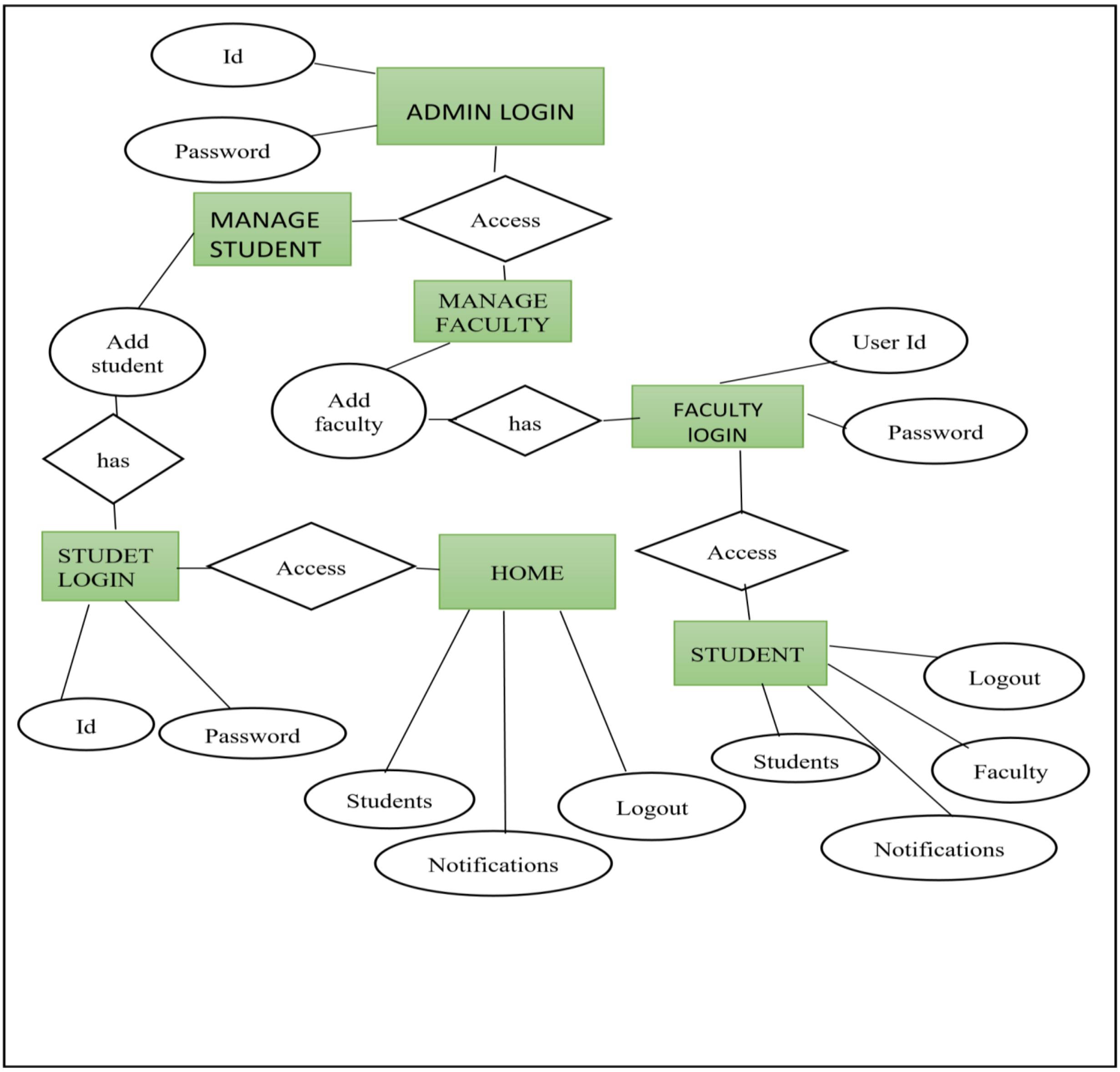


3. Description

The waterfall Model is a linear sequential flow. In which progress is seen as flowing steadily downwards (like a waterfall) through the phases of software implementation. This means that any phase in the development process begins only if the previous phase is complete. The waterfall approach does not define the process to go back to the previous phase to handle changes in requirement. The waterfall approach is the earliest approach that was used for software development.

4. PROJECT DESIGN

E-R Diagram



Use Case Diagram

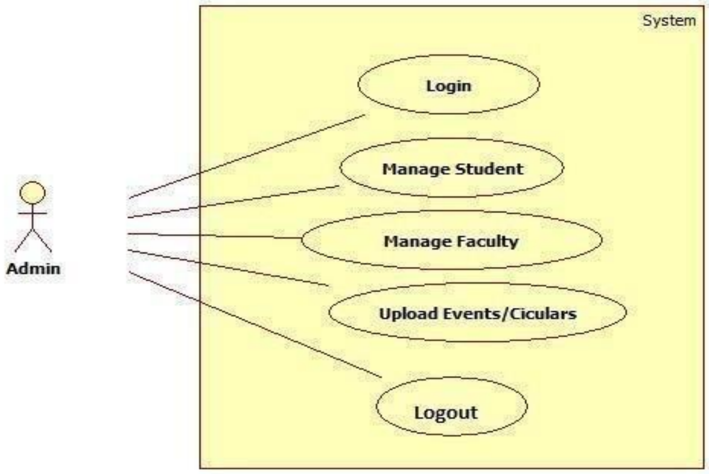


Fig. Use Case Diagram of Admin

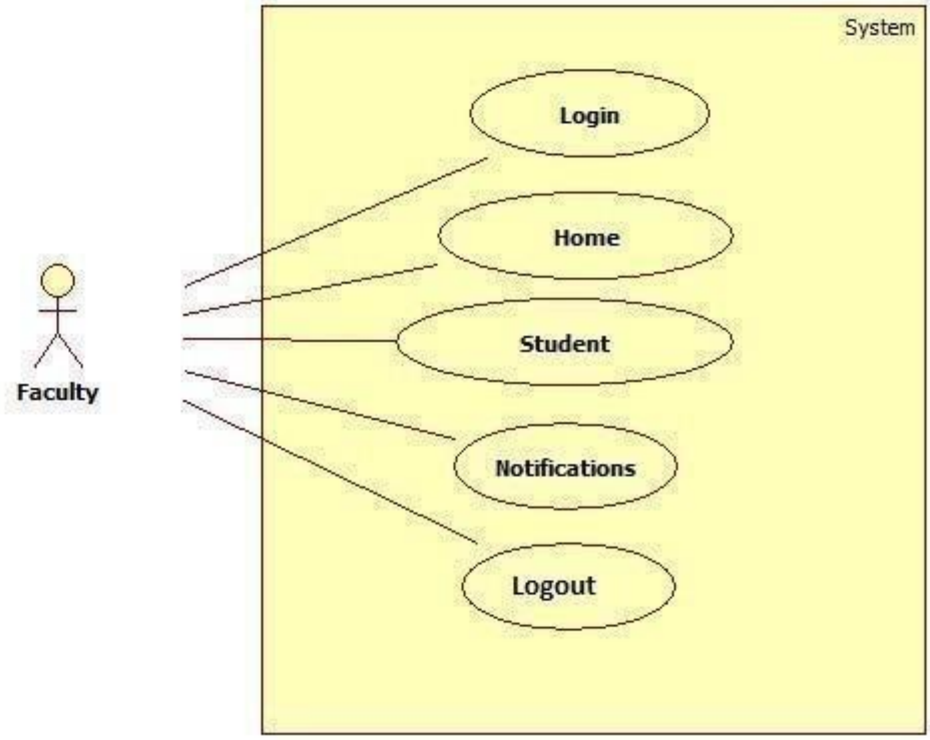


Fig. Use Case Diagram of Faculty

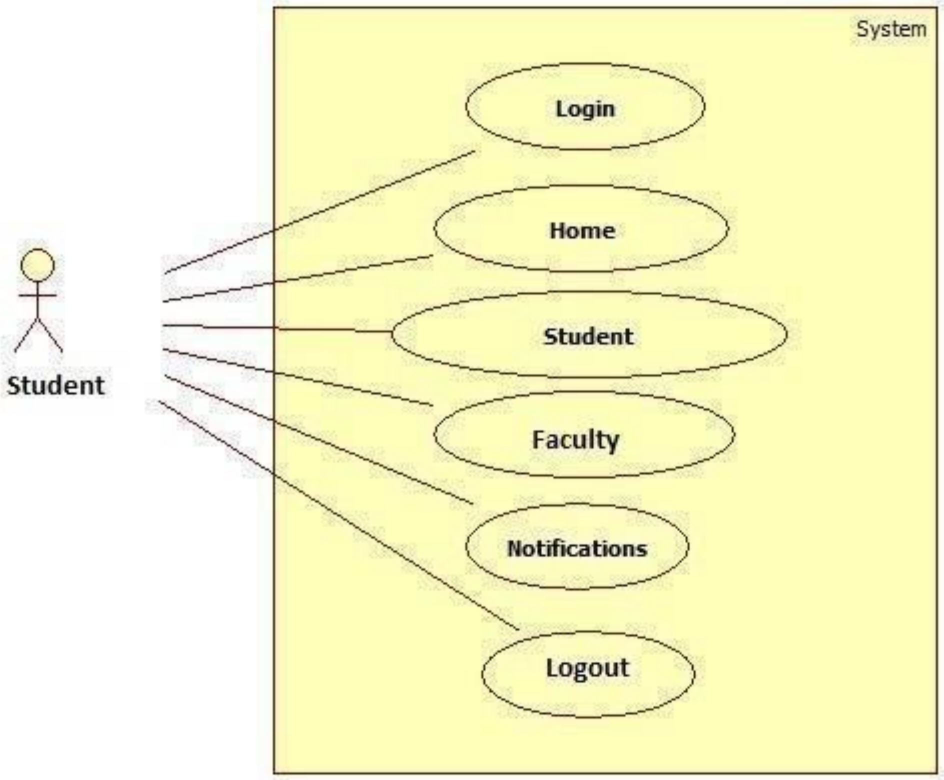


Fig. Use Case Diagram of Student

Sequence Diagram

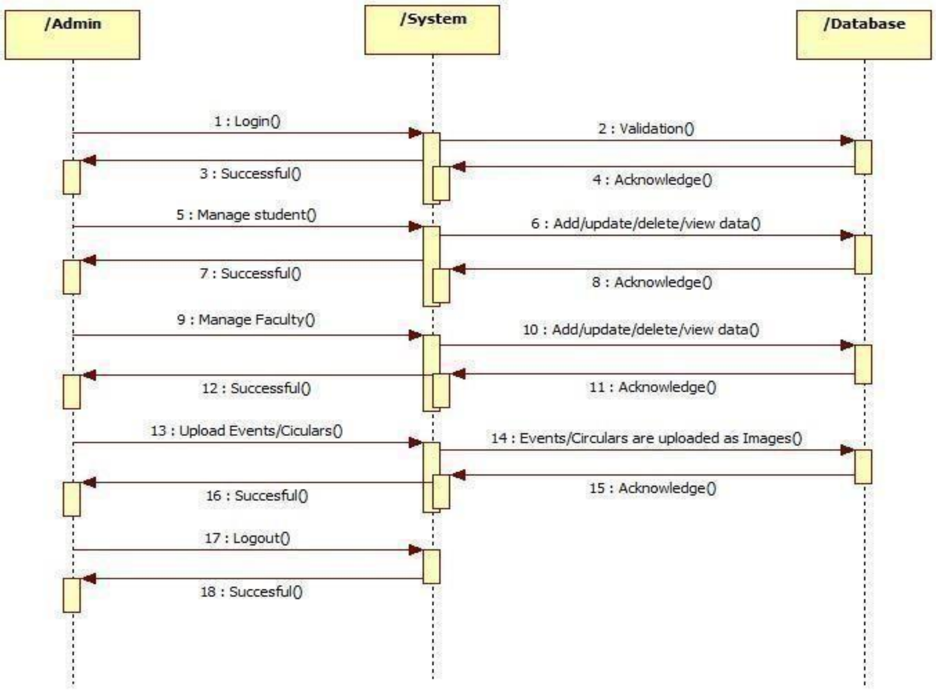


Fig. Sequence Diagram of Admin

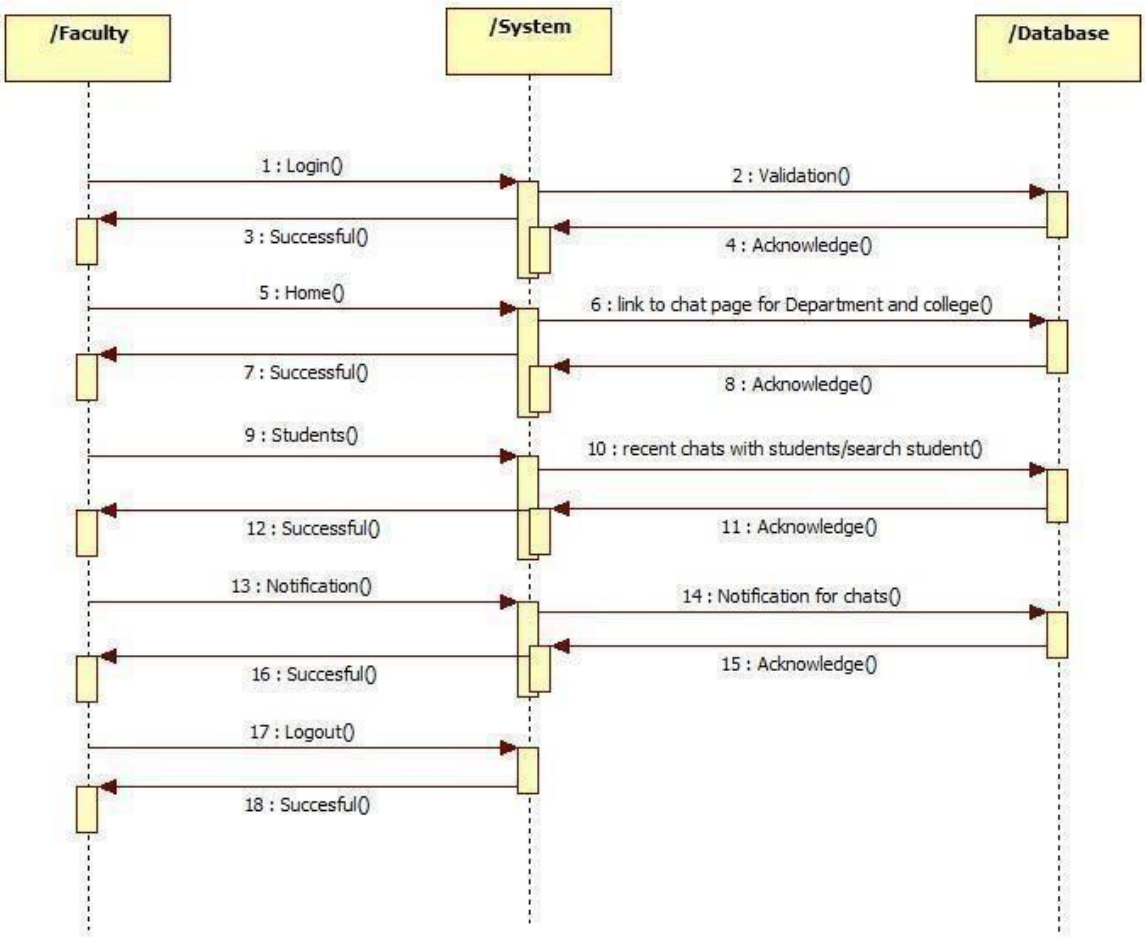


Fig. Sequence Diagram of Faculty

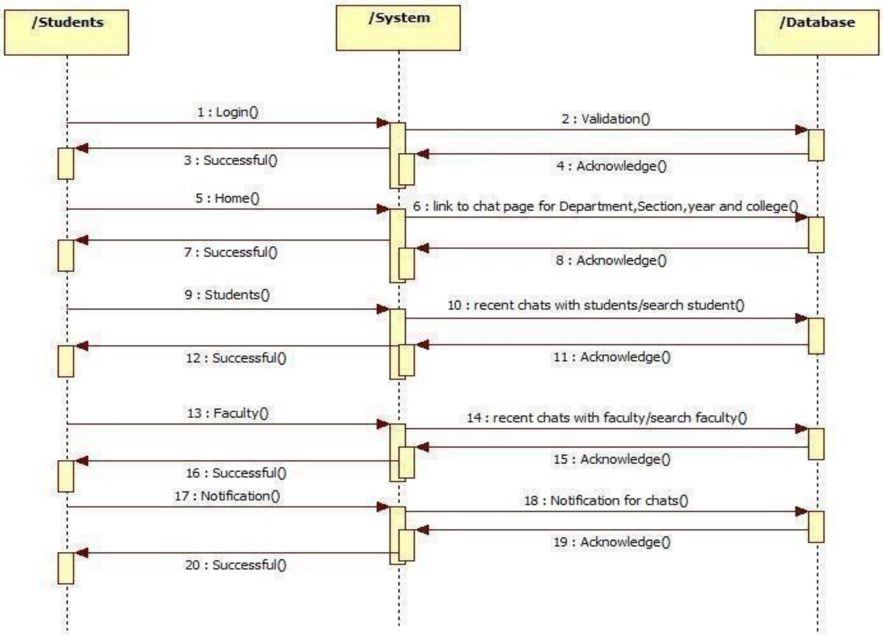


Fig. Sequence Diagram of Student

Activity Diagram

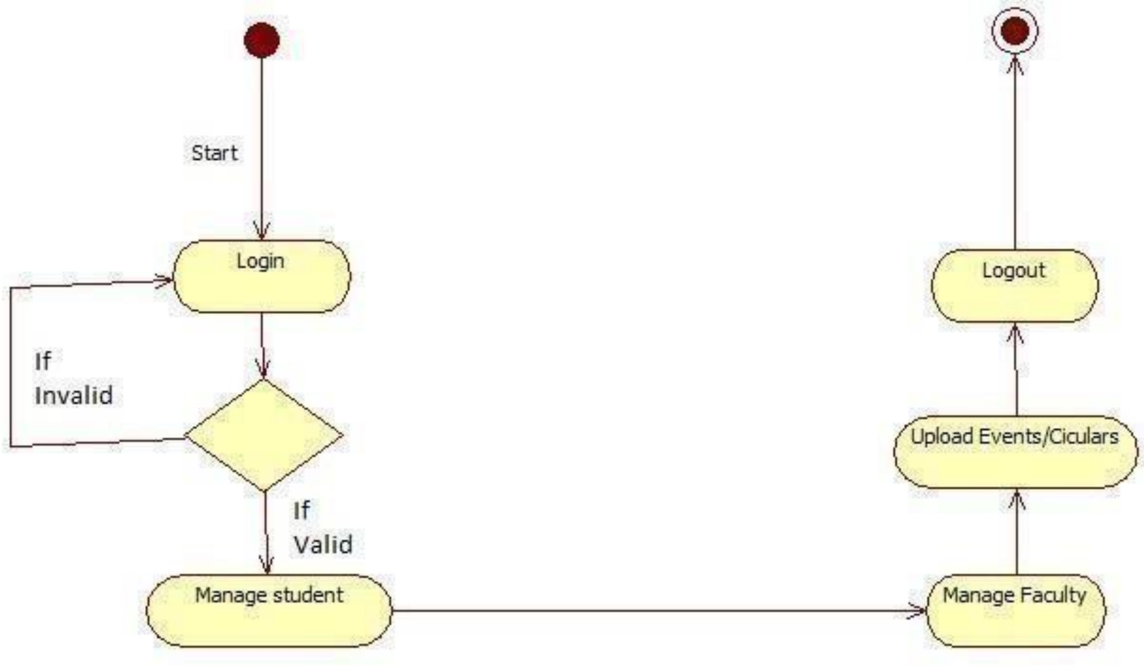


Fig. Activity Diagram of Admin

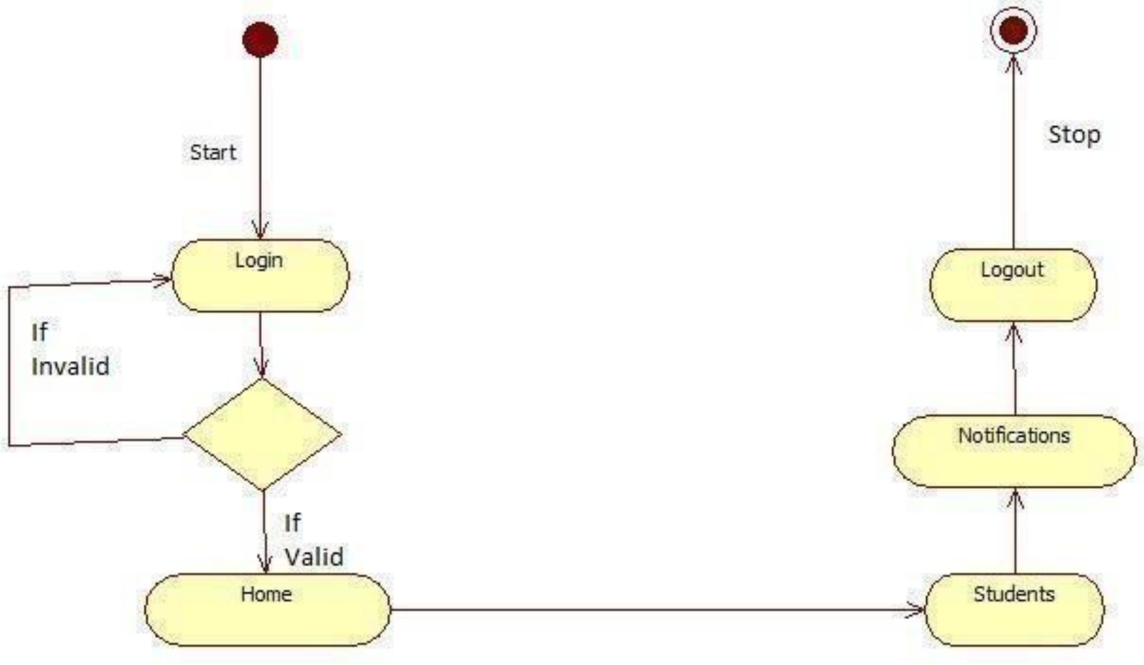
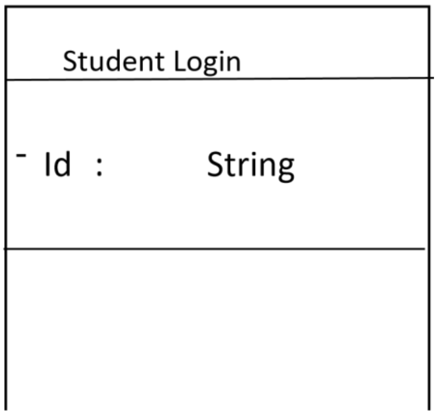


Fig. Activity Diagram of Faculty



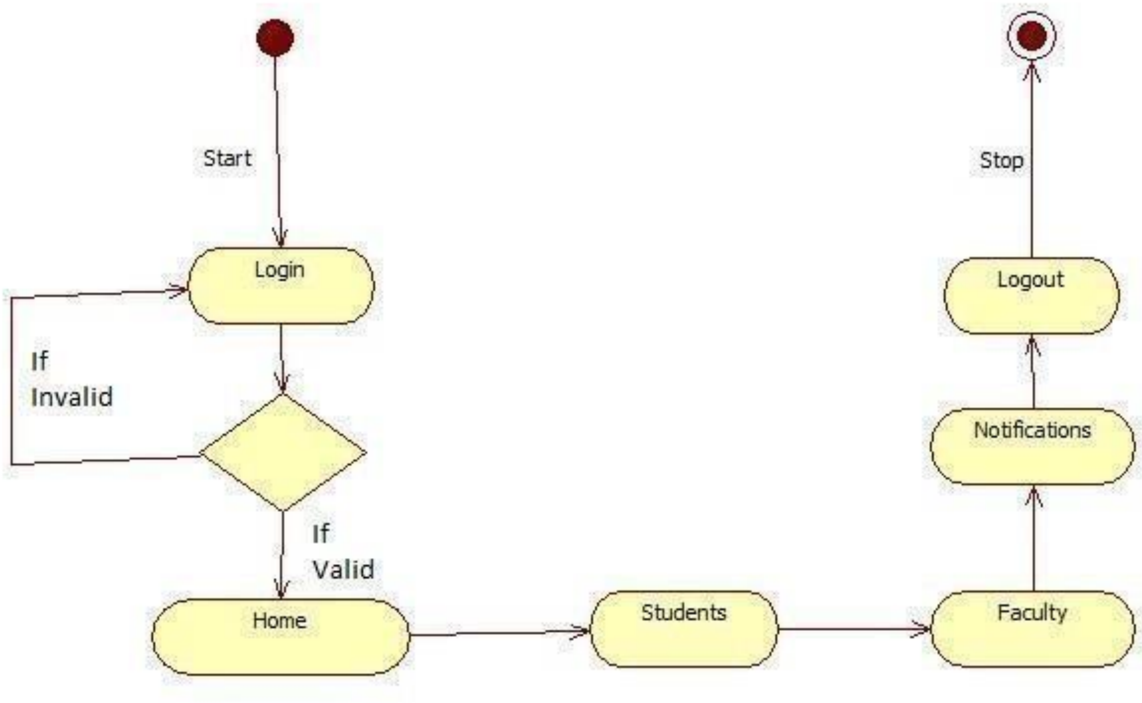
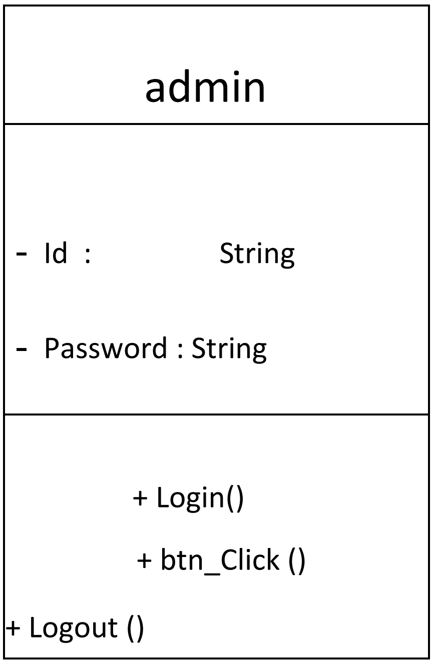


Fig. Activity Diagram of Student

Class Diagram



admin

- Id : String
- Password : String

+ Login()

+ btn_Click ()

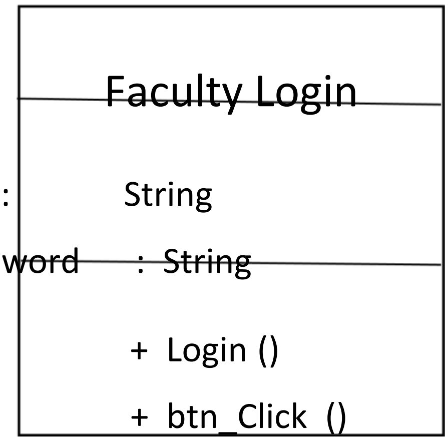
+ Logout ()

- Password : String

+ Login ()

+ btn_Click ()

+ Logout ()



Faculty Login

- Id : String
- Password : String

+ Login ()

+ btn_Click ()

+ Logout ()

Data Flow Diagram (DFD's)

A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose. The development of DFD's is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The lop-level diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system.

The process in the context level diagram is exploded into other process at the first level DFD.

The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process.

Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical from, this lead to the modular design.

A DFD is also known as a "bubble Chart" has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

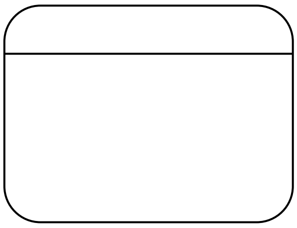
DFD SYMBOLS:

In the DFD, there are four symbols

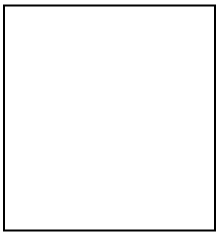
1. A square defines a source(originator) or destination of system data

2. An arrow identifies data flow. It is the pipeline through which the information flows
3. A circle or a bubble represents a process that transforms incoming data flow into outgoing data flows.

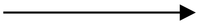
4. An open rectangle is a data store, data at rest or a temporary repository of data.



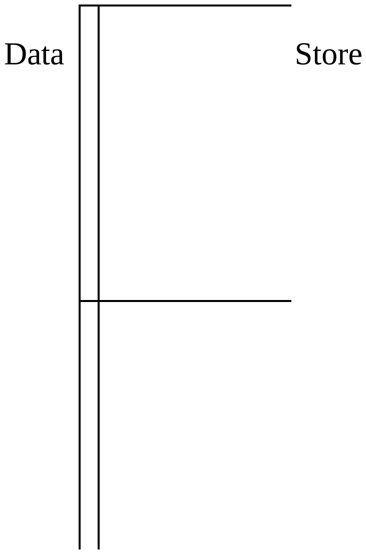
Process that transforms data flow.



Source or Destination of data



Data flow



CONSTRUCTING A DFD:

Several rules of thumb are used in drawing DFD's:

1. Process should be named and numbered for an easy reference. Each name should be representative of the process.

2. The direction of flow is from top to bottom and from left to right. Data traditionally flow from source to the destination although they may flow back to the source. One way to indicate this is to draw long flow line back to a source. An alternative way is to repeat the source symbol as a destination.

   Since it is used more than once in the DFD it is marked with a short diagonal.

3. When a process is exploded into lower level details, they are numbered.

4. The names of data stores and destinations are written in capital letters. Process and dataflow names have the first letter of each work capitalized

A DFD typically shows the minimum contents of data store. Each data store should contain all the data elements that flow in and out.

Questionnaires should contain all the data elements that flow in and out. Missing interfaces redundancies and like is then accounted for often through interviews.

SAILENT FEATURES OF DFD's

1. The DFD shows flow of data, not of control loops and decision are controlled considerations do not appear on a DFD.

2. The DFD does not indicate the time factor involved in any process whether the data flows take place daily, weekly, monthly or yearly. 3. The sequence of events is not brought out on the DFD.

TYPES OF DATA FLOW DIAGRAMS

1. Current Physical
2. Current Logical
3. New Logical
4. New Physical

CURRENT PHYSICAL*:*

In Current Physical DFD process label include the name of people or their positions or the names of computer systems that might provide some of the overall system-processing label includes an identification of the technology used to process the data. Similarly, data flows and data stores are often labels with the names of the actual physical media on which data are stored such as file folders, computer files, business forms or computer tapes.

CURRENT LOGICAL:

The physical aspects at the system are removed as much as possible so that the current system is reduced to its essence to the data and the processors that transform them regardless of actual physical form.

NEW LOGICAL:

This is exactly like a current logical model if the user were completely happy with the user were completely happy with the functionality of the current system but had problems with how it was implemented typically through the new logical model will differ from current logical model while having additional functions, absolute function removal and inefficient flows recognized.

NEW PHYSICAL:

The new physical represents only the physical implementation of the new system.

RULES GOVERNING THE DFD'S

PROCESS

1) No process can have only outputs.
2) No process can have only inputs. If an object has only inputs than it must be a sink.
3) A process has a verb phrase label.

DATA STORE

1) Data cannot move directly from one data store to another data store, a process must move data.

2) Data cannot move directly from an outside source to a data store, a process, which receives, must move data from the source and place the data into data store 3) A data store has a noun phrase label.

SOURCE OR SINK

The origin and /or destination of data.

1) Data cannot move direly from a source to sink it must be moved by a process 2) A source and /or sink has a noun phrase land

DATA FLOW

1) A Data Flow has only one direction of flow between symbols. It may flow in both directions between a process and a data store to show a read before an update. The later it usually indicated however by two separate arrows since these happen at different type.

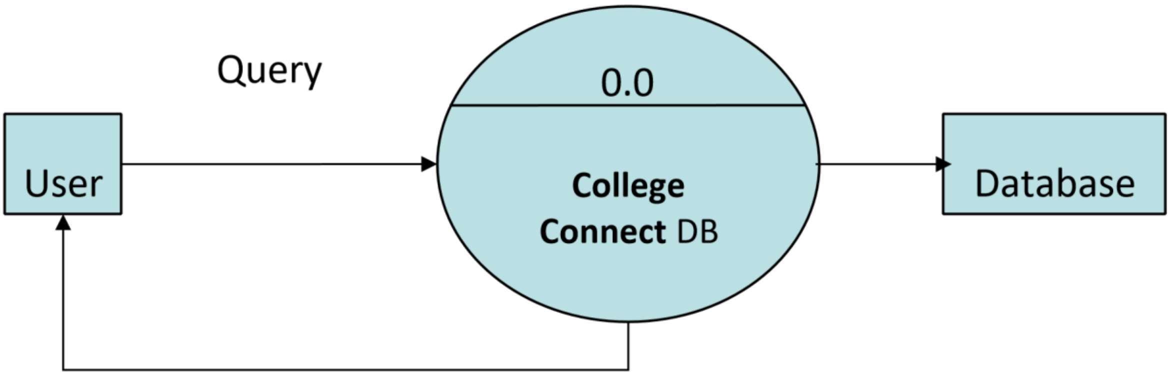
2) A join in DFD means that exactly the same data comes from any of two or more different processes data store or sink to a common location.

3) A data flow cannot go directly back to the same process it leads. There must be at least one other process that handles the data flow produce some other data flow returns the original data into the beginning process.

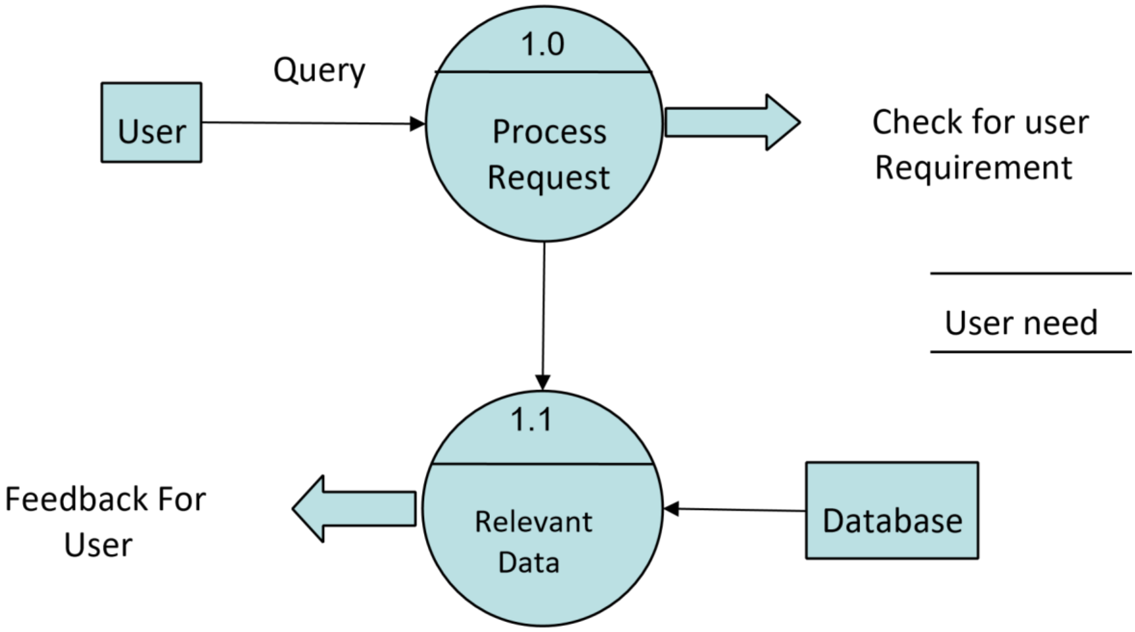
4) A Data flow to a data store means update (delete or change).

5) A data Flow from a data store means retrieve or use.

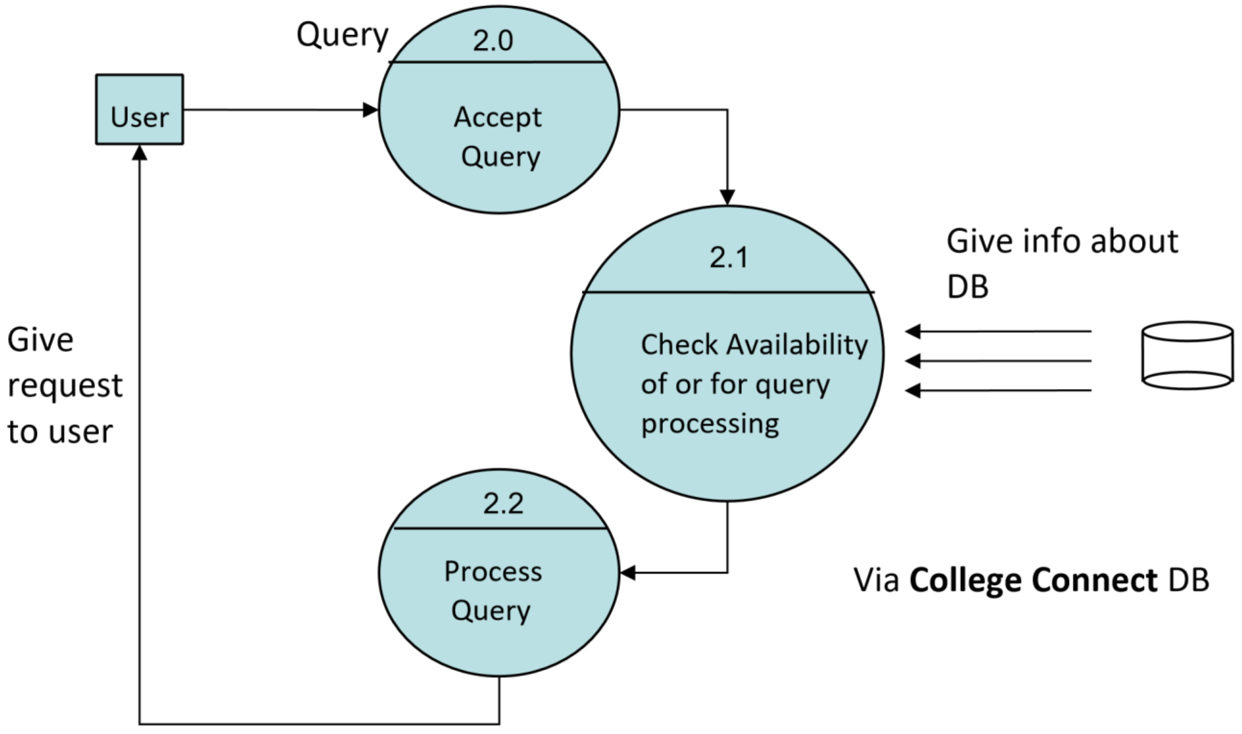
Data Flow Diagrams (DFD's)



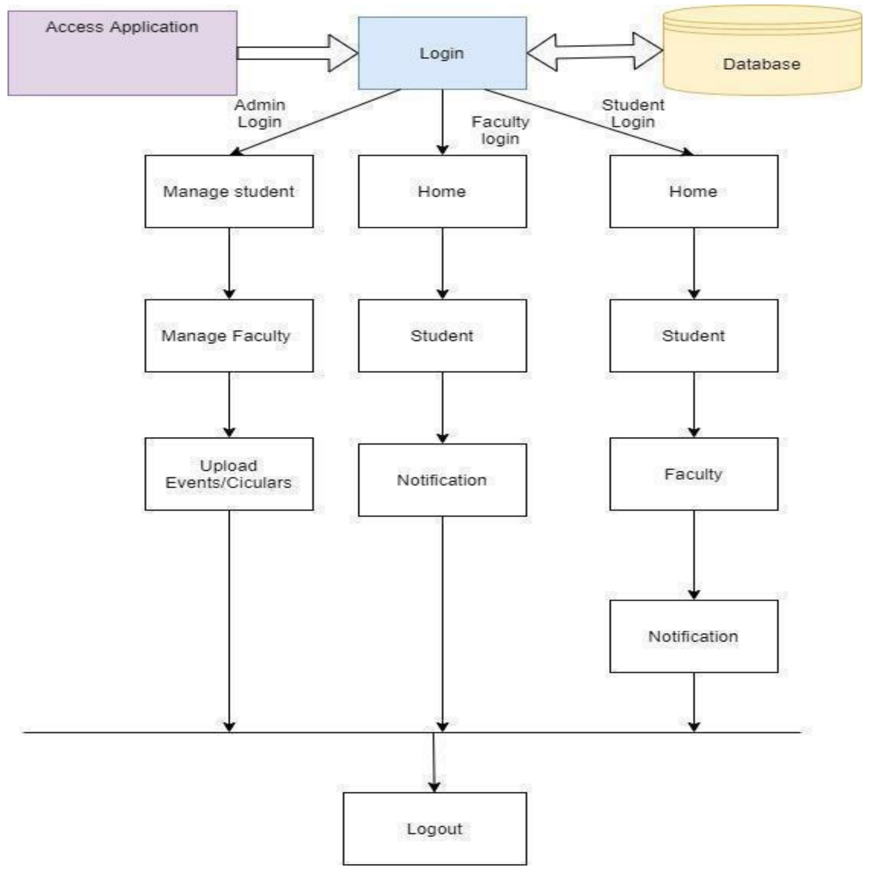
DATABASE DETAIL



LEVEL 1 DFD



LEVEL 2 DFD: PREDICTION



6. PROJECT IMPLEMENTATION

6.1 Project Implementation Technology

The Project application is loaded in Android Studio. We used Android Studio for Design and coding of project. Created and maintained all databases into SQL Server, in that we create tables, write query for store data or record of project.

✞ Hardware Requirement:

1. Laptop or PC

- i3 Processor Based Computer or higher
- 1GB RAM
- 5 GB Hard Disk

2. Android Phone or Tablet

- 1.2 Quad core Processor or higher
- 1 GB RAM

✞ Software Requirement:

1. Laptop or PC

- Windows 7 or higher.
- Java
- Android Studio

2. Android Phone or Tablet

- ○ Android v5.0 or Higher

Introduction to Android

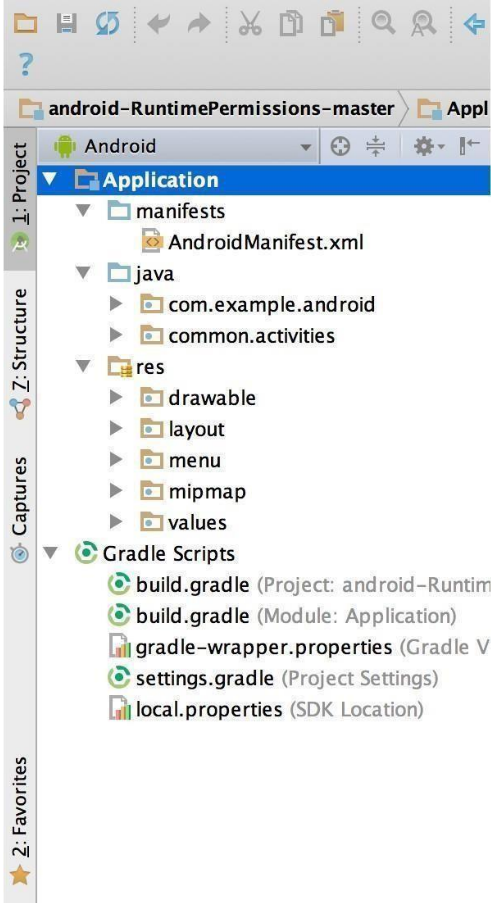
Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA . On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps, such as:

- A flexible Gradle-based build system
- A fast and feature-rich emulator
- A unified environment where you can develop for all Android devices
- Instant Run to push changes to your running app without building a new APK
- Code templates and GitHub integration to help you build common app features and import sample code
- Extensive testing tools and frameworks
- Lint tools to catch performance, usability, version compatibility, and other problems
- C++ and NDK support
- Built-in support for Google Cloud Platform, making it easy to integrate Google Cloud Messaging and App Engine.

Project Structure

Each project in Android Studio contains one or more modules with source code files and resource files. Types of modules include:

- Android app modules
- Library modules
- Google App Engine modules


?
android-RuntimePermissions-master
Appl
1: Project
Z: Structure
Captures
2: Favorites
Android
Application
manifests
AndroidManifest.xml
java
com.example.android
common.activities
res
drawable
layout
menu
mipmap
values
Gradle Scripts
build.gradle (Project: android-Runtim
build.gradle (Module: Application)
gradle-wrapper.properties (Gradle V
settings.gradle (Project Settings)
local.properties (SDK Location)

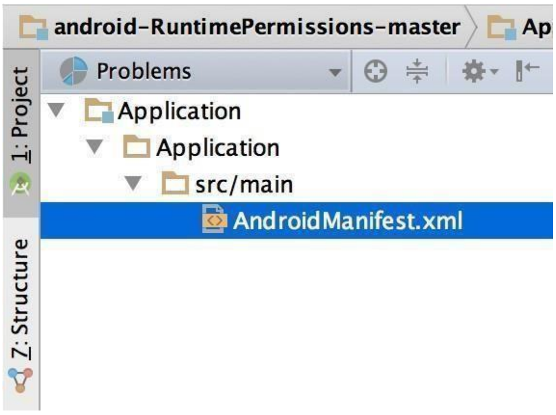
By default, Android Studio displays your project files in the Android project view, as shown in figure 1. This view is organized by modules to provide quick access to your project's key source files.

All the build files are visible at the top level under **Gradle Scripts** and each app module contains the following folders:

- **manifests**: Contains the AndroidManifest.xml file.
- **java**: Contains the Java source code files, including JUnit test code.
- **res**: Contains all non-code resources, such as XML layouts, UI strings, and bitmap images.

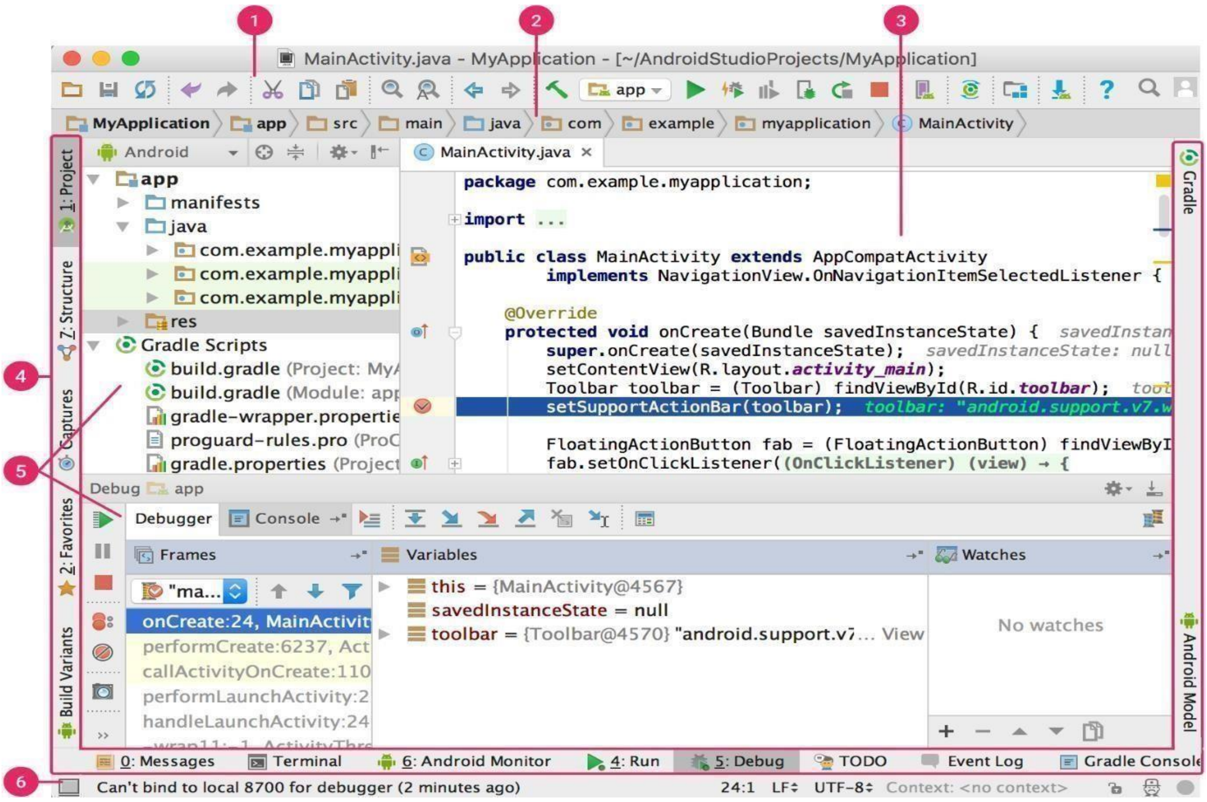
The Android project structure on disk differs from this flattened representation. To see the actual file structure of the project, select **Project** from the **Project** dropdown (in figure 1, it's showing as**Android**).

You can also customize the view of the project files to focus on specific aspects of your app development. For example, selecting the **Problems** view of your project displays links to the source files containing any recognized coding and syntax errors, such as a missing XML element closing tag in a layout file.



The User Interface

1. The **toolbar** lets you carry out a wide range of actions, including running your app and launching Android tools.
2. The **navigation bar** helps you navigate through your project and open files for editing. It provides a more compact view of the structure visible in the **Project** window.
3. The **editor window** is where you create and modify code. Depending on the current file type, the editor can change. For example, when viewing a layout file, the editor displays the Layout Editor.
4. The **tool window bar** runs around the outside of the IDE window and contains the buttons that allow you to expand or collapse individual tool windows.
5. The **tool windows** give you access to specific tasks like project management, search, version control, and more. You can expand them and collapse them.
6. The **status bar** displays the status of your project and the IDE itself, as well as any warnings or messages.



```
package com.example.myapplication;

import ...

public class MainActivity extends AppCompatActivity
        implements NavigationView.OnNavigationItemSelectedListener {

    @Override
    protected void onCreate(Bundle savedInstanceState) {  savedInstan
        super.onCreate(savedInstanceState);  savedInstanceState: null
        setContentView(R.layout.activity_main);
        Toolbar toolbar = (Toolbar) findViewById(R.id.toolbar);  tool
        setSupportActionBar(toolbar);  toolbar: "android.support.v7.w

        FloatingActionButton fab = (FloatingActionButton) findViewByI
        fab.setOnClickListener((OnClickListener) (view) → {
```

```
onCreate:24, MainActivit
performCreate:6237, Act
callActivityOnCreate:110
performLaunchActivity:2
handleLaunchActivity:24
```

```
this = {MainActivity@4567}
savedInstanceState = null
toolbar = {Toolbar@4570} "android.support.v7... View
```

```
Can't bind to local 8700 for debugger (2 minutes ago)        24:1   LF÷   UTF-8÷   Context: <no context>
```

You can organize the main window to give yourself more screen space by hiding or moving toolbars and tool windows. You can also use keyboard shortcuts to access most IDE features.

At any time, you can search across your source code, databases, actions, elements of the user interface, and so on, by double-pressing the Shift key, or clicking the magnifying glass in the upper right-hand corner of the Android Studio window. This can be very useful if, for example, you are trying to locate a particular IDE action that you have forgotten how to trigger.

Tool Windows

Instead of using preset perspectives, Android Studio follows your context and automatically brings up relevant tool windows as you work. By default, the most commonly used tool windows are pinned to the tool window bar at the edges of the application window.

- To expand or collapse a tool window, click the tool’s name in the tool window bar. You can also drag, pin, unpin, attach, and detach tool windows.
- To return to the current default tool window layout, click **Window > Restore Default Layout** or customize your default layout by clicking **Window > Store Current Layout as Default**.
- To show or hide the entire tool window bar, click the window icon ▢ in the bottom lefthand corner of the Android Studio window.

- To locate a specific tool window, hover over the window icon and select the tool window from the menu.

Navigation

Here are some tips to help you move around Android Studio.

- Switch between your recently accessed files using the *Recent Files* action. Press **Control+E** (**Command+E** on a Mac) to bring up the Recent Files action. By default, the last accessed file is selected. You can also access any tool window through the left column in this action.
- View the structure of the current file using the *File Structure* action. Bring up the File Structure action by pressing **Control+F12** (**Command+F12** on a Mac). Using this action, you can quickly navigate to any part of your current file.
- Search for and navigate to a specific class in your project using the *Navigate to Class* action. Bring up the action by pressing **Control+N**(**Command+O** on a Mac). Navigate to Class supports sophisticated expressions, including camel humps, paths, line navigate to, middle name matching, and many more. If you call it twice in a row, it shows you the results out of the project classes.
- Navigate to a file or folder using the *Navigate to File* action. Bring up the Navigate to File action by pressing **Control+Shift+N** (**Command+Shift+O** on a Mac). To search for folders rather than files, add a / at the end of your expression.
- Navigate to a method or field by name using the *Navigate to Symbol* action. Bring up the Navigate to Symbol action by pressing **Control+Shift+Alt+N**(**Command+Shift+Alt+O** on a Mac).
- Find all the pieces of code referencing the class, method, field, parameter, or statement at the current cursor position by pressing **Alt+F7**

Gradle Build System

Android Studio uses Gradle as the foundation of the build system, with more Androidspecific capabilities provided by the Android plugin for Gradle. This build system runs as an integrated tool from the Android Studio menu, and independently from the command line.

You can use the features of the build system to do the following:

- Customize, configure, and extend the build process.

- Create multiple APKs for your app, with different features using the same project and modules.

- Reuse code and resources across sourcesets.

By employing the flexibility of Gradle, you can achieve all of this without modifying your app's core source files. Android Studio build files are namedbuild.gradle. They are plain text files that use Groovy syntax to configure the build with elements provided by the Android plugin for Gradle. Each project has one top-level build file for the entire project and separate module-level build files for each module. When you import an existing project, Android Studio automatically generates the necessary build files.

Multiple APK Support

Multiple APK support allows you to efficiently create multiple APKs based on screen density or ABI. For example, you can create separate APKs of an app for the hdpi and mdpi screen densities, while still considering them a single variant and allowing them to share test APK, javac, dx, and ProGuard settings.

Debug and Profile Tools

Android Studio assists you in debugging and improving the performance of your code, including inline debugging and performance analysis tools.

Inline debugging

Use inline debugging to enhance your code walk-throughs in the debugger view with inline verification of references, expressions, and variable values.

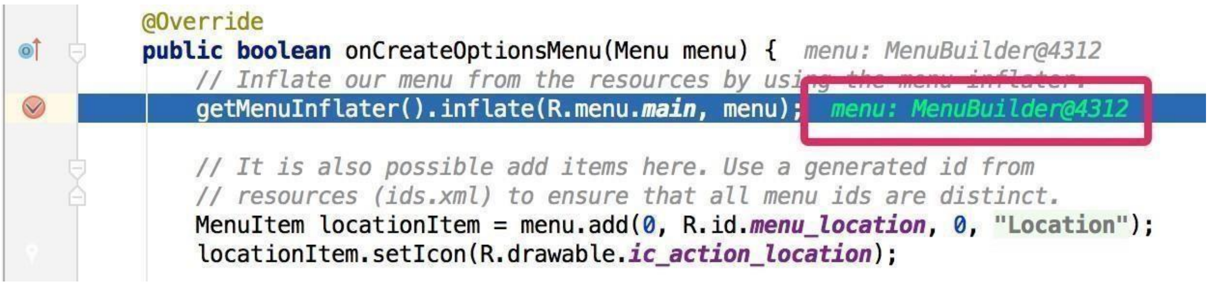
Inline debug information includes:

- Inline variable values

- Referring objects that reference a selected object

- Method return values

- Lambda and operator expressions
- Tooltip values



```
@Override
public boolean onCreateOptionsMenu(Menu menu) {  menu: MenuBuilder@4312
    // Inflate our menu from the resources by using the menu inflater.
    getMenuInflater().inflate(R.menu.main, menu);  menu: MenuBuilder@4312

    // It is also possible add items here. Use a generated id from
    // resources (ids.xml) to ensure that all menu ids are distinct.
    MenuItem locationItem = menu.add(0, R.id.menu_location, 0, "Location");
    locationItem.setIcon(R.drawable.ic_action_location);
```

Performance monitors

Android Studio provides performance monitors so you can more easily track your app’s memory and CPU usage, find deallocated objects, locate memory leaks, optimize graphics performance, and analyze network requests. With your app running on a device or emulator, open the **Android Monitor**tool window, and then click the **Monitors** tab.

Allocation tracker

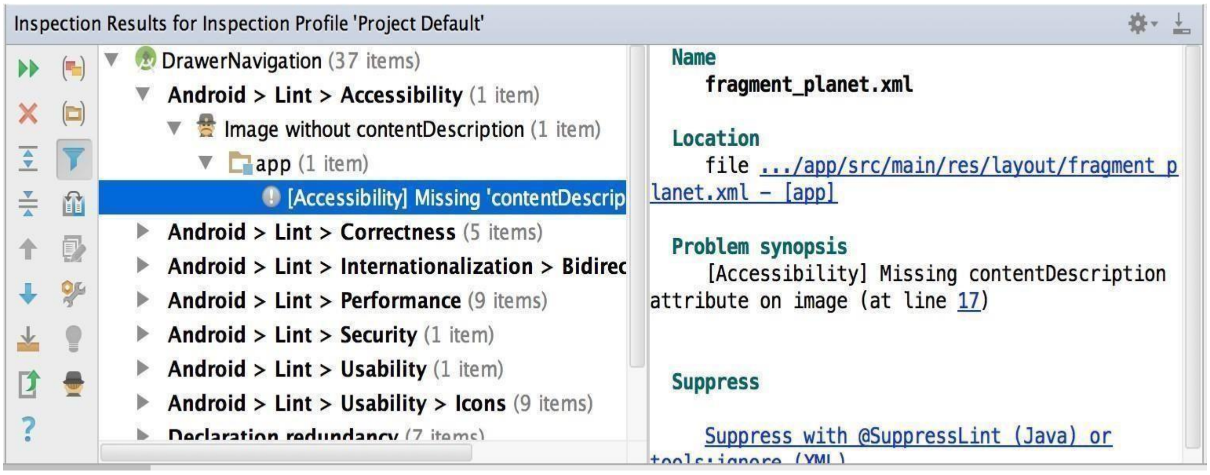
Android Studio allows you to track memory allocation as it monitors memory use.

Tracking memory allocation allows you to monitor where objects are being allocated when you perform certain actions. Knowing these allocations enables you to optimize your app’s performance and memory use by adjusting the method calls related to those actions.

Code inspections

Whenever you compile your program, Android Studio automatically runs configured Lint and other IDE inspections to help you easily identify and correct problems with the structural quality of your code.

The Lint tool checks your Android project source files for potential bugs and optimization improvements for correctness, security, performance, usability, accessibility, and internationalization.



Inspection Results for Inspection Profile 'Project Default'

```
▼ DrawerNavigation (37 items)
  ▼ Android > Lint > Accessibility (1 item)
    ▼ Image without contentDescription (1 item)
      ▼ app (1 item)
          [Accessibility] Missing 'contentDescrip
  ▶ Android > Lint > Correctness (5 items)
  ▶ Android > Lint > Internationalization > Bidirec
  ▶ Android > Lint > Performance (9 items)
  ▶ Android > Lint > Security (1 item)
  ▶ Android > Lint > Usability (1 item)
  ▶ Android > Lint > Usability > Icons (9 items)
  ▶ Declaration redundancy (7 items)
```

```
Name
   fragment_planet.xml

Location
   file .../app/src/main/res/layout/fragment_p
lanet.xml - [app]

Problem synopsis
   [Accessibility] Missing contentDescription
attribute on image (at line 17)

Suppress

   Suppress with @SuppressLint (Java) or
tools:ignore (XML)
```

FEASIBILITY REPORT

Feasibility Study is a high level capsule version of the entire process intended to answer a number of questions like: What is the problem? Is there any feasible solution to the given problem? Is the problem even worth solving? Feasibility study is conducted once the problem clearly understood. Feasibility study is necessary to determine that the proposed system is Feasible by considering the technical, Operational, and Economical factors. By having a detailed feasibility study the management will have a clear-cut view of the proposed system. The following feasibilities are considered for the project in order to ensure that the project is variable and it does not have any major obstructions.

Feasibility study encompasses the following things:

- Technical Feasibility
- Economic Feasibility
- Operational Feasibility

In this phase, we study the feasibility of all proposed systems, and pick the best feasible solution for the problem. The feasibility is studied based on three main factors as follows.

Technical Feasibility

In this step, we verify whether the proposed systems are technically feasible or not. i.e., all the technologies required to develop the system are available readily or not.

Technical Feasibility determines whether the organization has the technology and skills necessary to carry out the project and how this should be obtained. The system can be feasible because of the following grounds:

- All necessary technology exists to develop the system.
- This system is too flexible and it can be expanded further.
- This system can give guarantees of accuracy, ease of use, reliability and the data security.
- This system can give instant response to inquire. Our project is technically feasible because, all the technology needed for our project is readily available.

Operating System	**:**	Android v5.0 or Higher
Languages	**:**	JAVA, PHP(LARAVEL)
Database System	**:**	MS-SQL Server
Documentation Tool	**:**	MS - Word

Operational Feasibility

In this step, we verify different operational factors of the proposed systems like manpower, time etc., whichever solution uses less operational resources, is the best operationally feasible solution. The solution should also be operationally possible to implement. Operational Feasibility determines if the proposed system satisfied user objectives could be fitted into the current system operation.

- The methods of processing and presentation are completely accepted by the clients since they can meet all user requirements.
- The clients have been involved in the planning and development of the system.
- The proposed system will not cause any problem under any circumstances.

Our project is operationally feasible because the time requirements and personnel requirements are satisfied. We are a team of two members and we worked on this project for all these working months

8. TESTING

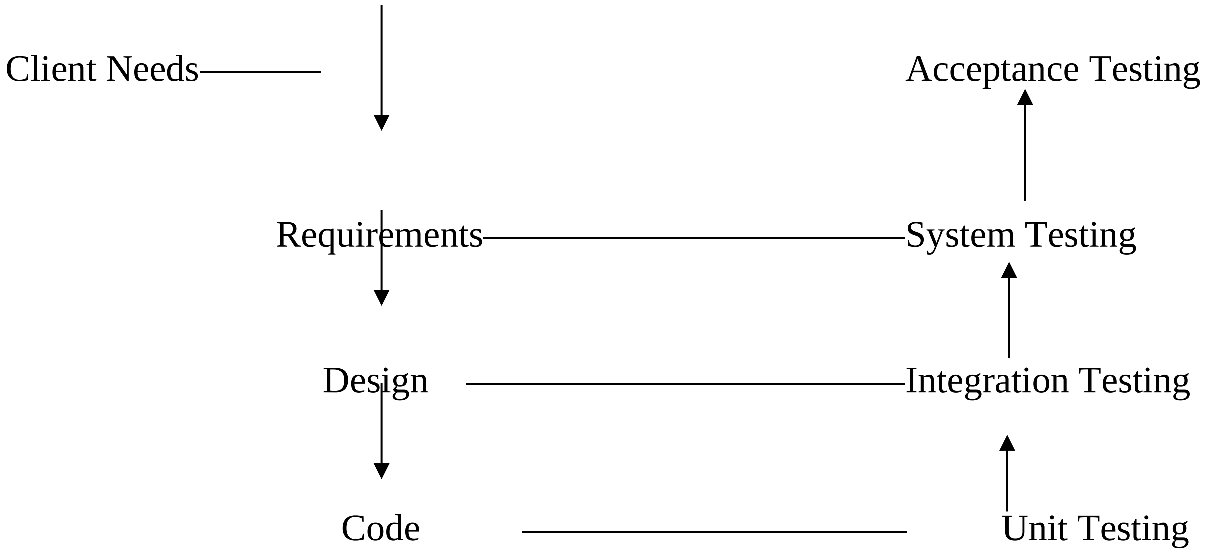
As both the projects are on bit large scale, we always need testing to make it successful. If each components work properly in all respect and gives desired output for all kind of inputs then project is said to be successful. So the conclusion is-to make the project successful, it needs to be tested.

The testing done here was System Testing checking whether the user requirements were satisfied. The code for the new system has been written completely using JAVA as the coding language and Android Studio as the interface for front-end designing. The new system has been tested well with the help of the users and all the applications have been verified from every nook and corner of the user.

Although some applications were found to be erroneous these applications have been corrected before being implemented. The flow of the forms has been found to be very much in accordance with the actual flow of data.

Levels of Testing

In order to uncover the errors present in different phases we have the concept of levels of testing. The basic levels of testing are:



A series of testing is done for the proposed system before the system is ready for the user acceptance testing.

The steps involved in Testing are:

Unit Testing

Unit testing focuses verification efforts on the smallest unit of the software design, the module. This is also known as “Module Testing”. The modules are tested separately. This testing carried out during programming stage itself. In this testing each module is found to be working satisfactorily as regards to the expected output from the module.

Integration Testing

Data can be grossed across an interface; one module can have adverse efforts on another. Integration testing is systematic testing for construction the program structure while at the same time conducting tests to uncover errors associated with in the interface. The objective is to take unit tested modules and build a program structure. All the modules are combined and tested as a whole. Here correction is difficult because the isolation of cause is complicate by the vast expense of the entire program. Thus in the integration testing stop, all the errors uncovered are corrected for the text testing steps.

System testing

System testing is the stage of implementation that is aimed at ensuring that the system works accurately and efficiently for live operation commences. Testing is vital to the success of the system. System testing makes a logical assumption that if all the parts of the system are correct, then goal will be successfully achieved.

Validation Testing

At the conclusion of integration testing software is completely assembled as a package, interfacing errors have been uncovered and corrected and a final series of software tests begins, validation test begins. Validation test can be defined in many ways. But the simple definition is that validation succeeds when the software function in a manner that can reasonably expected by the customer. After validation test has been conducted one of two possible conditions exists.

One is the function or performance characteristics confirm to specifications and are accepted and the other is deviation from specification is uncovered and a deficiency list is created.

Proposed system under consideration has been tested by using validation testing and found to be working satisfactorily.

Output Testing

After performing validation testing, the next step is output testing of the proposed system since no system could be useful if it does not produce the required output in the specified format. Asking the users about the format required by them tests the outputs generated by the system under consideration. Here the output format is considered in two ways, one is on the screen and other is the printed format. The output format on the screen is found to be correct as the format was designed in the system designed phase according to the user needs.

For the hard copy also the output comes as the specified requirements by the users. Hence output testing does not result any corrections in the system.

User Acceptance Testing

User acceptance of a system is the key factor of the success of any system. The system under study is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes wherever required.

Test Cases

Registration: To begin with login, user need to register by filling up basic registration details. There are multiple fields in registration page and every field has to fill by user. User cannot use character in the login id field.

Login: - Login id and password are kept compulsory fields, and if the id or password doesn’t match then it will show an error message.

VALIDATION CRITERIA

1. In each form, no field which is not null able should be left blank.
2. All numeric fields should be checked for non-numeric values. Similarly, text fields like names should not contain any numeric characters.

3. All primary keys should be automatically generated to prevent the user from entering any existing key.
4. Use of error handling for each Save, Edit, delete and other important operations.
5. Whenever the user Tabs out or Enter from a text box, the data should be validated and if it is invalid, focus should again be sent to the text box with proper message.

9. ADVANTAGES OF PROJECT

Advantages:

- It is a user-friendly application.
- Students can easily get to know the notice.
- This will help student to solve their queries easily.

Limitations

• This application requires active internet connection. • User need to put correct data or else it behaves abnormally.

Features

1) Load Balancing:
Since the system will be available only the admin logs in the amount of load on server will be limited to time period of admin access.

2) Easy Accessibility:
Records can be easily accessed and store and other information respectively.

3) User Friendly:
The website/application will be giving a very user-friendly approach for all user.

4) Efficient and reliable:
Maintaining the all secured and database on the server which will be accessible according the user requirement without any maintenance cost will be a very efficient as

compared to storing all the customer data on the spreadsheet or in physically in the record books.

5) Easy maintenance:

Both the apps are design as easy way. So maintenance is also easy.

10. CONCLUSION

This was our project about **“Student Council Android and Web App”** developed in Android, Laravel as well as web application based on Java and Asp. Net programming language. The Development of this system takes a lot of efforts from us. We think this system gave a lot of satisfaction to all of us. Though every task is never said to be perfect in this development field even more improvement may be possible in this application. We learned so many things and gained a lot of knowledge about development field. We hope this will prove fruitful to us.

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http://msdn2.microsoft.com/enus/default.aspx: This is a valuable online resource, and is a must for any developer using Microsoft tools.

http://www.asp.net/: This is the official Microsoft ASP.NET web site. It has a lot of: tutorials, training videos, and sample projects.

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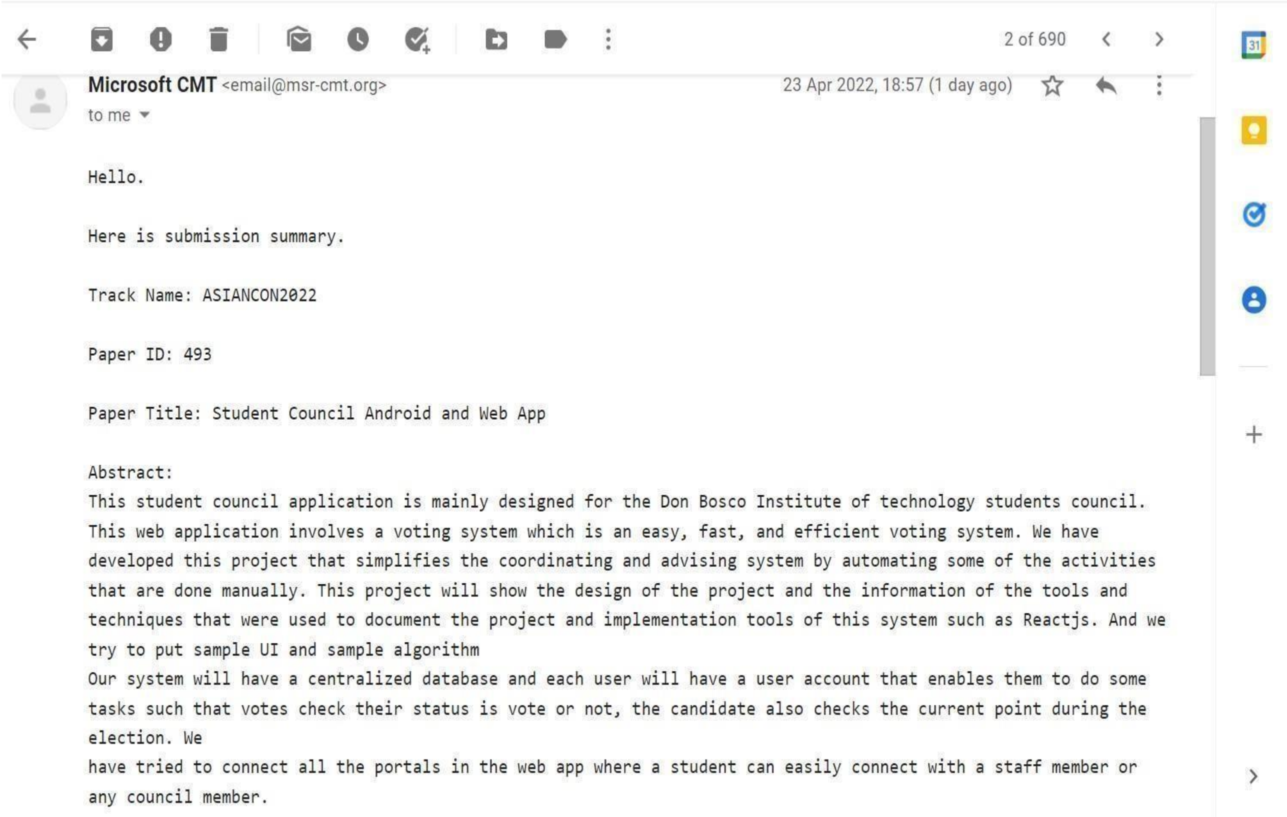
Publication Paper

Our Research Paper **"Student Council Android and Web App"** was submitted in the council of IEEE ASIANCON2022. With the track name ASIANCON2022. And paper ID- 493.



Microsoft CMT <email@msr-cmt.org>
to me
23 Apr 2022, 18:57 (1 day ago)

Hello.

Here is submission summary.

Track Name: ASIANCON2022

Paper ID: 493

Paper Title: Student Council Android and Web App

Abstract:
This student council application is mainly designed for the Don Bosco Institute of technology students council. This web application involves a voting system which is an easy, fast, and efficient voting system. We have developed this project that simplifies the coordinating and advising system by automating some of the activities that are done manually. This project will show the design of the project and the information of the tools and techniques that were used to document the project and implementation tools of this system such as Reactjs. And we try to put sample UI and sample algorithm
Our system will have a centralized database and each user will have a user account that enables them to do some tasks such that votes check their status is vote or not, the candidate also checks the current point during the election. We
have tried to connect all the portals in the web app where a student can easily connect with a staff member or any council member.

Acknowledgement

We are pleased to present **"College Connect"** and **"DBIT Easy Admin"** project and take this opportunity to express our profound gratitude our project guide **Prof. Imran Ali Mirza**, who helped us in completion of this project.

We thank our college for providing us with excellent facilities that helped us to complete and present this project. We would also like to thank the staff members and lab assistants for permitting us to use computers in the lab as and when required.

We express our deepest gratitude towards our project guide for his valuable and timely advice during the various phases in our project. We would also like to thank **Ms. Ditty Varghese** for providing us with all proper facilities and support as the project coordinator. We would like to thank her for support, patience and faith in our capabilities and for giving us flexibility in terms of working and reporting schedules.

We would like to thank all our friends for their smiles and friendship making the college life enjoyable and memorable and family members who always stood beside us and provided the utmost important moral support. Finally, we would like to thank our **HOD Dr. Phiroj Shaikh** for his constant support and motivation

1. Ayushman Pandita, 77

(Signature)

2. Austin Abraham, 78

(Signature)

Date