

# **A PROJECT REPORT ON**

## **HATIM APP**

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Lecturer  
Department of Computer Sciences



**MIZORAM UNIVERSITY, TANHRIL: AIZAWL  
2020**

# HIGHER AND TECHNICAL INSTITUTE, MIZORAM CERTIFICATE



*This is to certify that, C.Laldinsanga, Gagan Rai and R.Remchhingpuii, has satisfactorily fulfilled the project entitled “**Hatim App**” in order to meet the requirements of the Mizoram University for the VI Semester, Bachelor of Computer Application in the year 2020. It is to certify that all the corrections/suggestions indicated for internal assessment has been approved as it satisfies the academic requirements in respect of project work prescribed for the BCA course.*

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# **A PROJECT REPORT ON**

## **HATIM APP**

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**HIGHER AND TECHNICAL INSTITUTE MIZORAM**

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**2020**



# ACKNOWLEDGEMENT

*We express our sincere gratitude to all those who support us and lend a helping hand in making this project a success. We are deeply indebted to the following persons for their valuable guidance and support.*

*Most of all we would like to thank Mr Vuansanga Vanchhawng, Principal, Higher and Technical Institute, Mizoram for his moral and prayer support. Mr K. Lalmuanpuia, Head of Department in Computer Sciences for the education and training for this career. The selection of this Project and the completion of this project is mainly due to our Project Guide Mr. H. Lalruatkima. Lecturer, Dept. of Computer Sciences. We are thankful to him for his outstanding comments and the advice he had given us.*

*We also like to thank and give our grateful gratitude to our parents for their moral and financial support, as well as their encouragement to succeed this Project.*

*Most of all we like to thank God for his mercy and faithfulness and for giving us wisdom and knowledge to be able to complete our project without failures.*

*C. Laldinsanga  
Gagan Rai  
R. Remchhingpuii*



## DECLARATION

*We do hereby the declare that the project entitled “**Hatim App**” has no formed the basis formed the award of any Diploma, Degree or and other similar project. This project is prepared under the guidance and supervision of our project guide Mr. H. Lalruatkima which forms our partial fulfilment of the requirements for three years Bachelor Degree in Computer Applications of Mizoram University.*

*C. Laldinsanga  
Gagan Rai  
R. Remchhingpuii*



# ABSTRACT

*This project report includes the description and implementation for **Hatim App**. This project deals with the construction using Android Studio (for front-end) and Firebase (for back-end) which plays a vital role in this project.*

*As this project deals with guiding the users who is familiar with the college by using this app, it is simple and easy to understand and grasp the concept of this project.*

*This application mainly aims display and produce the necessary information about the Institution, news will be provided through this apps by using the news page and Institution important Events will be display.*

*With the help of this project, finding and searching about the institution can easily be done and quicker than asking the Faculty or Principal. The entire project helps the users to spend less time than manually consulting the brochure.*

*Finally, this project deals with the easiest and simplest layout which made it simple to understand and to work with it.*

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# 1. PROJECT ANALYSIS

## 1.1 Overview of the Project

This project plan and oversee the new student,existing student,parents and the teacher to guide them to acquire information from this app.They assist student,parents for acquiring any knowledge regarding knowing the name of their faculties,news,hatim important files and important events of hatim

This Project will show the new student,parents,and teachers to guide them through the news so that they will get to know where to enter the college and all the news of hatim like showing every events participate by hatimians

The main aim of this project is to make an app which will be user-friendly and also to provide an easy way for the user who wan to know about hatim College

Most of the benefits of this app will goes to new student and their parents by using this app their problem will be solved.

## 1.2 Objectives of the project

The main objectives of this project is to design and develop a simple and understandable College Apps. The Application will be very useful for students and for parents where every detail of information will be display using the News we solve the problems of news where student can have directly on this App about the necessary information

The objectives of this project are as follows:

- ❖ To provide User Friendly Interface
- ❖ To Provide the New Students to know the Complete detail about their Institution
- ❖ To help the students for having knowledge about their College Events
- ❖ To help Student to know their Course and their Teachers detail
- ❖ To have direct information using the news page

### **1.3 Scope of the project**

The scope of this project cover to help and guide students to enter this HATIM institution based on application using Android Studio and Firebase

It includes the following:

- 1) An application which produce the necessary information about the Institution
- 2) Name of their teachers and their Course are available in this apps to guide and help the new students and their parents to get their teacher and faculties so that they will not be blind while entering the college
- 3) Institution important Events will be display. All the important dates are carefully written like sports, holiday etc.
- 4) News will be provided for the guidance of the Student using the news page all the news page will be send by the admin of the firebase.

## 2. SYSTEM REQUIREMENTS

### 2.1 Hardware Requirements

This project is designed in such a way that it can be implemented almost on any Android devices. Thus, the hardware requirement is not high.

The basic configurations required are as follows:

1. Android 7.0 Nougat (API 24)
2. Android 8.0 Oreo (API 26)
3. Android 9.0 Pie (API 28)
4. Above 2gb Ram

### 2.2 Software Requirements

The software used for designing the User Interface (Front-end) and the database (Back-end) are as follows:

- (i) **Android Studio**
- (ii) **Firebase**

### 2.3 Details of Hardware used

Android is a mobile operating system developed by Google, based on a modified version of the Linux kernel and other open source software and designed primarily for touchscreen mobile devices such as smartphones and tablets. In addition, Google has further developed Android TV for televisions, Android Auto for cars, and Wear OS for wrist watches, each with a specialized user interface.

Initially developed by Android Inc., which Google bought in 2005, Android was unveiled in 2007, with the first commercial android device launched in September 2008. The operating system has since gone through multiple major releases, with the current version being 9.0 "Pie", released in September 2019. List of android devices are:

- 1) Nougat version 7.0, 7.1
- 2) Oreo version 8.0, 8.1
- 3) Pie version 9.0
- 4) Above 2gb Ram

## 2.4 Details of Software Used

The main details of the software and database engine used to create this project are given below:

- (i) **Android Studio:** Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as primary IDE for native Android application development.
- (ii) **Firestore :** Firestore is a technology that allows you to create web applications without server-side programming, making development faster and easier. It supports Web, iOS, OS X and Android clients. Apps that use Firestore can use and control data without thinking about how data is stored and synchronized across different instances of the application in real-time. Firestore is a good choice because it's free for a number of users and is preferable for the beginning. It was bought by Google and now it is being constantly improved in order to make the user experience much more convenient and productive.

## 2.5 Overview of Front-End:

**Android Studio** is the official Integrated Development Environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as primary IDE for native Android application development.

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0. The current stable version is 3.1 released in March 2018. The following features are provided in the current stable version:

- Gradle-based build support.
- Android-specific refactoring and quick fixes.
- Lint tools to catch performance, usability, version compatibility and other problems
- ProGuard integration and app-signing capabilities.
- Template-based wizards to create common Android designs and components.
- A rich layout editor that allows users to drag-and-drop UI components, option to preview layouts on multiple screen configurations.
- Support for building Android Wear apps.
- Built-in support for Google Cloud Platform, enabling integration with Firebase Cloud Messaging (Earlier 'Google Cloud Messaging') and Google App Engine.
- Android Virtual Device (Emulator) to run and debug apps in the Android studio.

## 2.6 Overview of the Back-End:

**Firestore:** Firestore is a set of tools offered by Google to build excellent scalable applications in the cloud. It is a powerful service that helps in building applications quickly without reinventing the components or modules. Services like analytics, authentication, databases, configuration, file storage, push messaging are provided by firestore thereby making it easy for the developers to focus on the user experience of the application.

Firestore allow syncing the real time data across all the devices-Android,IOS,and the web without refreshing the screen Firestore offers integration to Google Ads, AdMob, DoubleClick, Play Store, Data Studio, BigQuery, and Slack,to make you're app development with efficient and accurate management and maintenance

Everything from the Database, analytics to crashing reports are included in Firestore. So the app development teams can stay focus on improving the user experience



### 3. SYSTEM ANALYSIS

#### 3.1 Entity Relationship (ER) Diagram

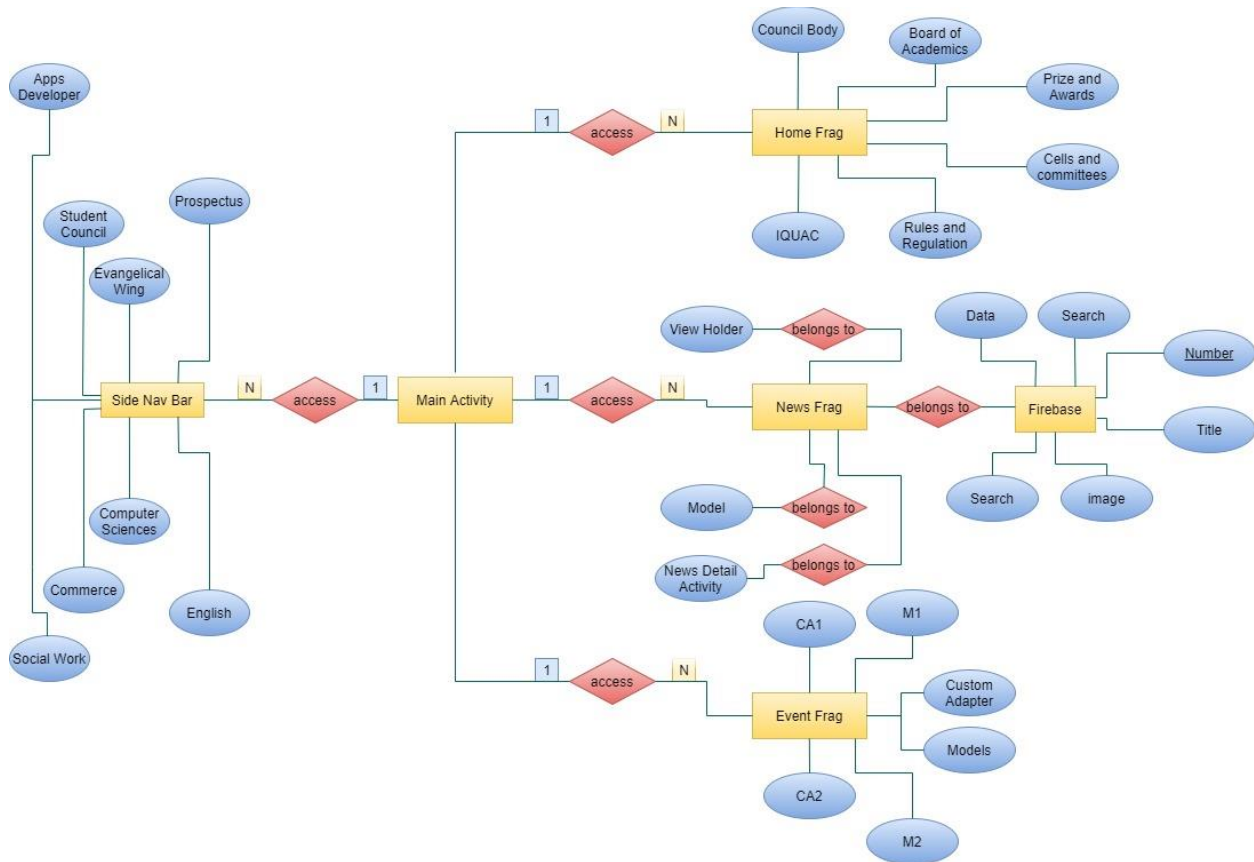


Fig.1 Entity Relationship Diagram

### 3.2 Data Flow Diagram (DFD)

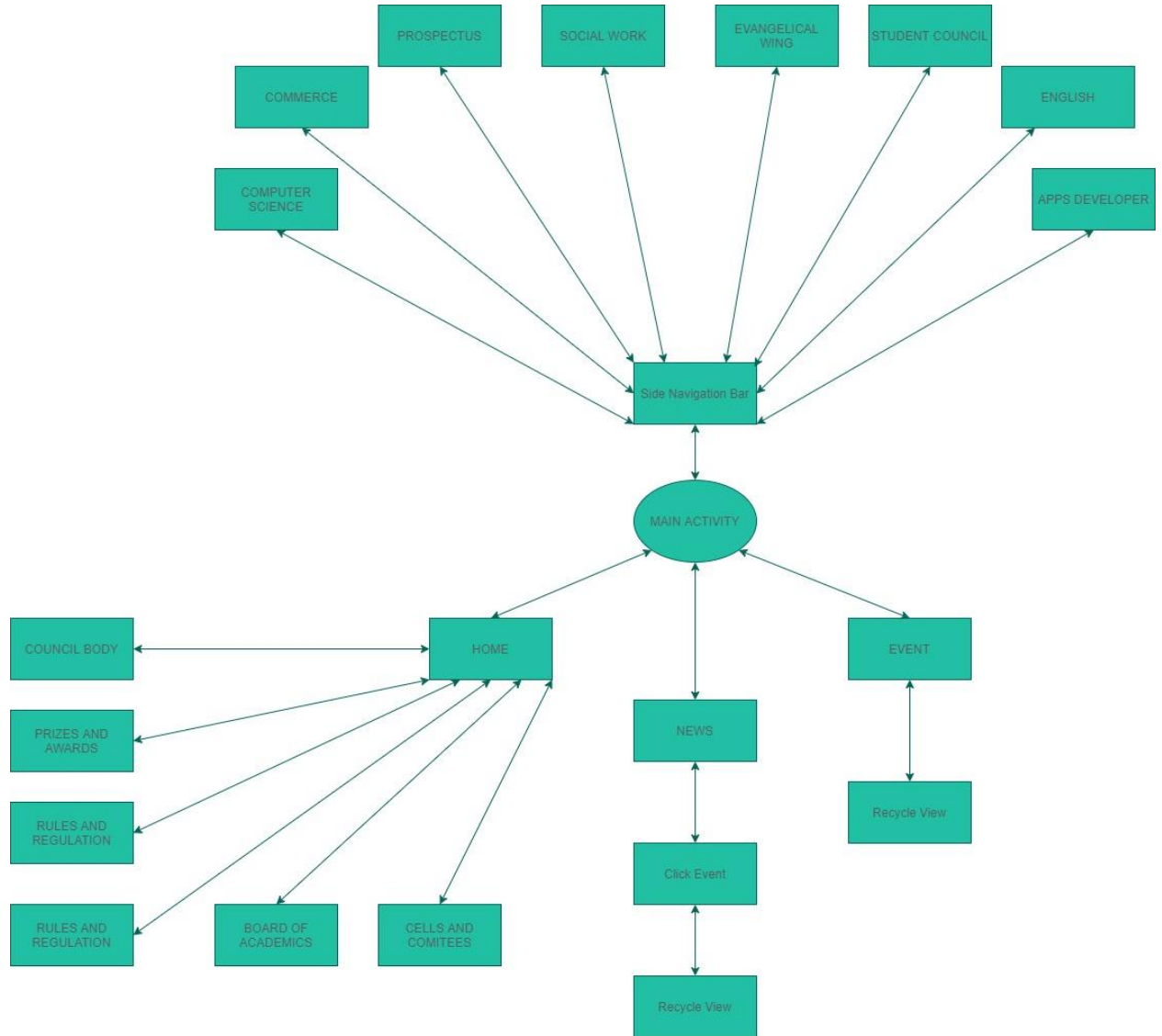


Fig.2 Data Flow Diagram

### 3.3 Physical and Logical Structure

#### Database Design:

The back-end of the project is created using Firebase Realtime Database data is stored as JSON objects, unlike a SQL database there are no tables or records. When we add data to the JSON tree it becomes a node in the existing JSON structure with an associated key. You Can provide your own keys such as user IDs or semantic names, or they can be provided for you using `childByAutoId`. The Node are:

#### Firebase Realtime Database:

The screenshot shows the Firebase Realtime Database console interface. At the top, the word "Database" is displayed in a large font, followed by a dropdown menu set to "Realtime Database". Below this, there are navigation tabs for "Data", "Rules", "Backups", and "Usage", with "Data" being the active tab. The main content area shows the URL "https://fir-newest.firebaseio.com/" and a red warning banner that reads: "Your security rules are defined as public, so anyone can steal, modify, or delete data in your database". Below the warning, the database structure is visualized as a tree under the name "fir-newest". A "Data" folder is expanded to show two nodes, labeled "1" and "2". Node "1" contains the following JSON object:
 

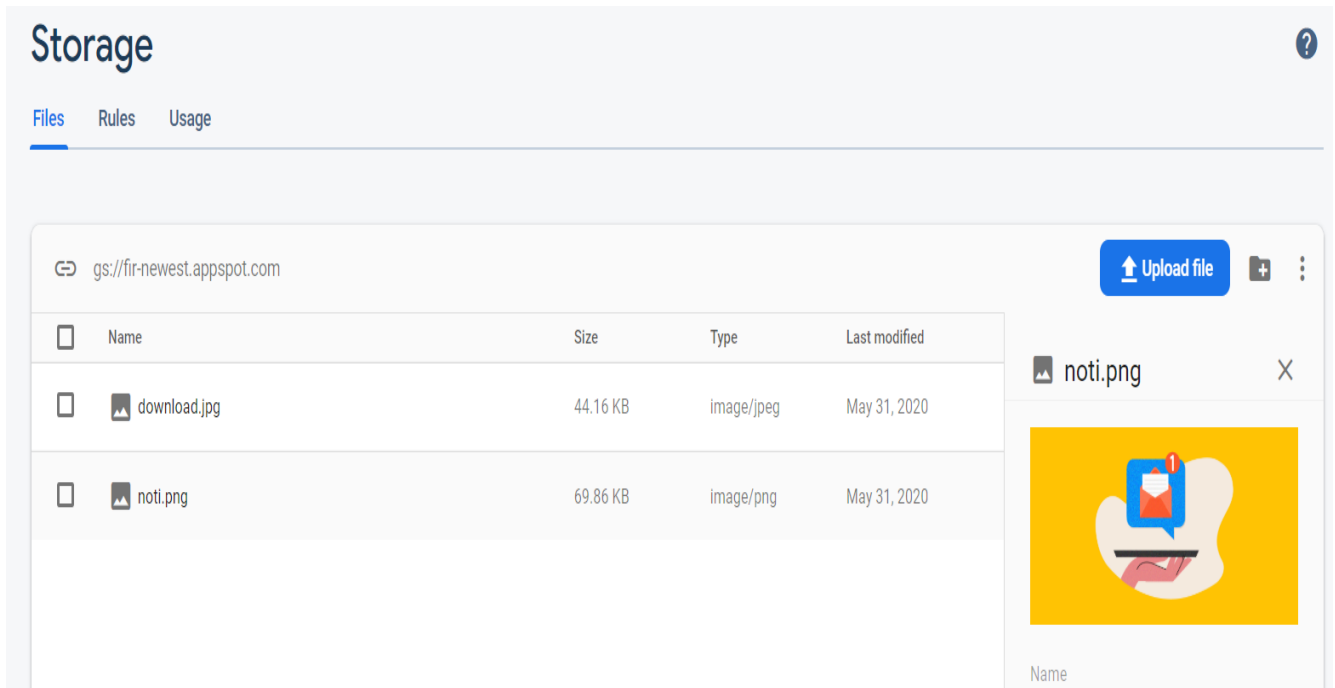
```
{
  "description": "23rd March, 2020 As per the Government of Miz",
  "image": "https://firebasestorage.googleapis.com/v0/b/fir",
  "search": "HATIM OFFICE NOTIFICATIC",
  "title": "HATIM OFFICE NOTIFICATIC"
}
```

 Node "2" contains the following JSON object:
 

```
{
  "description": "16th March, 2020 In the light of the unprece",
  "image": "https://firebasestorage.googleapis.com/v0/b/fir",
  "search": "NOTIFICATION REGARDING COVID-",
  "title": "NOTIFICATION REGARDING COVID-"
}
```

**Fig.3 Database**

## Firebase Storage:



**Fig.4 Storage**

## 4. SYSTEM DESIGN AND IMPLEMENTATION

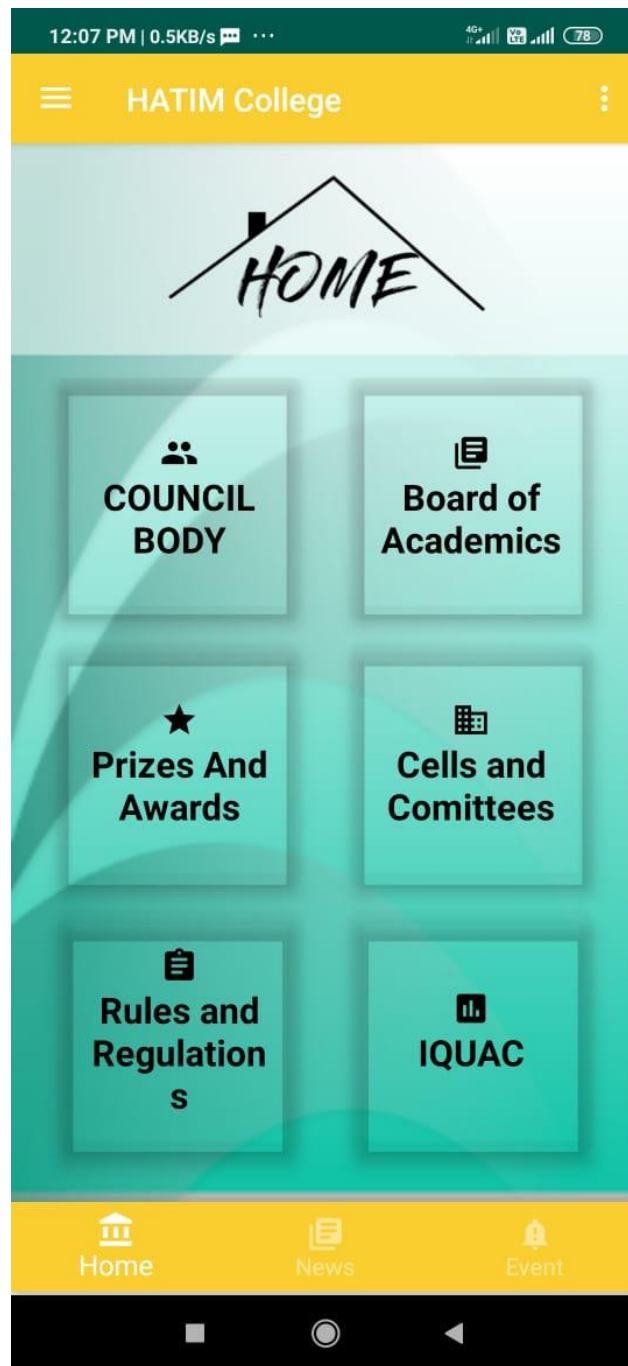
### 4.1 User Interface and approach

1) **SPLASH SCREEN:** A splash screen is a graphical control element consisting of a window containing an image, a logo, and the current version of the software. A splash screen usually appears while a game or program is launching



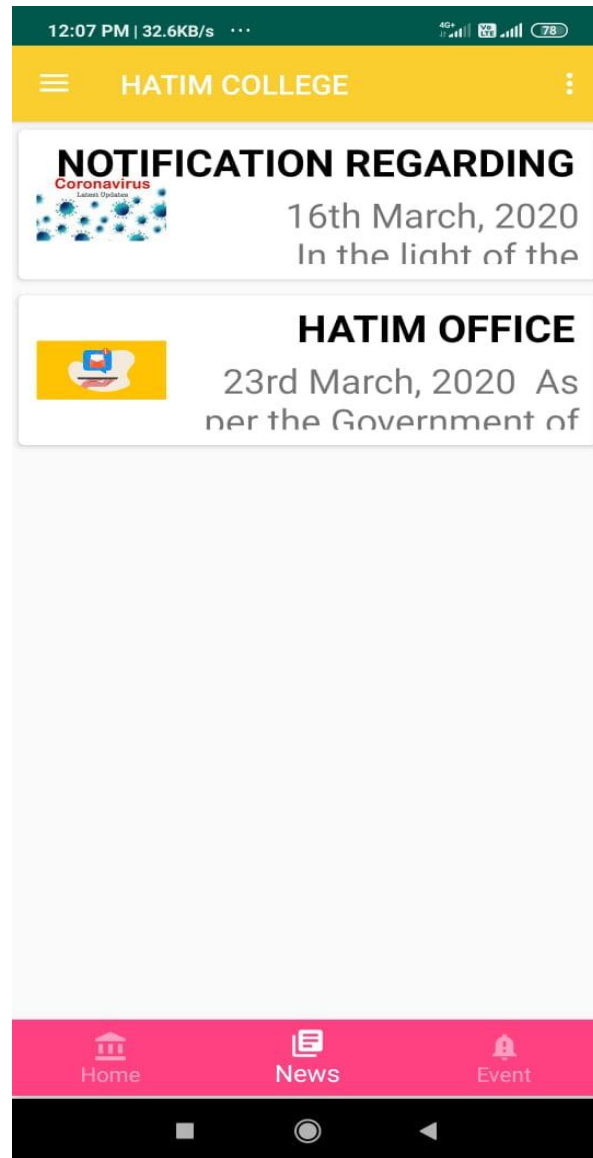
**Fig.5 Splash Screen**

2) **HOME:** Home Screen is the page where user can know certain Details of this institution consists of Council body, Board of Academics, Prizes and Awards, Cells and Committees, Rules and Regulations, IQUAC



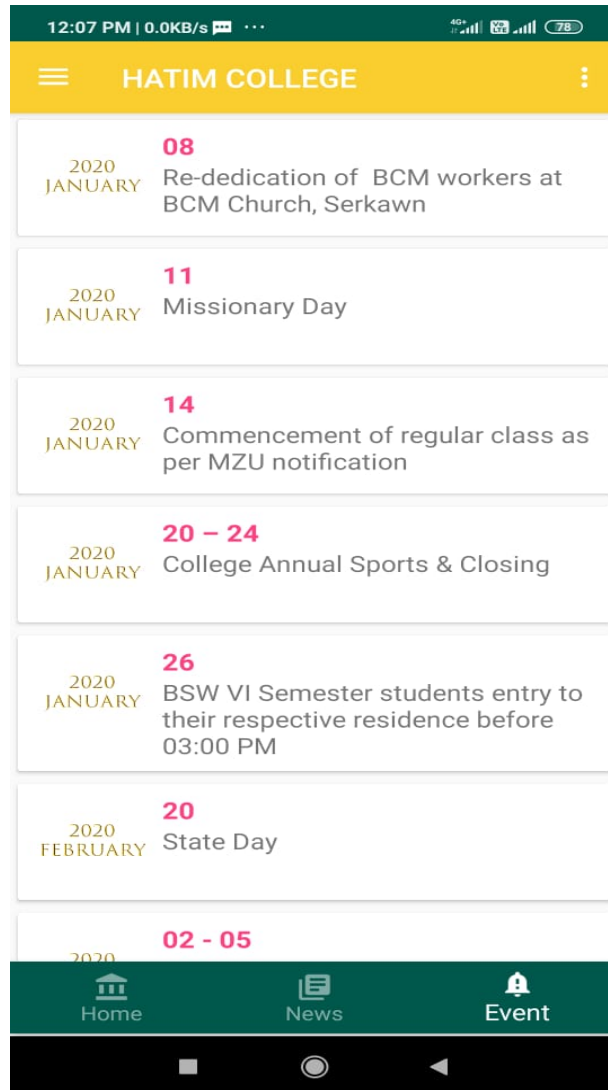
**Fig.6 Home**

3) **NEWS** : News will be used by the admin of Hatim. It will be used for conveying the necessary information about the students. We can also use for notifying their parents about the necessary detail of information about the functioning of the college



**Fig.7 News**

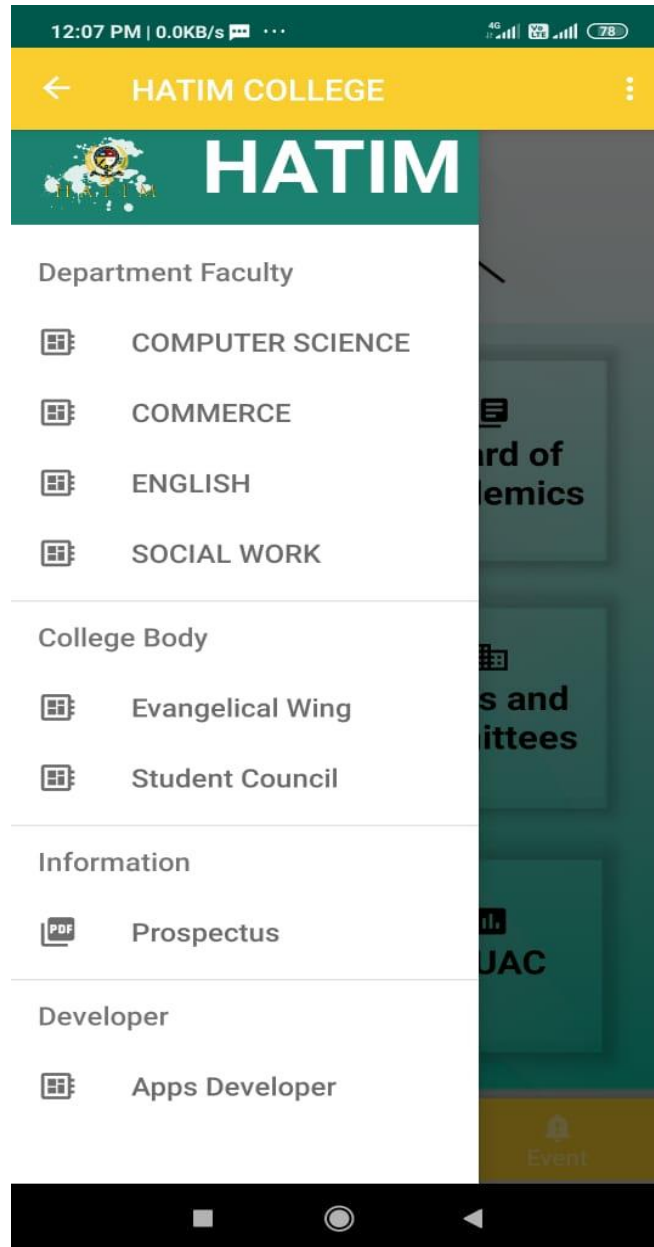
4) **EVENTS** : Different occasion Conducted by College will be displaying in these Events page like festival, ceremony and celebrations at our home, college or offices.



**Fig.8 Event**



**4) NAVIGATION BAR :** There are Department Faculty, College body, information and developer where New Students can easily their Department lecturer and know the complete prospectus of this institution



**Fig.9 Navigation Bar**

## 5. CODING SYSTEM

As the front-end is created using Android Studio version 3.0.1, the language used to develop the application is java programming. The codes used in the project are given below:

### 1) Codes for Activity\_Home:

```
<RelativeLayout tools:context=".home"
    android:layout_height="match_parent"
    android:layout_width="match_parent">

<com.google.android.material.bottomnavigation.BottomNavigationView
    android:layout_height="56dp"
    android:layout_width="match_parent"
    android:id="@+id/main_nav"
    app:menu="@menu/nav_item"
    app:itemTextColor="@color/nav_item_colors"
    app:itemIconTint="@color/nav_item_colors"
    android:background="#face2f"
    android:layout_marginBottom="2dp"
    android:layout_marginStart="0dp"
    android:layout_alignParentBottom="true"
    android:layout_alignParentStart="true">

</com.google.android.material.bottomnavigation.BottomNavigationView>

    <FrameLayout
        android:layout_height="match_parent"
        android:layout_width="match_parent"
        android:id="@+id/main_frame"
        android:layout_above="@id/main_nav">
    </FrameLayout>

</RelativeLayout>

<com.google.android.material.navigation.NavigationView
    android:layout_height="match_parent"
    android:layout_width="wrap_content"
    android:id="@+id/nv"
    app:menu="@menu/drawermenu"
    app:itemTextColor="@color/darkgray"
    app:itemIconTint="@color/darkgray"
    android:background="@android:color/white"
    app:headerLayout="@layout/header"
    android:layout_gravity="start"/>

</androidx.drawerlayout.widget.DrawerLayout>
```

**2) Codes for Home.java:**

```

package com.example.hatimfinal;

import androidx.annotation.NonNull;
import androidx.appcompat.app.ActionBarDrawerToggle;
import androidx.appcompat.app.AppCompatActivity;
import androidx.drawerlayout.widget.DrawerLayout;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentTransaction;

import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;

import android.widget.FrameLayout;

import com.firebase.ui.database.FirebaseRecyclerAdapter;
import com.firebase.ui.database.FirebaseRecyclerOptions;

import com.google.android.material.bottomnavigation.BottomNavigationView;
import com.google.android.material.navigation.NavigationView;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.Query;

public class home extends AppCompatActivity {
    LinearLayoutManager mLayoutManager;//for sorting
    SharedPreferences mSharedPref;//for saving sort settings

    RecyclerView mRecyclerView;
    FirebaseDatabase mFirebaseDatabase;
    DatabaseReference mRef;
    FirebaseRecyclerAdapter<Model,ViewHolder> firebaseRecyclerAdapter;
    FirebaseRecyclerOptions<Model> options;

    private DrawerLayout mDrawerLayout;
    private ActionBarDrawerToggle mToggle;

    public BottomNavigationView mMainNav;
    public FrameLayout mMainFrame;
    private HomeFragment homeFragment;
    private NewsFragment newsFragment;

```

```

private EventFragment eventFragment;
private NavigationView nv;

@Override
protected void onCreate(final Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_home);

    mDrawerLayout = (DrawerLayout) findViewById(R.id.drawer_layout);
    mToggle = new ActionBarDrawerToggle(this, mDrawerLayout,
R.string.open, R.string.close);
    mDrawerLayout.addDrawerListener(mToggle);
    mToggle.syncState();
    getSupportActionBar().setDisplayHomeAsUpEnabled(true);

    nv=(NavigationView)findViewById(R.id.nv);
    nv.setNavigationItemSelectedListener(new
NavigationView.OnNavigationItemSelectedListener() {
        @Override
        public boolean onOptionsItemSelected(@NonNull MenuItem
item) {

            int id=item.getItemId();
            switch (id){

                case R.id.pdf:
                    Intent s = new Intent(home.this,
prospectus.class);
                    startActivity(s);
                    return true;
                case R.id.BCA:
                    Intent a = new Intent(home.this, mainfcs.class);
                    startActivity(a);
                    return true;
                case R.id.BCOM:
                    Intent c = new Intent(home.this, commerce.class);
                    startActivity(c);
                    return true;
                case R.id.BA:
                    Intent ba = new Intent(home.this,
englishba.class);
                    startActivity(ba);
                    return true;
                case R.id.BSW:
                    Intent sw = new Intent(home.this,
socialwork.class);
                    startActivity(sw);
                    return true;
                case R.id.ew:
                    Intent e = new Intent(home.this, hew.class);

```

```

        startActivity(e);
        return true;
    case R.id.sc:
        Intent sc = new Intent(home.this, hsc.class);
        startActivity(sc);
        return true;

    case R.id.DEV:
        Intent d = new Intent(home.this, maindev.class);
        startActivity(d);
        return true;
    default:
        return false;
    }
}
});

mMainFrame = (FrameLayout) findViewById(R.id.main_frame);
mMainNav = (BottomNavigationView) findViewById(R.id.main_nav);

homeFragment = new HomeFragment();
newsFragment = new NewsFragment();
eventFragment = new EventFragment();

setFragment(homeFragment);

mMainNav.setOnNavigationItemSelectedListener(new
BottomNavigationView.OnNavigationItemSelectedListener() {
    @Override
    public boolean onNavigationItemSelected(@NonNull MenuItem
item) {

        switch (item.getItemId()) {

            case R.id.nav_home:

mMainNav.setItemBackgroundResource(R.color.colorPrimary);
                setFragment(homeFragment);
                return true;

            case R.id.nav_news:

mMainNav.setItemBackgroundResource(R.color.colorAccent);

```

```

        setFragment(newsFragment);
        return true;

        case R.id.nav_event:
mMainNav.setItemBackgroundResource(R.color.colorPrimaryDark);
        setFragment(eventFragment);
        return true;

        default:
            return false;
    }
}

private void setFragment(Fragment fragment) {
    FragmentTransaction fragmentTransaction =
getSupportFragmentManager().beginTransaction();
    fragmentTransaction.replace(R.id.main_frame, fragment);
    fragmentTransaction.commit();

}
});
}

@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    if (mToggle.onOptionsItemSelected(item)) {
        return true;
    }
    return super.onOptionsItemSelected(item);
}

private void setFragment(HomeFragment homeFragment) {
    FragmentTransaction fragmentTransaction =
getSupportFragmentManager().beginTransaction();
    fragmentTransaction.replace(R.id.main_frame, homeFragment);
    fragmentTransaction.commit();
}
}

```

### 3) Codes for Fragment\_news:

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".NewsFragment">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recyclerView"
        android:layout_width="match_parent"
        android:layout_height="match_parent"/>

</FrameLayout>
```

### 4) Codes for NewsFragment.java:

```
package com.example.hatimfinal;

import android.content.Context;
import android.content.DialogInterface;
import android.content.Intent;
import android.content.SharedPreferences;
import android.os.Bundle;

import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.appcompat.app.ActionBar;
import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.view.MenuItemCompat;
import androidx.fragment.app.Fragment;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.view.LayoutInflater;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.View;
import android.view.ViewGroup;
import android.widget.SearchView;

import com.firebase.ui.database.FirebaseRecyclerAdapter;
import com.firebase.ui.database.FirebaseRecyclerOptions;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.Query;

import static android.content.Context.MODE_PRIVATE;
```

```

/**
 * A simple {@Link Fragment} subclass.
 */
public class NewsFragment extends Fragment {

    LinearLayoutManager mLayoutManager;//for sorting
    //for saving sort settings

    RecyclerView mRecyclerView;
    FirebaseDatabase mFirebaseDatabase;
    DatabaseReference mRef;
    FirebaseRecyclerAdapter<Model,ViewHolder>
firebaseRecyclerAdapter;
    FirebaseRecyclerOptions<Model> options;
    SharedPreferences mSharedPref;
    String postid;

    public View onCreateView(LayoutInflater inflater,ViewGroup
container,Bundle savedInstanceState){
    View
view=inflater.inflate(R.layout.fragment_news,container,false);

    ActionBar actionBar
=((AppCompatActivity) getActivity()).getSupportActionBar();
//Set Title

    actionBar.setTitle("HATIM COLLEGE");
    mSharedPref=this.getActivity().getSharedPreferences("Sort
Settings",MODE_PRIVATE);
    String
mSorting=mSharedPref.getString("Sort","newest");//where if no settings
//is selected newest will be default

    if(mSorting.equals("newest")){
        mLayoutManager=new LinearLayoutManager(getContext());
        //this will load the items from bottom means newest
first
        mLayoutManager.setReverseLayout(true);
        mLayoutManager.setStackFromEnd(true);
    }
    else if(mSorting.equals("oldest")){
        mLayoutManager=new LinearLayoutManager(getContext());
        //this will load the items from bottom means oldest
first
        mLayoutManager.setReverseLayout(false);

```



```

        mLayoutManager.setStackFromEnd(false);
    }

    //RecyclerView
    mRecyclerView = view.findViewById(R.id.recyclerView);
    mRecyclerView.setHasFixedSize(true);

    //Send Query to Firebase
    mFirebaseDatabase = FirebaseDatabase.getInstance();
    mRef = mFirebaseDatabase.getReference("Data");

    showData();
    return view;
}

private void showData(){

    options=new
    FirebaseRecyclerOptions.Builder<Model>().setQuery(mRef,Model.class).build(
    );

    firebaseRecyclerAdapter = new
    FirebaseRecyclerAdapter<Model, ViewHolder>(options) {
        @Override
        protected void onBindViewHolder(@NonNull ViewHolder
        holder, int position, @NonNull Model model) {

            holder.setDetails(getActivity().getApplicationContext(),model.getTitle(),m
            odel.getDescription(),model.getImage());
        }

        @NonNull
        @Override
        public ViewHolder onCreateViewHolder(@NonNull
        ViewGroup parent, int viewType) {
            //inflating layout row.xml
            View itemView=
            LayoutInflater.from(parent.getContext()).inflate(R.layout.row,parent,false
            );

            ViewHolder viewHolder = new ViewHolder(itemView);
            //item click listener
            viewHolder.setOnClickListener(new
            ViewHolder.ClickListener() {
                @Override

```

```

        public void onItemClick(View view, int
position) {
        //getData from firebase at position is
clicked
        String mTitle =
getItem(position).getTitle();
        String mDesc =
getItem(position).getDescription();
        String mImage =
getItem(position).getImage();

        //pass this data to new activity
        Intent intent=new
Intent(view.getContext(),NewsDetailActivity.class);
        intent.putExtra("title",mTitle);//put
Title
        intent.putExtra("description",mDesc);//put
Description
        intent.putExtra("image",mImage);//put
image URL
        startActivity(intent);//start activity
    }

    @Override
    public void onItemClick(View view, int
position) {
        //Todo implement you on long click
functionality here
    }
});
return viewHolder;
}
};
//set layout as LinearLayout
mRecyclerView.setLayoutManager(mLayoutManager);
firebaseRecyclerAdapter.startListening();
//set adapter to firebase recycler view
mRecyclerView.setAdapter(firebaseRecyclerAdapter);
}

//Search Data
private void firebaseSearch(String searchText){
    //convert string entered in Searchview to lowercase
    String query=searchText.toLowerCase();

    Query
firebaseSearchQuery=mRef.orderByChild("search").startAt(query).endAt(query
+"\uf8ff");

```

```

        options=new
        FirebaseRecyclerOptions.Builder<Model>().setQuery(firebaseSearchQuery,Model.class).build();

        firebaseRecyclerAdapter = new
        FirebaseRecyclerAdapter<Model, ViewHolder>(options) {
            @Override
            protected void onBindViewHolder(@NonNull ViewHolder
            holder, int position, @NonNull Model model) {

            holder.setDetails(getActivity().getApplicationContext(),model.getTitle(),model.getDescription(),model.getImage());
            }

            @NonNull
            @Override
            public ViewHolder onCreateViewHolder(@NonNull
            ViewGroup parent, int viewType) {
                //inflating layout row.xml
                View itemView=
                LayoutInflater.from(parent.getContext()).inflate(R.layout.row,parent,false);

                ViewHolder viewHolder = new ViewHolder(itemView);
                //item click listener
                viewHolder.setOnClickListener(new
                ViewHolder.ClickListener() {
                    @Override
                    public void onItemClick(View view, int
                    position) {

                    //getData from firebase at position is
                    clicked

                    String mTitle =
                    getItem(position).getTitle();
                    String mDesc =
                    getItem(position).getDescription();
                    String mImage =
                    getItem(position).getImage();

                    //pass this data to new activity
                    Intent intent=new
                    Intent(view.getContext(),NewsDetailActivity.class);
                    intent.putExtra("title",mTitle);//put
                    Title
                    intent.putExtra("description",mDesc);//put
                    Description
                    intent.putExtra("image",mImage);//put
                    image URL
                    startActivity(intent);//start activity
                }
            }

```

```

        @Override
        public void onItemClick(View view, int
position) {
        //Todo implement you on Long click
        functionality here
        }
    });
    return viewHolder;
}
};
//set layout as Linearlayout
mRecyclerView.setLayoutManager(mLayoutManager);
firebaseRecyclerAdapter.startListening();
//set adapter to firebase recycler view
mRecyclerView.setAdapter(firebaseRecyclerAdapter);
}

//load data into recycler view onStart
@Override
public void onStart() {
    super.onStart();
    if (firebaseRecyclerAdapter !=null){
        firebaseRecyclerAdapter.startListening();
    }
}

@Override
public void onCreateOptionsMenu(Menu menu,MenuInflater
inflater) {
    //inflate the menu,this add item in the action Bar if it
is present
    inflater.inflate(R.menu.menu,menu);
    MenuItem item =menu.findItem(R.id.action_search);
    SearchView searchView=(SearchView)
MenuItemCompat.getActionView(item);
    searchView.setOnQueryTextListener(new
SearchView.OnQueryTextListener() {
        @Override
        public boolean onQueryTextSubmit(String query) {
            firebaseSearch(query);
            return false;
        }

        @Override
        public boolean onQueryTextChange(String newText) {
            //Filter As you type
            firebaseSearch(newText);
            return false;
        }
    }
}

```

```

    });
    super.onCreateOptionsMenu(menu,inflater);

}

@Override
public boolean onOptionsItemSelected(@NonNull MenuItem item) {
    int id=item.getItemId();

    //handle other action bar item clicks here
    if(id==R.id.action_sort){
        //display alert dialog choose sorting
        showSortDialog();
        //TODO
        return true;
    }
    return super.onOptionsItemSelected(item);
}
}

```

### 5) Codes for Academics:

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".academics">
    <com.github.barteksc.pdfviewer.PDFView
        android:id="@+id/academic"
        android:layout_width="match_parent"
        android:layout_height="match_parent">

    </com.github.barteksc.pdfviewer.PDFView>
</androidx.constraintlayout.widget.ConstraintLayout>

```

### 6) Codes for Academics.java:

```

package com.example.hatimfinal;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import com.github.barteksc.pdfviewer.PDFView;

public class academics extends AppCompatActivity {
    PDFView homes;

    @Override
    protected void onCreate(Bundle savedInstanceState) {

```

```

        super.onCreate(savedInstanceState);
        setContentView(R.layout.academics);
        homes=(PDFView)findViewById(R.id.academic);
        homes.fromAsset("Board of Acedemics.pdf").load();
    }
}

```

### 7) Codes for AwardProspectus:

```

<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".award">
<com.github.barteksc.pdfviewer.PDFView
    android:id="@+id/Award"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

</com.github.barteksc.pdfviewer.PDFView>
</androidx.constraintlayout.widget.ConstraintLayout>

```

### 8) Codes for Awards.java:

```

package com.example.hatimfinal;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import com.github.barteksc.pdfviewer.PDFView;

public class award extends AppCompatActivity {
    PDFView homes;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.award_prospectus);
        homes=(PDFView)findViewById(R.id.Award);
        homes.fromAsset("Award.pdf").load();
    }
}

```

**9) Codes for Fragment Event:**

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".EventFragment">
<androidx.recyclerview.widget.RecyclerView
android:id="@+id/recycle"
android:layout_width="match_parent"
android:layout_height="match_parent">
</androidx.recyclerview.widget.RecyclerView>

</RelativeLayout>

```

**10) Codes for EventFragment.java:**

```

package com.example.hatimfinal;

import android.content.Context;
import android.net.Uri;
import android.os.Bundle;

import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.fragment.app.Fragment;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import java.util.ArrayList;
import java.util.List;

public class EventFragment extends Fragment {
    RecyclerView recyclerView;

    List<Models> main_list=new ArrayList<Models>();//hemi model class
    ah hian data in tih lan duh kha in dah dawn nia.Eg ah 1 ka lo dah ang
    ;
    RecyclerView.Adapter adapter;

```

```

@Override
public void onCreateView(@NonNull View view, @Nullable Bundle
savedInstanceState) {
    super.onCreateView(view, savedInstanceState);
    main_list=new ArrayList<>();

    main_list.add(new Models(R.drawable.jan,"08","Re-dedication of
BCM workers at BCM Church, Serkawn"));
    main_list.add(new Models(R.drawable.jan,"11","Missionary
Day"));
    main_list.add(new Models(R.drawable.jan,"14","Commencement of
regular class as per MZU notification"));
    main_list.add(new Models(R.drawable.jan,"20 - 24 ", "College
Annual Sports & Closing"));
    main_list.add(new Models(R.drawable.jan,"26", "BSW VI Semester
students entry to their respective residence before 03:00 PM"));
    main_list.add(new Models(R.drawable.feb,"20", "State Day"));
    main_list.add(new Models(R.drawable.mer,"02 - 05 ", "First
Internal Continuous Assessment (CA - I)"));
    main_list.add(new Models(R.drawable.mer,"06", "Chapchar Kut "));
    main_list.add(new Models(R.drawable.april,"06", "Mahavir
Jayanti"));
    main_list.add(new Models(R.drawable.april,"07-10", "Second
Internal Continuous Assessment (CA - II)"));
    main_list.add(new Models(R.drawable.april,"10", "Good Friday"));
    main_list.add(new Models(R.drawable.april," 12", "Easter
Sunday"));
    main_list.add(new Models(R.drawable.april," 13", "Easter
Monday"));
    main_list.add(new Models(R.drawable.may," 1", "May Day
(Observance)"));
    main_list.add(new Models(R.drawable.may," 1-22", "University
Examinations"));
    main_list.add(new Models(R.drawable.may,"24-25", "Idul Fitr"));
    main_list.add(new Models(R.drawable.may,"26", "HATIM Valedictory
Ceremony"));
    main_list.add(new Models(R.drawable.may,"27", "Exit of Students
from the residences"));
    main_list.add(new Models(R.drawable.may,"27", "Entrance test for
new admission"));
    main_list.add(new Models(R.drawable.may,"28", "Interview for BA
(English) & B. Com"));
    main_list.add(new Models(R.drawable.may,"29", "Interview for BCA
& BSW"));
    main_list.add(new Models(R.drawable.jun,"1 - 5", "Payment of
Admission fees for new students"));
    main_list.add(new Models(R.drawable.jun,"15 ", "YMA Day "));
    main_list.add(new Models(R.drawable.jun,"30 ", "Remna Ni"));
    main_list.add(new Models(R.drawable.jul,"1", "Existing Students
entry to their respective residences before 04:00 PM"));

```



```

        main_list.add(new Models(R.drawable.jul,"2","New Students entry
to their respective residences before 12:00 Noon"));
        main_list.add(new Models(R.drawable.jul,"3","PTA Meeting (New
Students Parents)"));
        main_list.add(new Models(R.drawable.jul,"6","Commencement of
regular classes"));
        main_list.add(new Models(R.drawable.jul,"7-10","Submission of
Lesson Plans"));
        main_list.add(new Models(R.drawable.jul,"14","College Day"));
        main_list.add(new Models(R.drawable.jul,"17","Fresher's Day"));
        main_list.add(new Models(R.drawable.aug,"10-14","Commencement
of First Internal Examinations for BCA & BSW"));
        main_list.add(new Models(R.drawable.aug,"15","Independence day
"));
        main_list.add(new Models(R.drawable.aug,"17-20","Commencement
of First Internal Examinations for B. Com & BA "));
        main_list.add(new Models(R.drawable.aug,"20","End of First
Internal Examinations "));
        main_list.add(new Models(R.drawable.sept,"5","Teacher's Day
"));
        main_list.add(new Models(R.drawable.sept,"11-13","Spiritual
Nurturing Program (Tentative) "));
        main_list.add(new Models(R.drawable.oct,"2","Mahatma Gandhi's
Birthday "));
        main_list.add(new Models(R.drawable.oct,"5-8","Commencement of
Second Internal Examinations for BCA BSW"));
        main_list.add(new Models(R.drawable.oct,"5-8","Commencement of
Second Internal Examinations for BA B.com"));
        main_list.add(new Models(R.drawable.oct,"5-8","Commencement of
Second Internal Examinations for BA B.com"));
        main_list.add(new Models(R.drawable.oct,"8","End of Second
Internal Examinations"));
        main_list.add(new Models(R.drawable.nov,"10","University
Examinations"));
        adapter=new CustomAdapter(main_list,getContext());
        recyclerView.setAdapter(adapter);
        recyclerView.setLayoutManager(new
LinearLayoutManager(getActivity(),LinearLayoutManager.VERTICAL,false));
    }

```

## 11) Codes for Fragment Home:

```

<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:orientation="vertical"
android:background="@drawable/homee"
android:weightSum="10"
tools:context=".HomeFragment">

    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="2"
        android:background="@color/colorWhiteTransparent">

        <ImageView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:background="@drawable/hom"/>

    </RelativeLayout>

    <GridLayout
        android:id="@+id/mainGrid"
        android:columnCount="2"
        android:rowCount="3"
        android:alignmentMode="alignMargins"
        android:columnOrderPreserved="false"
        android:layout_weight="8"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:padding="14dp">

        <!-- Row 1 -->
        <!-- Coloumn 1 -->

        <androidx.cardview.widget.CardView
            android:layout_width="0dp"
            android:layout_height="0dp"
            android:layout_columnWeight="1"
            android:layout_rowWeight="1"
            android:layout_marginBottom="16dp"
            android:layout_marginLeft="16dp"
            android:layout_marginRight="16dp"
            app:cardElevation="8dp"
            app:cardCornerRadius="8dp"
            app:cardBackgroundColor="@android:color/transparent">

```

```

<LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
    android:layout_margin="16dp"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
    <ImageView
        android:src="@drawable/council_24dp"
        android:layout_gravity="center_horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
    <TextView
        android:text="COUNCIL BODY"
        android:textAlignment="center"
        android:textColor="@android:color/black"
        android:textSize="18sp"
        android:textStyle="bold"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<!--Coloumn 1 -->

<androidx.cardview.widget.CardView
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_columnWeight="1"
    android:layout_rowWeight="1"
    android:layout_marginBottom="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"
    app:cardElevation="8dp"
    app:cardCornerRadius="8dp"
    app:cardBackgroundColor="@android:color/transparent">
    <LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
    android:layout_margin="16dp"
    android:orientation="vertical"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
    <ImageView
        android:src="@drawable/academic_24dp"
        android:layout_gravity="center_horizontal"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
    <TextView
        android:text="Board of Academics"
        android:textAlignment="center"
        android:textColor="@android:color/black"
        android:textSize="18sp"

```

```

        android:textStyle="bold"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>

<!--Row 1 -->
<!--Coloumn 1 -->

<androidx.cardview.widget.CardView
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_columnWeight="1"
    android:layout_rowWeight="1"
    android:layout_marginBottom="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"
    app:cardElevation="8dp"
    app:cardCornerRadius="8dp"
    app:cardBackgroundColor="@android:color/transparent">
    <LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
        android:layout_margin="16dp"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
        <ImageView
            android:src="@drawable/award_24dp"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"/>
        <TextView
            android:text="Prizes And Awards"
            android:textAlignment="center"
            android:textColor="@android:color/black"
            android:textSize="18sp"
            android:textStyle="bold"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<!--Coloumn 1 -->

<androidx.cardview.widget.CardView
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_columnWeight="1"
    android:layout_rowWeight="1"
    android:layout_marginBottom="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"

```

```

        app:cardElevation="8dp"
        app:cardCornerRadius="8dp"
        app:cardBackgroundColor="@android:color/transparent">
        <LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
        android:layout_margin="16dp"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
            <ImageView
                android:src="@drawable/comitees_24dp"
                android:layout_gravity="center_horizontal"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"/>
            <TextView
                android:text="Cells and Comittees"
                android:textAlignment="center"
                android:textColor="@android:color/black"
                android:textSize="18sp"
                android:textStyle="bold"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"/>
        </LinearLayout>
    </androidx.cardview.widget.CardView>
    <androidx.cardview.widget.CardView
        android:layout_width="0dp"
        android:layout_height="0dp"
        android:layout_columnWeight="1"
        android:layout_rowWeight="1"
        android:layout_marginBottom="16dp"
        android:layout_marginLeft="16dp"
        android:layout_marginRight="16dp"
        app:cardElevation="8dp"
        app:cardCornerRadius="8dp"
        app:cardBackgroundColor="@android:color/transparent">
        <LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
        android:layout_margin="16dp"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
            <ImageView
                android:src="@drawable/rules_24dp"
                android:layout_gravity="center_horizontal"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"/>
            <TextView
                android:text="Rules and Regulations"
                android:textAlignment="center"
                android:textColor="@android:color/black"

```

```

        android:textSize="18sp"
        android:textStyle="bold"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>
<!--Column 1 -->

<androidx.cardview.widget.CardView
    android:layout_width="0dp"
    android:layout_height="0dp"
    android:layout_columnWeight="1"
    android:layout_rowWeight="1"
    android:layout_marginBottom="16dp"
    android:layout_marginLeft="16dp"
    android:layout_marginRight="16dp"
    app:cardElevation="8dp"
    app:cardCornerRadius="8dp"
    app:cardBackgroundColor="@android:color/transparent">
    <LinearLayout
android:layout_gravity="center_horizontal|center_vertical"
        android:layout_margin="16dp"
        android:orientation="vertical"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content">
        <ImageView
            android:src="@drawable/assesment_24dp"
            android:layout_gravity="center_horizontal"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"/>
        <TextView
            android:text="IQUAC"
            android:textAlignment="center"
            android:textColor="@android:color/black"
            android:textSize="18sp"
            android:textStyle="bold"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"/>
    </LinearLayout>
</androidx.cardview.widget.CardView>

</GridLayout>

</LinearLayout>

```

## 11) Codes for Home Fragment.java:

```

package com.example.hatimfinal;

import android.content.Intent;

import android.os.Bundle;

import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import androidx.cardview.widget.CardView;
import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;

import android.view.ViewGroup;
import android.widget.GridLayout;
import android.widget.Toast;

/**
 * A simple {@Link Fragment} subclass.
 */
public class HomeFragment extends Fragment{
    private GridLayout gridLayout;
    private CardView mcCardView;
    @Nullable
    @Override
    public View onCreateView(@NonNull LayoutInflater inflater,
        ViewGroup container,
                               Bundle savedInstanceState){
        View
view=inflater.inflate(R.layout.fragment_home,container,false);
        gridLayout=view.findViewById(R.id.mainGrid);
        setSingleEvent(gridLayout);
        return view;
    }
    /**
     * click listener for cardview in home Fragment
     */
    private void setSingleEvent(GridLayout gridLayout){
        for (int i=0;i<gridLayout.getChildCount();i++)
        {
            CardView cardView=(CardView)gridLayout.getChildAt(i);
            final int finalI = i;

```

```

        cardView.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if (finalI == 0) {
                    Intent intent = new
Intent(getActivity(), Councilbody.class);
                    startActivity(intent);
                } else if (finalI == 1) {
                    Intent intent = new
Intent(getActivity(), academics.class);
                    startActivity(intent);
                } else if (finalI == 2) {
                    Intent intent = new Intent(getActivity(),
award.class);
                    startActivity(intent);
                } else if (finalI == 3) {
                    Intent intent = new
Intent(getActivity(), Cells.class);
                    startActivity(intent);
                } else if (finalI == 4) {
                    Intent intent = new Intent(getActivity(),
Rules.class);
                    startActivity(intent);
                } else if (finalI == 5) {
                    Intent intent = new Intent(getActivity(),
Iquac.class);
                    startActivity(intent);
                } else {
                    Toast.makeText(getActivity(), "Please set
Activity For this Card Item", Toast.LENGTH_SHORT).show();
                }
            }
        });
    }
}
}

```



## 6. USER'S GUIDE

### 6.1 Installation Guide

The basic hardware requirements are already mentioned under the System Requirements topic. The application can be installed on any android devices by connecting the device with a USB cable to the computer which is used to developed the application or by using the readymade .apk file.

The procedures are as follows:

- 1) Connect your android device with a USB cable to the computer which is used to developed the application by using Android Studio.
- 2) Select the debug button. The name of your device will appear in the list, select it to start the installation process to your device.
- 3) After the installation process is done you can freely access the application to your device.
- 4) Another way of installing the application is by first obtaining the .apk file to your android device to start the installation process.

## 6.2 User operating instructions

After the application is installed successfully, the user can run and access the application whenever he/she need. The basic user operating instructions can be explained from the working of the different buttons.

It starts with Bottom Navigation. There are three bottom Navigation that are clickable those are:

- 1) **Home:** When the user launch the app it will show this home button as a default Home different button that are clickable those are the important file of Hatim document those are: Council body, Board of Academics, Prizes and Awards, Cells and Comitees, Rules and Regulations, IQUAC.
- 2) **News button:** News button show the news of the institution by the admin of the backend firebase .This will be very useful since in whatsapp there are different group to be made in order to solve the problem user of this app will receive news without creating any whatsapp group. They will receive all the same information
- 3) **Event button:** This button will display important events of the college so that the student, parents, teachers, will be remind of the important dates and events of the institution.

Navigation bar contain different list view those are :

- i) **Computer Science :** When we click computer science it will display the lecturer and their department H.O.D ,we will see there name and another details
- ii)**Commerce:** When we click Commerce button will display will display the lecturer and their department H.O.D ,we will see there name and another details
- iii)**English:** English button will display will display the lecturer and their department H.O.D ,we will see there name and another details
- iv)**Social Work:** Social Work button will display will display the lecturer and their department H.O.D ,we will see there name and another details
- v)**Evangelical Wing:** When we click this button we will see students who are involved in evangelical wing their name and another details.

**vi)Student Council:** When we click this button we will see students who are involved in Student Council their name and another details.

**vii)Prospectus :** This button will display the college prospectus and all the necessary information like course details and structure admission procedure and all the rules and regulation. This will be very useful for new student so that they may not broken the rules.

**viii)Apps Developer :** This app is create by the three student their names and details are displayed so that when the user of this app face any problem they will inform those developer and they will take care of it

## 7. LIMITATIONS AND DRAWBACKS

Firstly it is very nice to work as a team, we put our gigantic effort for this project, actually we apply our knowledge of java that we previously learn in fifth semester, its very new thing for us to work on android studio since it does not include in our syllabus but as a team we tried to influence our junior that everything is possible when we our dedicated enough. Since when we start developing this android we are very blind, but by the help and motivation of our teacher we are able to build this app. Most of the time we doing the research on the internet for building this app. We try to implement the notification as well as the synchronous messaging system due to lack of time we are not able to do it.

We fail many times building this app since this is very vast and needs some developer knowledge before we build this app we learn to build a simple app and through that we may able to build a useful app. Since if we include tremendous component it will take more Ram and we also we don't include many things because we don't want our app size not to be large so that user will make most benefit out of that .We build this app because we feel the need for our college so that student as well as parents will able to know the details about hatim, but due to the bothering of the size of the app we cannot include everything.

We face a problem in our backend since the free version gives us 100 mb of data storage and a maximum of 50 connection so Firebase pricing starts at \$24.99 per month so in order to use effectively it very difficult for us to buy as a Student .So it will be very good idea if the College is going to help us for this particular.

It is also a very new thing for our teachers as well, as all of the projects which are done before till now are usually windows based applications. It is not as easy as we expected because even though our teachers supported and helped us in whatever the way they can, when it comes to the coding and a knowledge about developing android applications their knowledge is also very limited compared to us. We usually consult tutorial videos from youtube to facilitate our project work which gives us and help us gain a lot of knowledge in terms of developing android based applications.

## 8. FUTURE ENHANCEMENT

### 8.1 Future implementation and advantages

Due to the advancement of technology it is possible to implement different components like the synchronous messaging system and the notification part we will try to implement this in the future days to come in order to do this we need more time and a tremendous experience in order to implement this component in our project, we notice that there are many area to improve since java coding knowledge is not enough in order to have a good interaction with our app since as the more advancement of the technology ,it also offer us a lot of tool to used in terms of coding language they introduce a new language that can easily used like react this coding language is very interactive so in future days to come we will be more acquiring new language and will upgrade in a simple and better way.

## 8.2 Upgrades

As this project is carried out in a limited time and limited skill, there are many areas in which the software can be upgraded. The database can be enhanced and can be enlarged by paying the price per month. Our project will support a synchronous messaging system and notification so that student easily can interact and take out the potential benefit offered by this app .

The scope and the approach of the software is a little bit more efficient if we could add this messaging system so that there can be more user and it will be very easy to just text their classmate according to this application. This app will also be very useful for the parents in order to give information to the teacher using this synchronous messaging

The upgradation and enhancement is not much required from the hardware point of view. This type of android supported devices could be run and implemented in almost any type of android devices available today. Thus, the main upgradation needed is from the software design and approach.

## **9. CONCLUSION**

We know that our project “Hatim App” has many drawbacks and shortcomings. But on the other hand, when we think how much we give for it we think it deserves a care. This project work is the compilations of our ideas, views and thoughts, we have benefited a great deal from our interaction with our teachers, peoples and friends. We extend our sincere thanks to them.

It was build for the new student, existing student, teacher and parents so that their can easier way of sending information and knowing all the details about Hatim all the important events and the document of the college

It is a great pleasure for us to express our immense regards to our project guide Mr. H. Lalruatkima and Head of Department Mr. K.Lalmuanpuia for their inspirational guidance who helps us in many ways from the beginning till the end, it is true that only by his help we can complete our project.

We would like to place and record sincere thanks and gratitude to our Principal, Mr Vuansanga Vanchhawng for extending his full support and contentment to this project.

Thought this project may not be the best we hope and pray that the user of this software will find satisfaction in using it. This is a very painstaking work; however, we try our best to satisfy the needs of this project. With many efforts this project has come into being even though we are conscious of our limited knowledge and skills. But it would be our request than this project we have undertaken, be dealt with much consideration and acknowledgement.