EX NO 11 MINI PROJECT – ISLAMIC QURAN & PRAYER APP

DATE :

AIM :

To build an Islamic – Quran & Prayer android application, using Java in Android Studio.

STEPS :

1] Create a New Project

2] First let's setup the layout for the app. So, go to App -> Res -> Layout -> activity_main.xml section.

3] Now design the layout for the app, the main navigation side bar, and each navigator should lead to specific page.

4] Now, go to MainActivity.java section, Now connect the buttons to the Java code.

PROBLEM STATEMENT :

Design and develop an Islamic App for android devices using Android studio. The objective of this app is to provide users a compass to find prayer direction , a digital copy of the quran and provide prayer timings according to their location.

Requirements :

1. Navigation Bar
    - The navigation bar helps in switching between 4 different sections of the application. The Home page, Prayer timings section, prayer direction section and Quran section.
2. Prayer Timings Section
    - The prayer timings section will provide the user timings for the 5 daily prayer based on their location.
3. Prayer Direction Section
    - The prayer direction section will provide the user with the direction to pray from their current location.
4. Digital Copy of Quran
    - The application also provides the user with a digital copy of the Quran, so they can read it whenever possible.

Deliverables:

- Android Studio project files containing the complete source code of the Islamic application.
- Documentation covering the design, implementation details, and usage instructions

for the application.

Constraints:

- The application should be developed using Java or Kotlin programming languages.
- Compatibility: The application should be compatible with Android devices running Android OS version 4.4 (KitKat) or higher.

Evaluation Criteria:

- Correctness and functionality of logic.
- User interface design and usability.
- Error handling and edge case scenarios.
- Compliance with Android development best practices and guidelines.

IMPLEMENTATION :

XML CODE :

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="net.a6te.lazycoder.muslim_pro_islamicremainders">
    <uses-permission
android:name="android.permission.ACCESS_COARSE_LOCATION" />
    <uses-permission android:name="android.permission.ACCESS_LOCATION" />
    <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION"
/>
    <uses-permission android:name="android.permission.ACCESS_GPS" />
    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"
/>
    <uses-permission
android:name="android.permission.ACCESS_COARSE_LOCATION" />

    <uses-permission
android:name="android.permission.WRITE_EXTERNAL_STORAGE" />
    <uses-permission
android:name="android.permission.READ_EXTERNAL_STORAGE" />
    <uses-feature android:name="android.hardware.location.gps" />
    <uses-permission android:name="android.permission.WAKE_LOCK"></uses-
permission>



    <application
        android:configChanges="layoutDirection|locale"
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
            </intent-filter>
        </activity>

        <!-- Register the Alarm Receiver -->
```

```
        <receiver android:name=".Remainder.AlarmReceiver"
            android:enabled="true">
            <intent-filter>
                <action android:name="android.intent.action.BOOT_COMPLETED"
/>
            </intent-filter>
        </receiver>

        <meta-data android:name="com.facebook.sdk.ApplicationId"
android:value="@string/facebook_app_id"/>
        <provider
android:authorities="com.facebook.app.FacebookContentProvider17944299271357
9"
            android:name="com.facebook.FacebookContentProvider"
            android:exported="true" />
        <meta-data
            android:name="io.fabric.ApiKey"
            android:value="27b695160327127fcd19210e585688fd69fa5d22" />

        <service
            android:name=".DownloadData"
            android:exported="false" />
        <provider
            android:name="android.support.v4.content.FileProvider"
            android:authorities="${applicationId}.provider"
            android:exported="false"
            android:grantUriPermissions="true">
            <meta-data
                android:name="android.support.FILE_PROVIDER_PATHS"
                android:resource="@xml/provider_paths"/>
        </provider>

    </application>

</manifest>
```

JAVA CODE :

HOME :

```
package net.a6te.lazycoder.muslim_pro_islamicremainders.fragments;


import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.content.IntentFilter;
import android.graphics.Bitmap;
import android.media.MediaPlayer;
import android.os.Build;
import android.os.Bundle;
import android.os.Environment;
import android.support.annotation.NonNull;
import android.support.annotation.Nullable;
import android.support.v4.app.Fragment;
import android.support.v4.content.LocalBroadcastManager;
import android.support.v4.widget.TextViewCompat;
import android.text.Html;
import android.util.Log;
import android.view.LayoutInflater;
```

```
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.RelativeLayout;
import android.widget.TextView;

import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.HomePresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPView;
import net.a6te.lazycoder.muslim_pro_islamicremainders.R;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.Remainder.AlarmReceiver;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.Remainder.NotificationSched
uler;
import net.a6te.lazycoder.muslim_pro_islamicremainders.Utils;

import java.io.BufferedOutputStream;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;

import static android.app.Activity.RESULT_OK;

/**
 * A simple {@link Fragment} subclass.
 */


public class Home extends Fragment implements View.OnClickListener,
MVPView.HomeView{


    private View view;
    private TextView autoSizeTv;


    private RelativeLayout createImageRL;//relative layout that we will
convert to an image bitmap
    private ImageView shareIvBtn;
    private Button createNewImageBtn;
    private String appName;
    private File imageDirectory;
    private String imageName;
    private MVPPresenter.HomePresenter presenter;
    private MediaPlayer ring;
    public static final int SHARE_IMAGE_REQUEST_CODE=101;

    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {

        // Inflate the layout for this fragment
        view =  inflater.inflate(R.layout.fragment_home, container, false);
        initializeAll();

        return view;
    }
```

```
    private void initializeAll() {
        autoSizeTv = view.findViewById(R.id.atkharTv);
        createImageRL = view.findViewById(R.id.createImageRL);
        shareIvBtn = view.findViewById(R.id.shareIvBtn);
        createNewImageBtn = view.findViewById(R.id.createNewImageBtn);



        appName = "Muslim Athkar";
        imageDirectory = new File(Environment.getExternalStorageDirectory()
+ "/"+appName+"/");
        imageName = "Athkar.jpg";

        presenter = new HomePresenter(this);

        shareIvBtn.setOnClickListener(this);
        createNewImageBtn.setOnClickListener(this);
        ring= MediaPlayer.create(getContext(),R.raw.shared_thank_you);
        TextViewCompat.setAutoSizeTextTypeWithDefaults(autoSizeTv,
TextViewCompat.AUTO_SIZE_TEXT_TYPE_UNIFORM);

//
LocalBroadcastManager.getInstance(getActivity()).registerReceiver(connectio
nStatusReceiver
//                ,new IntentFilter(Utils.BROADCAST_CONNECTION_STATUS));
//

LocalBroadcastManager.getInstance(getContext()).registerReceiver(messageRec
eiver
                ,new IntentFilter(Utils.BROADCAST_ACTION));

    }

    /**
     * after view create initialize remainders and also show athkar/verse
on home page
     * */
    @Override
    public void onViewCreated(@NonNull View view, @Nullable Bundle
savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);

        //initialize remainder
        presenter.initializeRemainder();
        presenter.prepareAtkhar();
    }



    /**
     * This method will be call from presenter class
     * */
    @Override
    public void updateRemainder(Context context,int hour, int mint, long
interval){
        NotificationScheduler.setReminder(context, AlarmReceiver.class,
hour, mint,interval);
    }

    @Override
    public void onClick(View v) {
```

```
        switch (v.getId()){
            case R.id.shareIvBtn:
                presenter.createBitMap(createImageRL);//this will create
new image
                shareImageBtn();
                break;
            case R.id.createNewImageBtn:
                presenter.prepareAtkharBtnPress();
                break;
        }
    }

    /**
     * when user press the share button this method will show user the
available social media
     * */
    private void shareImageBtn(){
        File filePath = new File(imageDirectory,"/"+imageName);

        presenter.createIntentToShareImage(filePath);
    }

    //this is method will call from presenter it will take a intent then it
will make share event
    @Override
    public void shareImage(Intent shareIntent){

        Intent intent2 = Intent.createChooser(shareIntent,
getString(R.string.share_via));
        /** From version 24  we need to take file read permission */
        if(Build.VERSION.SDK_INT>=24){
            intent2.addFlags(Intent.FLAG_GRANT_READ_URI_PERMISSION);
        }

        startActivityForResult(intent2, SHARE_IMAGE_REQUEST_CODE);
    }

    @Override
    public void onActivityResult(int requestCode, int resultCode, Intent
data) {
        super.onActivityResult(requestCode, resultCode, data);

        if (requestCode == SHARE_IMAGE_REQUEST_CODE ){
            if (resultCode == RESULT_OK){
                playSound();
            }
        }
    }


    /**
     * show athkar/ verse*/
    @Override
    public void setTodayImage(String  data){
        if (android.os.Build.VERSION.SDK_INT >=
android.os.Build.VERSION_CODES.N) {

autoSizeTv.setText(Html.fromHtml(data,Html.FROM_HTML_MODE_LEGACY));
        } else {
            autoSizeTv.setText(Html.fromHtml(data));
        }
```

```
    }

    /*
    * Store athkar image to user phone
    * */
    @Override
    public void storeBitMapImage(Bitmap bitmap){

        File folderDirectory = imageDirectory;
        //create storage directories, if they don't exist
        folderDirectory.mkdirs();
        try {
            String filePath = folderDirectory.toString() +"/"+imageName;
            FileOutputStream fileOutputStream = new
FileOutputStream(filePath);

            BufferedOutputStream bos = new
BufferedOutputStream(fileOutputStream);
            //choose another format if PNG doesn't suit you
            bitmap.compress(Bitmap.CompressFormat.JPEG, 100, bos);

            bos.flush();
            bos.close();


        } catch (FileNotFoundException e) {
            e.printStackTrace();
        } catch (IOException e) {
            e.printStackTrace();
        }


    }
//
//    BroadcastReceiver connectionStatusReceiver = new BroadcastReceiver()
{
//        @Override
//        public void onReceive(Context context, Intent intent) {
//            Bundle bundle = intent.getExtras();
//            String message = bundle.getString(Utils.CONNECTION_STATUS);
//
////            if (bundle.getInt(Utils.STATUS_CODE) ==
Utils.ALL_CONNECTED){
////
Toast.makeText(context,message,Toast.LENGTH_SHORT).show();
////
////            }else if (bundle.getInt(Utils.STATUS_CODE) ==
Utils.NO_CONNECTION_CODE){
////
Toast.makeText(context,message,Toast.LENGTH_SHORT).show();
////            }
//
//        }
//    };

    public void playSound(){
        ring= MediaPlayer.create(getContext(),R.raw.shared_thank_you);
        ring.start();

    }
```

```
    @Override
    public void onResume() {
        ring= MediaPlayer.create(getContext(),R.raw.shared_thank_you);
        super.onResume();
    }

    @Override
    public void onPause() {
        ring.stop();
        super.onPause();
    }

    /*
    * This method will be call after API call
    * */
    //broadcast receiver
    BroadcastReceiver messageReceiver = new BroadcastReceiver() {
        @Override
        public void onReceive(Context context, Intent intent) {
            boolean isUpdateData =
intent.getBooleanExtra(Utils.EXTENDED_IS_UPDATE_DATA,false);
            //new data update
            if (isUpdateData){
                presenter.prepareAtkhar();

            }

            Log.d("Test", "onReceive: "+isUpdateData);
        }
    };
}
```

PrayerTime :

```
package net.a6te.lazycoder.muslim_pro_islamicremainders.fragments;


import android.Manifest;
import android.app.AlertDialog;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.DialogInterface;
import android.content.Intent;
import android.content.IntentFilter;
import android.content.pm.PackageManager;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.provider.Settings;
import android.support.annotation.NonNull;
import android.support.annotation.Nullable;
import android.support.v4.app.ActivityCompat;
import android.support.v4.app.Fragment;
import android.support.v4.content.ContextCompat;
import android.support.v4.content.LocalBroadcastManager;
import android.support.v4.widget.SwipeRefreshLayout;
import android.support.v7.widget.LinearLayoutManager;
import android.support.v7.widget.RecyclerView;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
```

```
import android.widget.TextView;
import android.widget.Toast;


import
net.a6te.lazycoder.muslim_pro_islamicremainders.CheckInternetConnection;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPView;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.PrayerTimePresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.R;
import net.a6te.lazycoder.muslim_pro_islamicremainders.SavedData;
import net.a6te.lazycoder.muslim_pro_islamicremainders.Utils;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.adapters.PrayerTimeAdapter;


/**
 * A simple {@link Fragment} subclass.
 */
public class PrayerTime extends Fragment implements MVPView.PrayerTimeView{


    private RecyclerView prayerTimeRV;
    private View v;
    private MVPPresenter.PrayerTimePresenter presenter;
    private TextView cityTv;
    private TextView errorNoInternetTv;
    private SwipeRefreshLayout refreshLayout;
    private CheckInternetConnection internetConnectionTest;
    private MediaPlayer ring;
    public static final int MY_PERMISSIONS_REQUEST_LOCATION = 100;
    private SavedData savedData;

    public PrayerTime() {
        // Required empty public constructor
    }


    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        v =  inflater.inflate(R.layout.fragment_prayer_time, container,
false);
        initializeAll();
        return v;
    }

    /*
    * initialize all necessary variable or initialize object etc
    * */
    private void initializeAll() {
        presenter = new PrayerTimePresenter(this);
        prayerTimeRV = v.findViewById(R.id.prayerTimeRV);//prayerTime
recyclerView(RV)
        prayerTimeRV.setHasFixedSize(true);
        prayerTimeRV.setLayoutManager(new
LinearLayoutManager(getContext(),LinearLayoutManager.VERTICAL,false));

        cityTv = v.findViewById(R.id.cityNameTv);
```

```
        errorNoInternetTv = v.findViewById(R.id.errorNoInternetTv);

        refreshLayout = v.findViewById(R.id.refreshLayout);
        refreshLayout.setOnRefreshListener(refreshListener);
        internetConnectionTest = new CheckInternetConnection();
        ring= MediaPlayer.create(getContext(),R.raw.prayer_allahu_akbar);


LocalBroadcastManager.getInstance(getActivity()).registerReceiver(connectio
nStatusReceiver
                ,new IntentFilter(Utils.BROADCAST_CONNECTION_STATUS));

        savedData = new SavedData(getContext());
    }

    @Override
    public void onViewCreated(@NonNull View view, @Nullable Bundle
savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);

        callPresenter();
        playSound();//it will play allhu akbar sound
    }


    private void callPresenter() {

        /** We have old lat and long so we can calculate by old report */
        if (savedData.getLong() != 0 && savedData.getLat() != 0){
            presenter.startCalculationPrayerTime();
        }
        if (internetConnectionTest.netCheck(getContext())){

            if (checkLocationPermission()){
                presenter.startCalculationPrayerTime();
                unVisibleErrorTv();
            }else {

Toast.makeText(getContext(),getResources().getString(R.string.gps_setting_m
essage), Toast.LENGTH_SHORT).show();

visibleErrorTv(getContext().getResources().getString(R.string.gps_setting_m
essage));
            }

        }else {

Toast.makeText(getContext(),getResources().getString(R.string.required_data
_connection), Toast.LENGTH_SHORT).show();

errorNoInternetTv.setText(getContext().getResources().getString(R.string.re
quired_data_connection));
            errorNoInternetTv.setVisibility(View.VISIBLE);
        }
    }

    /*
    * set Recycler view adapter
    * */
    @Override
    public void initializeRecyclerView(PrayerTimeAdapter adapter) {
```

```
        if (adapter != null) {
            prayerTimeRV.setAdapter(adapter);
        }
    }

    public void visibleErrorTv(String message){
        errorNoInternetTv.setVisibility(View.VISIBLE);
        errorNoInternetTv.setText(message);
    }
    public void unVisibleErrorTv(){
        errorNoInternetTv.setVisibility(View.GONE);
    }

    @Override
    public void setCityName(String cityName) {
        cityTv.setText(cityName);
    }


    /*
    * if GPS is not turn on this method will show a alert dialog to user to
setting enable GPS
    * */
    @Override
    public void showGpsSettingAlert(){
        AlertDialog.Builder alertDialog = new
AlertDialog.Builder(getContext());

        // Setting Dialog Title
        alertDialog.setTitle(R.string.gps_setting_title);

        // Setting Dialog Message
        alertDialog.setMessage(R.string.gps_setting_message);

        // On pressing Settings button
        alertDialog.setPositiveButton(R.string.settings, new
DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog,int which) {
                Intent intent = new
Intent(Settings.ACTION_LOCATION_SOURCE_SETTINGS);
                getContext().startActivity(intent);

            }
        });

        // on pressing cancel button
        alertDialog.setNegativeButton(R.string.cancel, new
DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int which) {
                dialog.cancel();

visibleErrorTv(getContext().getString(R.string.gps_setting_message));
            }
        });

        // Showing Alert Message
        alertDialog.show();


    }
```

```
    SwipeRefreshLayout.OnRefreshListener refreshListener = new
SwipeRefreshLayout.OnRefreshListener() {
        @Override
        public void onRefresh() {

            callPresenter();
            refreshLayout.setRefreshing(false);
        }
    };

    @Override
    public void onResume() {
        super.onResume();
    }

    public void playSound(){
        if (!ring.isPlaying()) {
            ring.start();
        }
    }
    @Override
    public void onPause() {
        ring.stop();
        super.onPause();
    }

    /*
    * Taking runtime permission for location
    * */

    public boolean checkLocationPermission() {

        final String[] PERMISSIONS =
{Manifest.permission.ACCESS_FINE_LOCATION,Manifest.permission.WRITE_EXTERNA
L_STORAGE};

        if(!hasPermissions(getContext(), PERMISSIONS)){

            ActivityCompat.requestPermissions(getActivity(),
                    PERMISSIONS,
                    MY_PERMISSIONS_REQUEST_LOCATION);
            return false;
        } else {
            return true;
            //permission already granted
            //like android version < 5(lollipop) don,t need runtime
permission

        }
    }

    /*
    * check is already permission granted or not
    * */
    public static boolean hasPermissions(Context context, String...
permissions) {
        if (context != null && permissions != null) {
            for (String permission : permissions) {
                if (ActivityCompat.checkSelfPermission(context, permission)
!= PackageManager.PERMISSION_GRANTED) {
```

```
                    return false;
                }
            }
        }
        return true;
    }


    @Override
    public void onRequestPermissionsResult(int requestCode,
                                           String permissions[], int[]
grantResults) {
        switch (requestCode) {
            case MY_PERMISSIONS_REQUEST_LOCATION: {
                // If request is cancelled, the result arrays are empty.
                if (grantResults.length > 0
                        && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                    if (ContextCompat.checkSelfPermission(getContext(),
                            Manifest.permission.ACCESS_FINE_LOCATION)
                            == PackageManager.PERMISSION_GRANTED) {
                        //permission granted
                    }

                } else {
                    permissionDenied();
                }
                return;
            }

        }
    }

    /*
    * if user deny to give permission this method will be called
    * */
    private void permissionDenied() {
        Toast.makeText(getContext(),
R.string.permission_denied,Toast.LENGTH_SHORT).show();
    }

    BroadcastReceiver connectionStatusReceiver = new BroadcastReceiver() {
        @Override
        public void onReceive(Context context, Intent intent) {
            Bundle bundle = intent.getExtras();
            String message = bundle.getString(Utils.CONNECTION_STATUS);

            if (bundle.getInt(Utils.STATUS_CODE) == Utils.ALL_CONNECTED){
                unVisibleErrorTv();
                presenter.startCalculationPrayerTime();
            }else if (bundle.getInt(Utils.STATUS_CODE) ==
Utils.NO_CONNECTION_CODE){
                visibleErrorTv(message);
            }

        }
    };
}
```

QIBLA :

```
package net.a6te.lazycoder.muslim_pro_islamicremainders.fragments;


import android.Manifest;
import android.app.AlertDialog;
import android.content.Context;
import android.content.DialogInterface;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.media.MediaPlayer;
import android.os.Bundle;
import android.provider.Settings;
import android.support.annotation.NonNull;
import android.support.annotation.Nullable;
import android.support.design.widget.Snackbar;
import android.support.v4.app.ActivityCompat;
import android.support.v4.app.Fragment;
import android.support.v4.content.ContextCompat;
import android.support.v4.widget.SwipeRefreshLayout;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.RelativeLayout;
import android.widget.TextView;
import android.widget.Toast;

import net.a6te.lazycoder.muslim_pro_islamicremainders.DrawCompass;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPView;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.QiblaPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.R;

/**
 * A simple {@link Fragment} subclass.
 */
public class Qibla extends Fragment implements MVPView.QiblaView{

    private RelativeLayout directionContainer;
    private DrawCompass rose;
    View view;
    TextView qiblaDistance, qiblaDegree;

    private MVPPresenter.QiblaPresenter presenter;
    private SwipeRefreshLayout refreshLayout;
    public static final int MY_PERMISSIONS_REQUEST_LOCATION = 99;
    private Context context;
    private TextView errorTv;
    private MediaPlayer ring;


    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        view =  inflater.inflate(R.layout.fragment_qibla, container,
false);
        initializeAll();
        return view;
    }
```

```
    @Override
    public void onViewCreated(@NonNull View view, @Nullable Bundle
savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);

        directionContainer.addView(rose);
        rose.invalidate();

        refreshLayout.setOnRefreshListener(refreshListener);

        //check is all type of run time permission enabled or not if not
enabled then show again
        checkPermission();
        presenter.startCalculatingLocation();

        playSound();
    }


    private void initializeAll() {
        qiblaDistance = view.findViewById(R.id.idDistance);
        qiblaDegree = view.findViewById(R.id.idDegree);

        directionContainer = view.findViewById(R.id.cantainer_layout);
        rose = new DrawCompass(context);
        presenter = new QiblaPresenter(this,context);
        refreshLayout = view.findViewById(R.id.refreshLayout);
        errorTv = view.findViewById(R.id.errorTv);
        ring= MediaPlayer.create(getContext(),R.raw.prayer_allahu_akbar);
    }



    @Override
    public void onAttach(Context context) {
        super.onAttach(context);
        this.context = context;
    }


    /*
     * initialize qibla current status(view update)
     * */
    @Override
    public void setQiblaInfo(String qiblaDegree, String qiblaDistance) {
        this.qiblaDegree.setText(qiblaDegree);
        this.qiblaDistance.setText(qiblaDistance);

    }

    //this will generate new compass direction
    @Override
    public void changeCompassDirection(float directionsNorth, float
directionsQibla, float degree) {
        rose.setDirections(directionsNorth, directionsQibla, degree);
    }

    @Override
    public void notifyNoInternetConnection() {
        Toast.makeText(context, R.string.no_internet_connection,
```

```
Toast.LENGTH_SHORT).show();
    }

    @Override
    public void showSensorNotAvailable(){
        Snackbar.make(view,
R.string.magnetic_sensor_not_available,Snackbar.LENGTH_SHORT).show();
        errorTv.setVisibility(View.VISIBLE);
    }

    /*
     * This method will check is GPS is turned on or off if off then this
method will show a dialog
     * */
    @Override
    public void notifyNotEnabledGPS() {

        AlertDialog.Builder alertDialog = new AlertDialog.Builder(context);
        // Setting Dialog Title

alertDialog.setTitle(getContext().getResources().getString(R.string.gps_set
ting_title));

        // Setting Dialog Message

alertDialog.setMessage(getContext().getResources().getString(R.string.gps_s
etting_message));

        // On pressing Settings button

alertDialog.setPositiveButton(getContext().getResources().getString(R.strin
g.settings), new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog,int which) {
                Intent intent = new
Intent(Settings.ACTION_LOCATION_SOURCE_SETTINGS);
                startActivity(intent);
            }
        });
        // on pressing cancel button

alertDialog.setNegativeButton(getContext().getResources().getString(R.strin
g.cancel), new DialogInterface.OnClickListener() {
            public void onClick(DialogInterface dialog, int which) {
                dialog.cancel();
            }
        });

        // Showing Alert Message
        alertDialog.show();
    }

    SwipeRefreshLayout.OnRefreshListener refreshListener = new
SwipeRefreshLayout.OnRefreshListener() {
        @Override
        public void onRefresh() {

            presenter.startCalculatingLocation();
            refreshLayout.setRefreshing(false);
        }
    };
```

```
    public boolean checkPermission() {

        final String[] PERMISSIONS =
{Manifest.permission.ACCESS_FINE_LOCATION,Manifest.permission.WRITE_EXTERNA
L_STORAGE};

        if(!hasPermissions(getContext(), PERMISSIONS)){

            ActivityCompat.requestPermissions(getActivity(),
                    PERMISSIONS,
                    MY_PERMISSIONS_REQUEST_LOCATION);

            return false;
        } else {
            //permission already granted
            //like android version < 5(lollipop) don,t need runtime
permission

            return true;

        }
    }

    public static boolean hasPermissions(Context context, String...
permissions) {
        if (context != null && permissions != null) {
            for (String permission : permissions) {
                if (ActivityCompat.checkSelfPermission(context, permission)
!= PackageManager.PERMISSION_GRANTED) {
                    return false;
                }
            }
        }
        return true;
    }


    @Override
    public void onRequestPermissionsResult(int requestCode,
                                           String permissions[], int[]
grantResults) {
        switch (requestCode) {
            case MY_PERMISSIONS_REQUEST_LOCATION: {
                // If request is cancelled, the result arrays are empty.
                if (grantResults.length > 0
                        && grantResults[0] ==
PackageManager.PERMISSION_GRANTED) {
                    if (ContextCompat.checkSelfPermission(getContext(),
                            Manifest.permission.ACCESS_FINE_LOCATION)
                            == PackageManager.PERMISSION_GRANTED) {
                        //permission granted
                    }

                } else {
                    permissionDenied();
                }
                return;
            }

        }
```

```
    }

    private void permissionDenied() {
        Toast.makeText(getContext(),
R.string.permission_denied,Toast.LENGTH_SHORT).show();

    }

    public void playSound(){
        if (!ring.isPlaying()) {
            ring.start();
        }
    }

    @Override
    public void onPause() {
        presenter.onPause();
        ring.stop();
        super.onPause();
    }

    @Override
    public void onResume() {
        presenter.onResume();
        super.onResume();
    }

}
```

QURAN :

```
package net.a6te.lazycoder.muslim_pro_islamicremainders.fragments;


import android.media.MediaPlayer;
import android.os.Bundle;
import android.support.annotation.NonNull;
import android.support.annotation.Nullable;
import android.support.v4.app.Fragment;
import android.text.Editable;
import android.text.TextWatcher;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;

import com.github.barteksc.pdfviewer.PDFView;
import com.github.barteksc.pdfviewer.listener.OnLoadCompleteListener;
import com.github.barteksc.pdfviewer.listener.OnPageChangeListener;
import com.github.barteksc.pdfviewer.scroll.DefaultScrollHandle;

import com.mancj.materialsearchbar.MaterialSearchBar;
import com.shockwave.pdfium.PdfDocument;

import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.MVPView;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MVP.QuranPresenter;
import net.a6te.lazycoder.muslim_pro_islamicremainders.MainActivity;
import net.a6te.lazycoder.muslim_pro_islamicremainders.R;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.adapters.CustomSuggestionsA
```

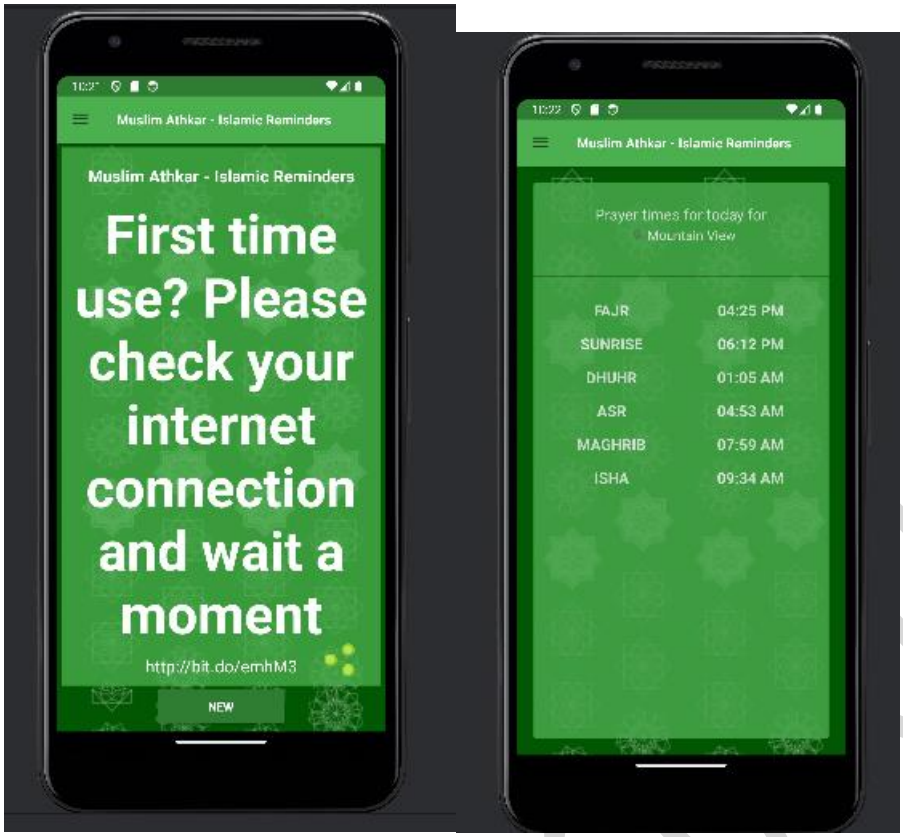
```
dapter;
import
net.a6te.lazycoder.muslim_pro_islamicremainders.interfaces.OnSearchItemClic
k;
import net.a6te.lazycoder.muslim_pro_islamicremainders.model.Surah;

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

import static android.content.Context.LAYOUT_INFLATER_SERVICE;

/**
 * A simple {@link Fragment} subclass.
 */
public class Quran extends Fragment implements MVPView.QuranView,
OnPageChangeListener,OnLoadCompleteListener,OnSearchItemClick {

    private View view;
    public static final String SAMPLE_FILE = "quraan.pdf";
    PDFView pdfView;
    String pdfFileName;
    private ArrayList<Surah> surahs;
    private LayoutInflater inflater;

    private MaterialSearchBar searchBar;
    private CustomSuggestionsAdapter customSuggestionsAdapter;
    private MVPPresenter.QuranPresenter presenter;
    private MediaPlayer ring;


    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        view =  inflater.inflate(R.layout.fragment_quran, container,
false);
        initializeAll();
        playSound();//it will play allhu akbar sound

        return view;
    }

    private void initializeAll() {
        ring= MediaPlayer.create(getContext(),R.raw.prayer_allahu_akbar);
        pdfView = view.findViewById(R.id.pdfView);
        surahs = new ArrayList<>();

        inflater = (LayoutInflater)
getContext().getSystemService(LAYOUT_INFLATER_SERVICE);
        searchBar = view.findViewById(R.id.searchBar);

        presenter = new QuranPresenter(this);

    }

    @Override
    public void onViewCreated(@NonNull View view, @Nullable Bundle
savedInstanceState) {
        super.onViewCreated(view, savedInstanceState);

        displayFromAsset(SAMPLE_FILE,0);//default pdf will be start from 0
```

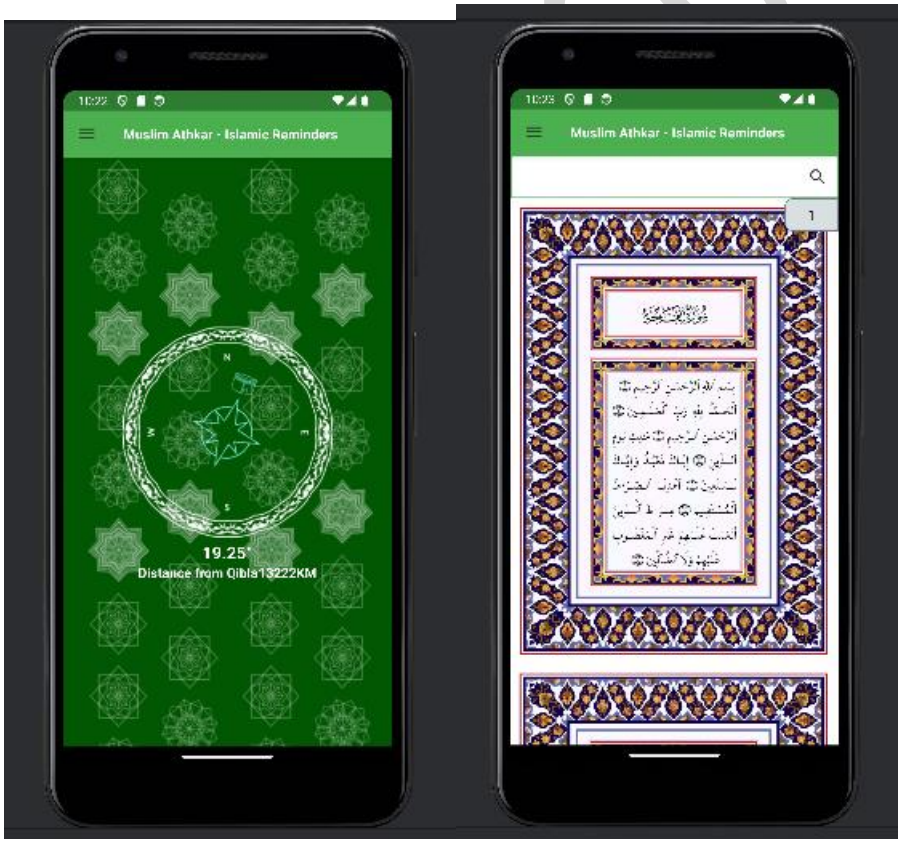
```
page

        /*
        * search bar default settings*/
        try {
            searchBar.setMaxSuggestionCount(2);
            searchBar.setHint(getString(R.string.find_surah));

            searchBar.addTextChangeListener(textWatcher);

        }catch (Exception e){
            e.printStackTrace();
        }

    }


    /*
    * initialize PDF view [PDF is located on asset folder]
    * */
    private void displayFromAsset(String assetFileName, int pageNumber) {
        pdfFileName = assetFileName;

        pdfView.fromAsset(SAMPLE_FILE)
                .defaultPage(pageNumber)
                .enableSwipe(true)
                .swipeHorizontal(false)
                .onPageChange(this)
                .enableAnnotationRendering(true)
                .onLoad(this)
                .scrollHandle(new DefaultScrollHandle(this.getContext()))
                .load();

    }


    @Override
    public void onPageChanged(int page, int pageCount) {
        getActivity().setTitle(String.format("%s %s / %s", pdfFileName,
page + 1, pageCount));
    }


    @Override
    public void loadComplete(int nbPages) {
        printBookmarksTree(pdfView.getTableOfContents(), "-");


    }

    public void printBookmarksTree(List<PdfDocument.Bookmark> tree, String
sep) {
        for (PdfDocument.Bookmark b : tree) {

            surahs.add(new Surah(b.getTitle(),b.getPageIdx()));
            if (b.hasChildren()) {
                printBookmarksTree(b.getChildren(), sep + "-");
            }
        }

        presenter.prepareSearchAdapter(inflater,surahs);
```

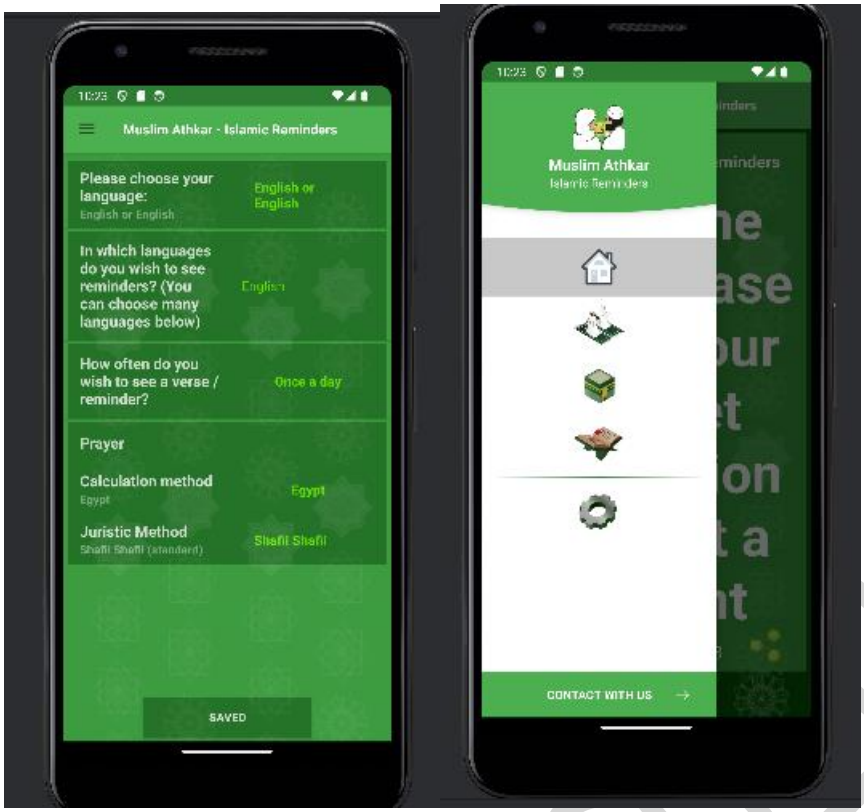
```
    }



    TextWatcher textWatcher = new TextWatcher() {
        @Override
        public void beforeTextChanged(CharSequence charSequence, int i, int
i1, int i2) {
        }

        @Override
        public void onTextChanged(CharSequence charSequence, int i, int i1,
int i2) {

            try {
                // send the entered text to our filter and let it manage
everything

customSuggestionsAdapter.getFilter().filter(searchBar.getText());
            }catch (Exception e){
                e.printStackTrace();
            }
        }

        @Override
        public void afterTextChanged(Editable editable) {

        }
    };

    @Override
    public void initializeSearchView(CustomSuggestionsAdapter adapter) {
        if (adapter != null) {
            try {
                searchBar.setCustomSuggestionAdapter(adapter);
                this.customSuggestionsAdapter = adapter;
            } catch (Exception e) {
                e.printStackTrace();
            }
        }
    }

    @Override
    public void onSearchItemClick(String indexNo) {

        searchBar.disableSearch();
        pdfView.jumpTo(Integer.parseInt(indexNo));


    }


    public void playSound(){
        if (!ring.isPlaying()) {
            ring.start();
        }
    }
    @Override
    public void onPause() {
```

```
        ring.stop();
        super.onPause();
    }
}
```

OUTPUT :


Muslim Athkar - Islamic Reminders
Muslim Athkar - Islamic Reminders
First time use? Please check your internet connection and wait a moment
http://bit.do/emhM3
NEW
Muslim Athkar - Islamic Reminders
Prayer times for today for
Mountain View
FAJR 04:25 PM
SUNRISE 06:12 PM
DHUHR 01:05 AM
ASR 04:53 AM
MAGHRIB 07:59 AM
ISHA 09:34 AM


Muslim Athkar - Islamic Reminders
19.25°
Distance from Qibla13222KM
Muslim Athkar - Islamic Reminders
1



RESULT :

Therefore, the Islamic Application has been developed successfully using Java in Android Studio.