Assignment 4 Report

SQLite Database App

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Introduction

In this report I will explain what each activity and class file does, and how they work with the SQLite database for registration and login. The activities and class files that will be explained are, MainActivity, RegisterActivity, DashboardActivity, and SQLiteHelper

SQLiteHelper

The script for building a database and a database connection is included in this code below.

```
package com.example.assignment4

import android.content.Context
import android.database.sqlite.SQLiteOpenHelper
import android.database.sqlite.SQLiteDatabase

class SQLiteHelper(context: Context?) : SQLiteOpenHelper(context,
DATABASE_NAME, null, 1) {
    override fun onCreate(database: SQLiteDatabase) {
        val CREATE_TABLE =
            "CREATE TABLE IF NOT EXISTS " + TABLE_NAME + " (" +
Table_Column_ID + " INTEGER PRIMARY KEY, " + Table_Column_1_Name + " VARCHAR,
" + Table_Column_2_Email + " VARCHAR, " + Table_Column_3_Password + "
VARCHAR)"
        database.execSQL(CREATE_TABLE)
    }

    override fun onUpgrade(db: SQLiteDatabase, oldVersion: Int, newVersion:
Int) {
        db.execSQL("DROP TABLE IF EXISTS " + TABLE_NAME)
        onCreate(db)
    }

    companion object {
        var DATABASE_NAME = "UsersDBInfo"
        const val TABLE_NAME = "UserTable"
        const val Table_Column_ID = "id"
        const val Table_Column_1_Name = "name"
        const val Table_Column_2_Email = "email"
        const val Table_Column_3_Password = "password"
    }
}
```

MainActivity

The applications register function is contained in this code. When the button is pressed, this will call the DatabaseHelper, which will enter the data into the database.

```
package com.example.assignment4

import androidx.appcompat.app.AppCompatActivity
import android.widget.EditText
import android.database.sqlite.SQLiteDatabase
import android.os.Bundle
import android.content.Intent
import android.database.Cursor
import android.widget.Toast
import android.text.TextUtils
import android.view.View
import android.widget.Button

class MainActivity : AppCompatActivity() {
    var LoginBtn: Button? = null
    var RegisterBtn: Button? = null
    var Email: EditText? = null
    var Password: EditText? = null
    var StoreEmail: String? = null
    var StorePassword: String? = null
    var EditTextEmptyHolder: Boolean? = null
    lateinit var sqLiteDatabaseObj: SQLiteDatabase
    var sqLiteHelper: SQLiteHelper? = null
    lateinit var cursor: Cursor
    var TempPassword = "NOT_FOUND"
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        LoginBtn = findViewById<View>(R.id.buttonLogin) as Button
        RegisterBtn = findViewById<View>(R.id.buttonRegister) as Button
        Email = findViewById<View>(R.id.editEmail) as EditText
        Password = findViewById<View>(R.id.editPassword) as EditText
        sqLiteHelper = SQLiteHelper(this)
        LoginBtn!!.setOnClickListener {
            CheckEditTextStatus()
            LoginFunction()
        }
        RegisterBtn!!.setOnClickListener {
            val intent = Intent(this@MainActivity,
RegisterActivity::class.java)
            startActivity(intent)
        }
    }

    fun LoginFunction() {
        if (EditTextEmptyHolder!!) {
            sqLiteDatabaseObj = sqLiteHelper!!.writableDatabase
            cursor = sqLiteDatabaseObj.query(
                SQLiteHelper.TABLE_NAME,
                null,
                " " + SQLiteHelper.Table_Column_2_Email + "=?",
```

```
                arrayOf(StoreEmail),
                null,
                null,
                null
            )
            while (cursor.moveToNext()) {
                if (cursor.isFirst()) {
                    cursor.moveToFirst()
                    TempPassword =

cursor.getString(cursor.getColumnIndexOrThrow(SQLiteHelper.Table_Column_3_Pas
sword))
                    cursor.close()
                }
            }
            CheckFinalResult()
        } else {
            Toast.makeText(
                this@MainActivity,
                "Please Enter UserName or Password.",
                Toast.LENGTH_LONG
            ).show()
        }
    }

    fun CheckEditTextStatus() {
        StoreEmail = Email!!.text.toString()
        StorePassword = Password!!.text.toString()
        EditTextEmptyHolder =
            if (TextUtils.isEmpty(StoreEmail) ||
TextUtils.isEmpty(StorePassword)) {
                false
            } else {
                true
            }
    }

    fun CheckFinalResult() {
        if (TempPassword.equals(StorePassword, ignoreCase = true)) {
            Toast.makeText(this@MainActivity, "Login Successful",
Toast.LENGTH_LONG).show()
            val intent = Intent(this@MainActivity,
DashboardActivity::class.java)
            intent.putExtra(UserEmail, StoreEmail)
            startActivity(intent)
        } else {
            Toast.makeText(
                this@MainActivity,
                "UserName or Password is Wrong, Please Try Again.",
                Toast.LENGTH_LONG
            ).show()
        }
        TempPassword = "NOT_FOUND"
    }

    companion object {
        const val UserEmail = ""
```

```
    }
}
```

RegisterActivity

This code contains the applications login function. This code reads the data from the input field and checks if it exists in the DatabaseHelper class.

```
package com.example.assignment4

import android.database.Cursor
import androidx.appcompat.app.AppCompatActivity
import android.widget.EditText
import android.database.sqlite.SQLiteDatabase
import android.os.Bundle
import android.widget.Toast
import android.text.TextUtils
import android.view.View
import android.widget.Button

class RegisterActivity : AppCompatActivity() {
    var Email: EditText? = null
    var Password: EditText? = null
    var Name: EditText? = null
    var Register: Button? = null
    var StoreName: String? = null
    var StoreEmail: String? = null
    var StorePassword: String? = null
    var EditTextEmptyHolder: Boolean? = null
    lateinit var sqLiteDatabaseObj: SQLiteDatabase
    var SQLiteDataBaseQueryHolder: String? = null
    var sqLiteHelper: SQLiteHelper? = null
    lateinit var cursor: Cursor
    var F_Result = "Not_Found"
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_register)
        Register = findViewById<View>(R.id.buttonRegister) as Button
        Email = findViewById<View>(R.id.editEmail) as EditText
        Password = findViewById<View>(R.id.editPassword) as EditText
        Name = findViewById<View>(R.id.editName) as EditText
        sqLiteHelper = SQLiteHelper(this)
        Register!!.setOnClickListener {
            SQLiteDataBaseBuild()
            SQLiteTableBuild()
            CheckEditTextStatus()
            CheckingEmailAlreadyExistsOrNot()
            EmptyEditTextAfterDataInsert()
        }
    }

    fun SQLiteDataBaseBuild() {
        sqLiteDatabaseObj = openOrCreateDatabase(SQLiteHelper.DATABASE_NAME,
MODE_PRIVATE, null)
    }
```

```
    fun SQLiteTableBuild() {
        sqLiteDatabaseObj!!.execSQL("CREATE TABLE IF NOT EXISTS " +
SQLiteHelper.TABLE_NAME + "(" + SQLiteHelper.Table_Column_ID + " PRIMARY KEY
AUTOINCREMENT NOT NULL, " + SQLiteHelper.Table_Column_1_Name + " VARCHAR, " +
SQLiteHelper.Table_Column_2_Email + " VARCHAR, " +
SQLiteHelper.Table_Column_3_Password + " VARCHAR);")
    }

    fun InsertDataIntoSQLiteDatabase() {
        if (EditTextEmptyHolder == true) {
            SQLiteDataBaseQueryHolder =
                "INSERT INTO " + SQLiteHelper.TABLE_NAME + "
(name,email,password) VALUES('" + StoreName + "', '" + StoreEmail + "', '" +
StorePassword + "');"
            sqLiteDatabaseObj!!.execSQL(SQLiteDataBaseQueryHolder)
            sqLiteDatabaseObj!!.close()
            Toast.makeText(this@RegisterActivity, "User Registered
Successfully", Toast.LENGTH_LONG)
                .show()
        } else {
            Toast.makeText(
                this@RegisterActivity,
                "Please Fill All The Required Fields.",
                Toast.LENGTH_LONG
            ).show()
        }
    }

    fun EmptyEditTextAfterDataInsert() {
        Name!!.text.clear()
        Email!!.text.clear()
        Password!!.text.clear()
    }

    fun CheckEditTextStatus() {
        StoreName = Name!!.text.toString()
        StoreEmail = Email!!.text.toString()
        StorePassword = Password!!.text.toString()
        EditTextEmptyHolder =
            if (TextUtils.isEmpty(StoreName) || TextUtils.isEmpty(StoreEmail)
|| TextUtils.isEmpty(
                    StorePassword
                )
            ) {
                false
            } else {
                true
            }
    }

    fun CheckingEmailAlreadyExistsOrNot() {
        sqLiteDatabaseObj = sqLiteHelper!!.writableDatabase
        cursor = sqLiteDatabaseObj.query(
            SQLiteHelper.TABLE_NAME,
            null,
            " " + SQLiteHelper.Table_Column_2_Email + "=?",
```

```
            arrayOf(StoreEmail),
            null,
            null,
            null
        )
        while (cursor.moveToNext()) {
            if (cursor.isFirst()) {
                cursor.moveToFirst()
                F_Result = "Email Found"
                cursor.close()
            }
        }
        CheckFinalResult()
    }

    fun CheckFinalResult() {
        if (F_Result.equals("Email Found", ignoreCase = true)) {
            Toast.makeText(this@RegisterActivity, "Email Already Exists",
Toast.LENGTH_LONG).show()
        } else {
            InsertDataIntoSQLiteDatabase()
        }
        F_Result = "Not_Found"
    }
}
```

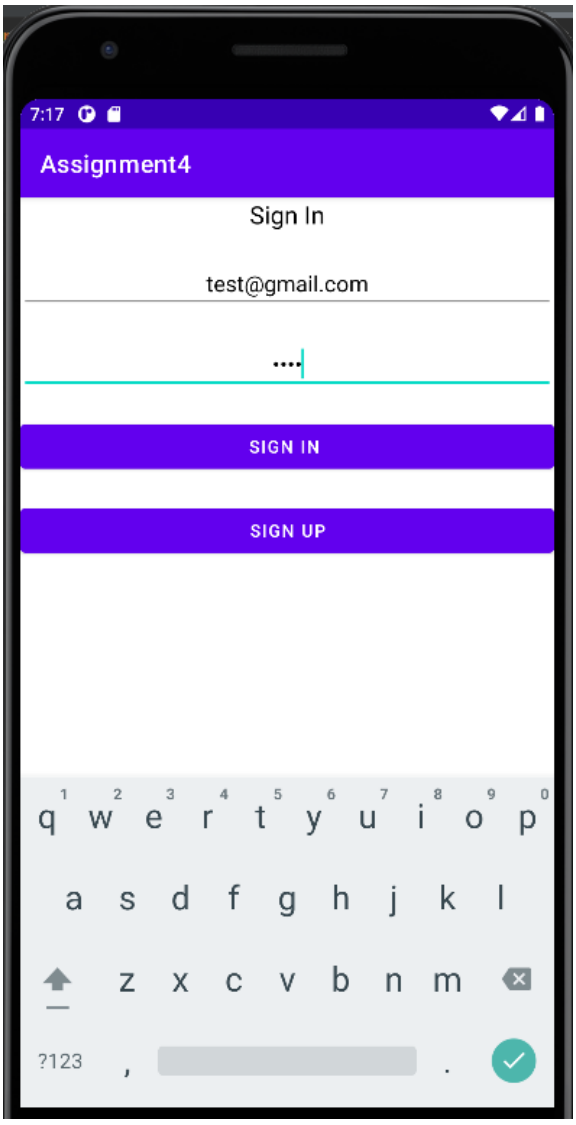
DashboardActivity

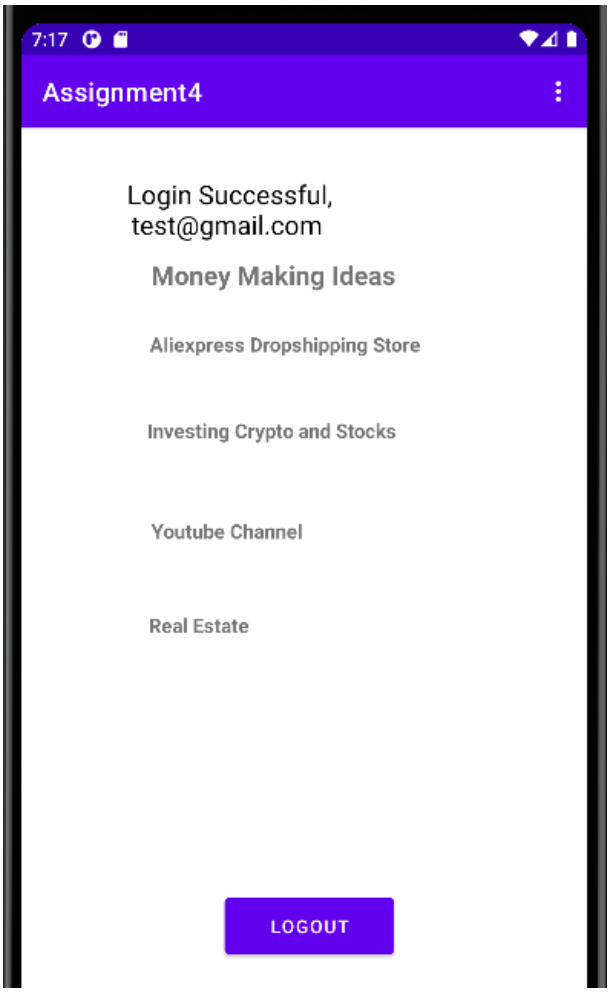
Takes the user to a page after the login is successful.

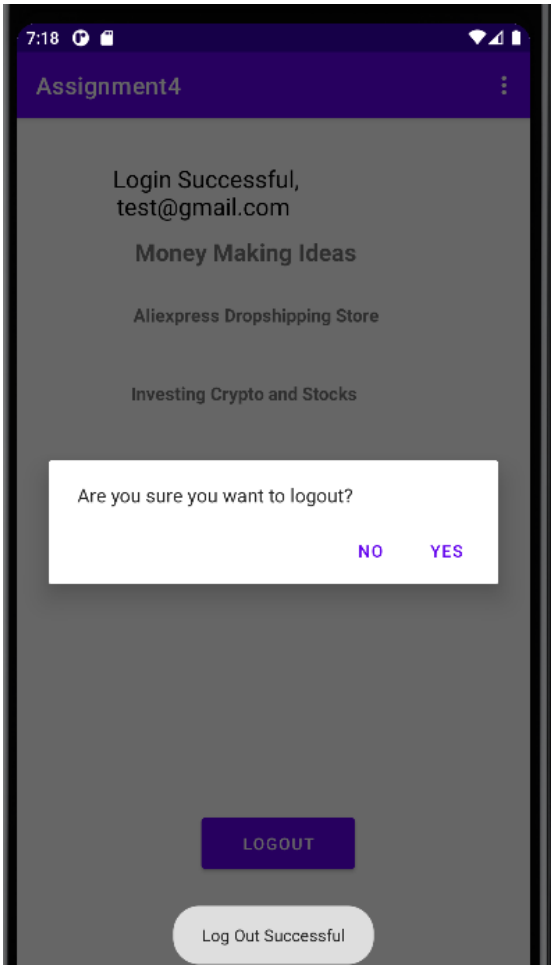
```
package com.example.assignment4

import android.app.AlertDialog
import androidx.appcompat.app.AppCompatActivity
import android.widget.TextView
import android.os.Bundle
import android.view.Menu
import android.view.MenuItem
import android.view.View
import android.widget.Button
import android.widget.Toast

class DashboardActivity : AppCompatActivity() {
    var EmailStored: String? = null
    var Email: TextView? = null
    var LogOUT: Button? = null
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_dashboard)
        Email = findViewById<View>(R.id.textView1) as TextView
        LogOUT = findViewById<View>(R.id.button1) as Button
        val intent = intent
        EmailStored = intent.getStringExtra(MainActivity.UserEmail)
        Email!!.text = Email!!.text.toString() + EmailStored
        LogOUT!!.setOnClickListener {
```

```
            val build = AlertDialog.Builder(this@DashboardActivity)
            build.setMessage("Are you sure you want to logout?")
                .setCancelable(false)
                .setPositiveButton("Yes") { dialogInterface, i -> finish() }
                .setNegativeButton("No") { dialogInterface, i ->
dialogInterface.cancel() }
            val alertDialog = build.create()
            alertDialog.show()
            Toast.makeText(this@DashboardActivity, "Log Out Successful",
Toast.LENGTH_LONG).show()
        }
    }

    override fun onCreateOptionsMenu(menu: Menu): Boolean {
        menuInflater.inflate(R.menu.menu, menu)
        return true
    }

    override fun onOptionsItemSelected(item: MenuItem): Boolean {
        return when (item.itemId) {
            R.id.action_quit ->{
                this.finish()
                true
            }
            else -> true
        }
    }
}
```

Screenshots


7:17
Assignment4
Sign In
test@gmail.com
SIGN IN
SIGN UP


7:17
Assignment4
Login Successful,
test@gmail.com
Money Making Ideas
Aliexpress Dropshipping Store
Investing Crypto and Stocks
Youtube Channel
Real Estate
LOGOUT


7:18
Assignment4
Login Successful,
test@gmail.com
Money Making Ideas
Aliexpress Dropshipping Store
Investing Crypto and Stocks
Are you sure you want to logout?
NO
YES
LOGOUT
Log Out Successful