Bahria University,

Karachi Campus

A logo with text on it

Description automatically generated

LAB EXPERIMENT NO.

**13**

LIST OF TASKS

|  |  |
| --- | --- |
| TASK NO | OBJECTIVE |
| 1 | In a basic E-commerce Android app, the app manages product and user data through a local SQLite database. It includes tables for Users, Products, and Orders. The Products table, for example, holds information like ID, name, and price. Users can browse products offline, add items to their cart, and place orders. The app syncs with a server when online to ensure data consistency. SQLite's lightweight design is ideal for fast data access and functionality without constant internet access, improving user experience in areas with unstable network conditions. |

Submitted On:

14 June 2024

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(Date: DD/MM/YY)

**Task 1**

In a basic E-commerce Android app, the app manages product and user data through a local SQLite database. It includes tables for Users, Products, and Orders. The Products table, for example, holds information like ID, name, and price. Users can browse products offline, add items to their cart, and place orders. The app syncs with a server when online to ensure data consistency. SQLite's lightweight design is ideal for fast data access and functionality without constant internet access, improving user experience in areas with unstable network conditions.

**XML code**

?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp">

<!-- Product Section -->

<TextView

android:id="@+id/productSectionLabel"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Products"

android:textSize="18sp"

android:textStyle="bold"

android:layout\_marginTop="8dp"/>

<LinearLayout

android:id="@+id/productsLayout"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="16dp"/>

<LinearLayout

android:id="@+id/usersLayout"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:orientation="vertical"

android:layout\_below="@id/userSectionLabel"

android:layout\_marginTop="8dp">

<!-- Example User Item -->

<TextView

android:id="@+id/userItem"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="User ID: 1\nName: John Doe\nEmail: john.doe@example.com"

android:textSize="16sp"

android:layout\_marginBottom="8dp"/>

<!-- Add more TextViews for each user dynamically in code -->

</LinearLayout>

package com.example.samdlab;

import android.annotation.SuppressLint;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import java.util.ArrayList;

import java.util.List;

return db.update(DatabaseHelper.TABLE\_PRODUCTS, values, DatabaseHelper.KEY\_ID + " = ?",

new String[]{String.valueOf(product.getId())});

}

package com.example.samdlab;

import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

import java.util.List;

public class MainActivity extends AppCompatActivity {

private DatabaseManager dbManager;

private TextView productsTextView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

dbManager = new DatabaseManager(this);

productsTextView = findViewById(R.id.productItem);

// Example: Add a product

Product product = new Product();

product.setName("Product A");

product.setPrice(19.99);

dbManager.open();

dbManager.addProduct(product);

dbManager.close();

// Example: Get all products

dbManager.open();

List<Product> products = dbManager.getAllProducts();

dbManager.close();

// Display products (example using TextView)

StringBuilder sb = new StringBuilder();

for (Product p : products) {

sb.append("ID: ").append(p.getId()).append(", Name: ").append(p.getName())

.append(", Price: $").append(p.getPrice()).append("\n");

}

productsTextView.setText(sb.toString());

}

@Override

protected void onDestroy() {

super.onDestroy();

if (dbManager != null) {

dbManager.close();

}

}

}

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