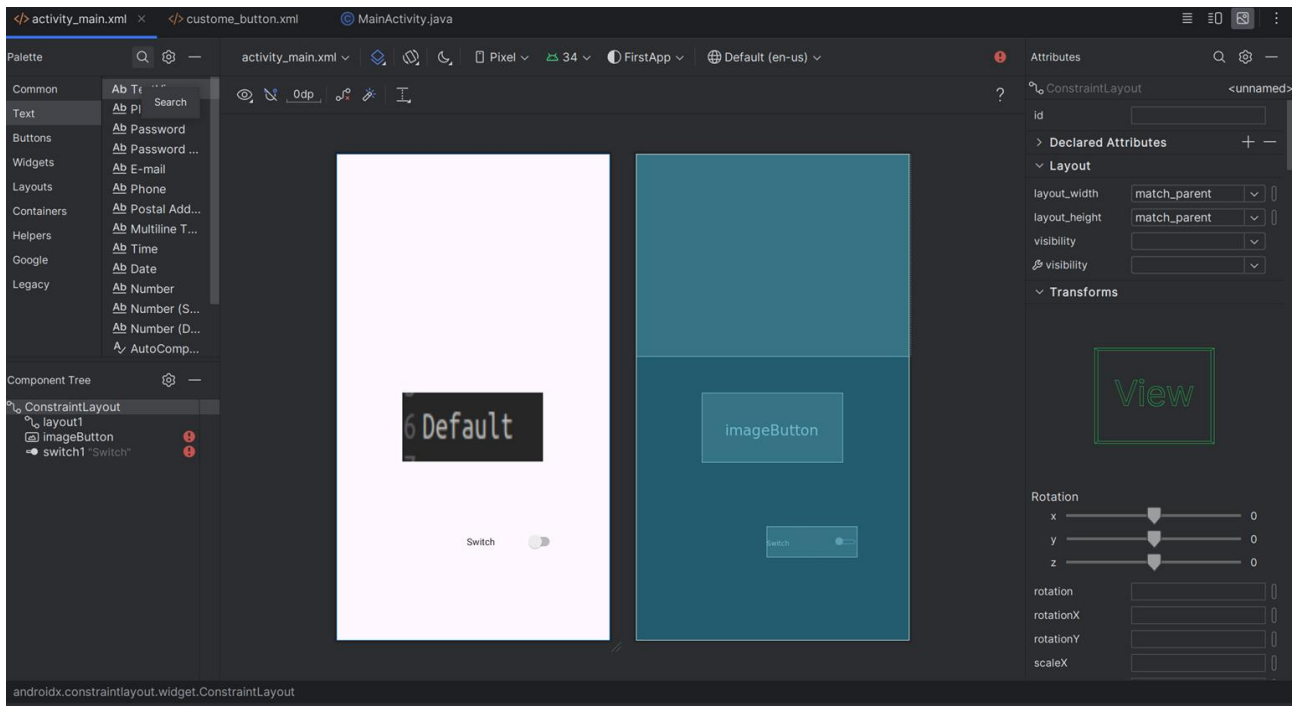


1. Program One



XML

```
<?xml version="1.0" encoding="utf-8"?>
<selector xmlns:android="http://schemas.android.com/apk/res/android">
  <item
    android:state_enabled="false"
    android:drawable="@drawable/disabled"/>
  <item
    android:state_pressed="true"
    android:drawable="@drawable/pressed"/>
  <item
    android:drawable="@drawable/bydefault"/>
</selector>
```

MainActivity.java

```
package com.example.firstapp;

import androidx.appcompat.app.AppCompatActivity;
import androidx.constraintlayout.widget.ConstraintLayout;

import android.os.Bundle;
import android.view.View;
import android.view.ViewGroup;
import android.widget.CalendarView;
import android.widget.CompoundButton;
import android.widget.ImageButton;
import android.widget.Switch;
```

```

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    ImageButton ib;
    Switch sw;
    ConstraintLayout cLayout;

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

        ib = findViewById(R.id.imageButton);
        sw = findViewById(R.id.switch1);
        cLayout = findViewById(R.id.layout1);

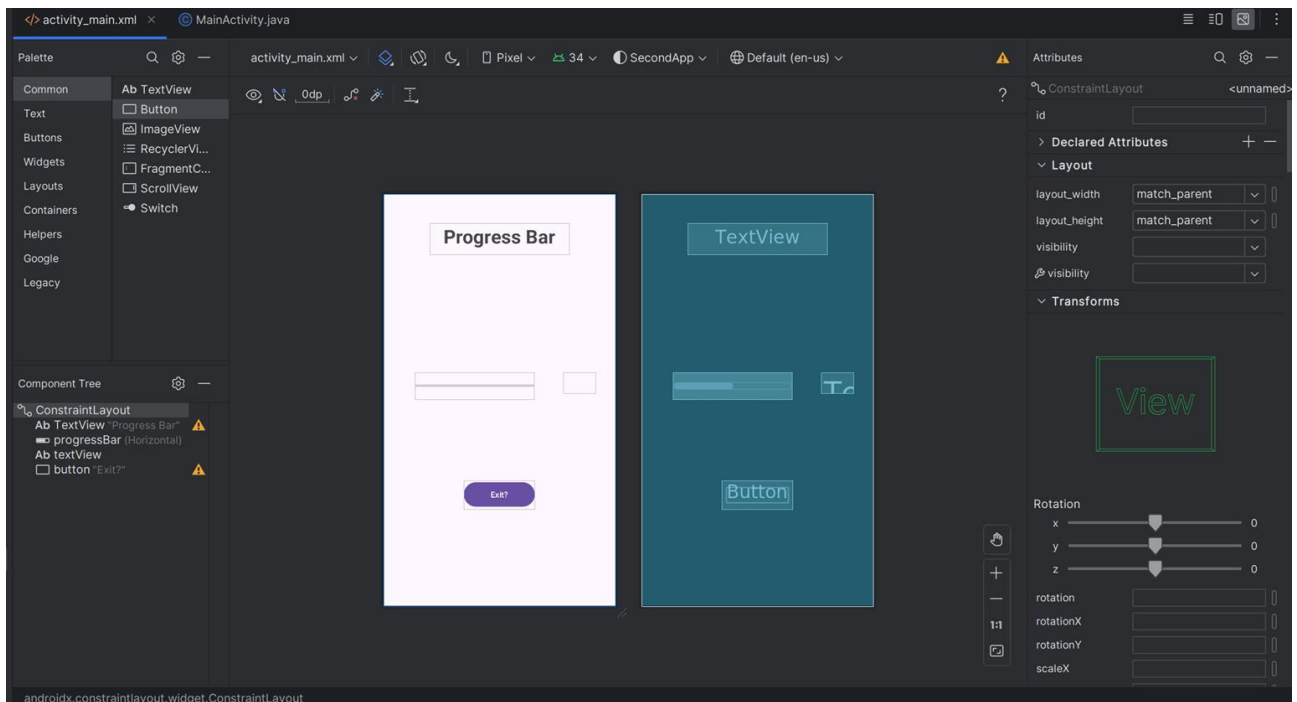
        ib.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(getApplicationContext(), "Button Pressed",
Toast.LENGTH_LONG).show();
            }
        });

        sw.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
            @Override
            public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {
                if(isChecked){
                    ib.setEnabled(true);
                    sw.setText("Enabled");
                }
                else{
                    ib.setEnabled(false);
                    sw.setText("Disabled");
                }
            }
        });

        CalendarView cv = new CalendarView(getApplicationContext());
        ConstraintLayout.LayoutParams lp = new ConstraintLayout.LayoutParams(
            ConstraintLayout.LayoutParams.MATCH_PARENT,
            ViewGroup.LayoutParams.MATCH_PARENT
        );
        cLayout.addView(cv, lp);
    }
}

```

2. Program Two



MainActivity

```
package com.example.secondapp;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.os.Handler;
import android.view.View;
import android.widget.Button;
import android.widget.ProgressBar;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    ProgressBar pg;
    TextView tv;
    Button bt;
    int progressStatus = 0;
    Handler handler = new Handler();

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

        pg = findViewById(R.id.progressBar);
        tv = findViewById(R.id.textView);
        bt = findViewById(R.id.button);
    }
}
```

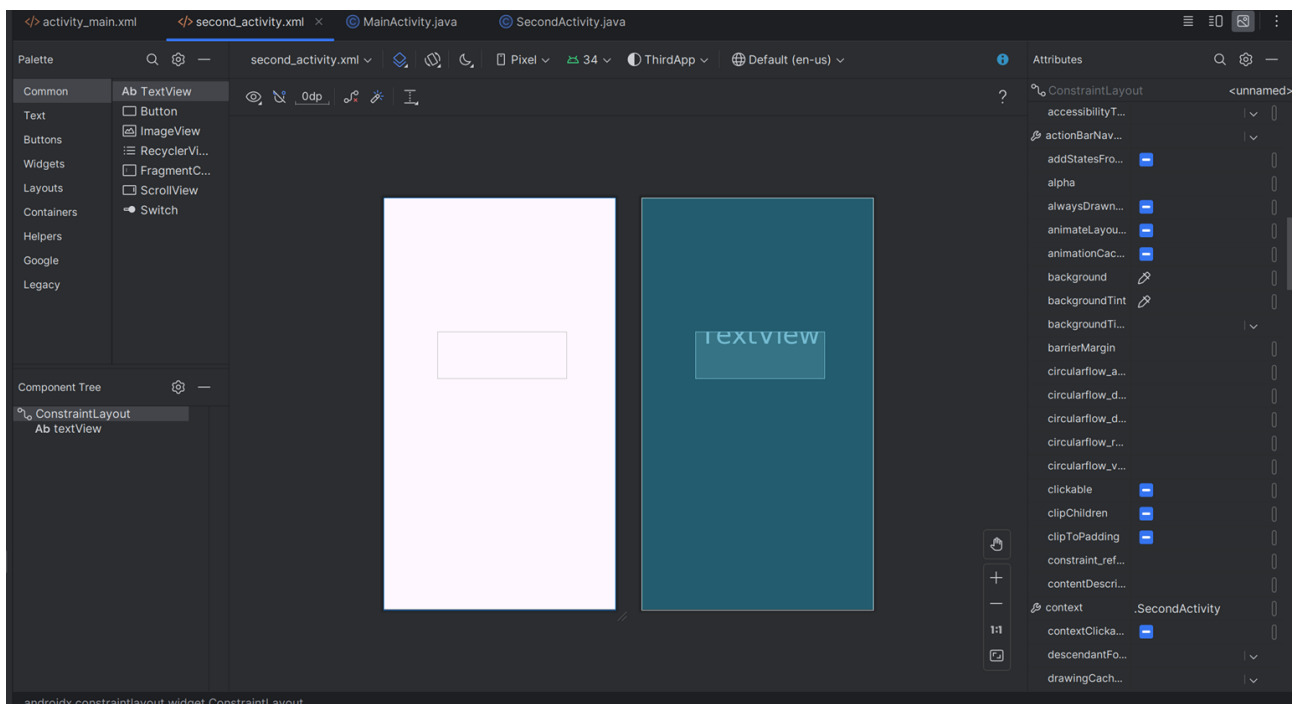
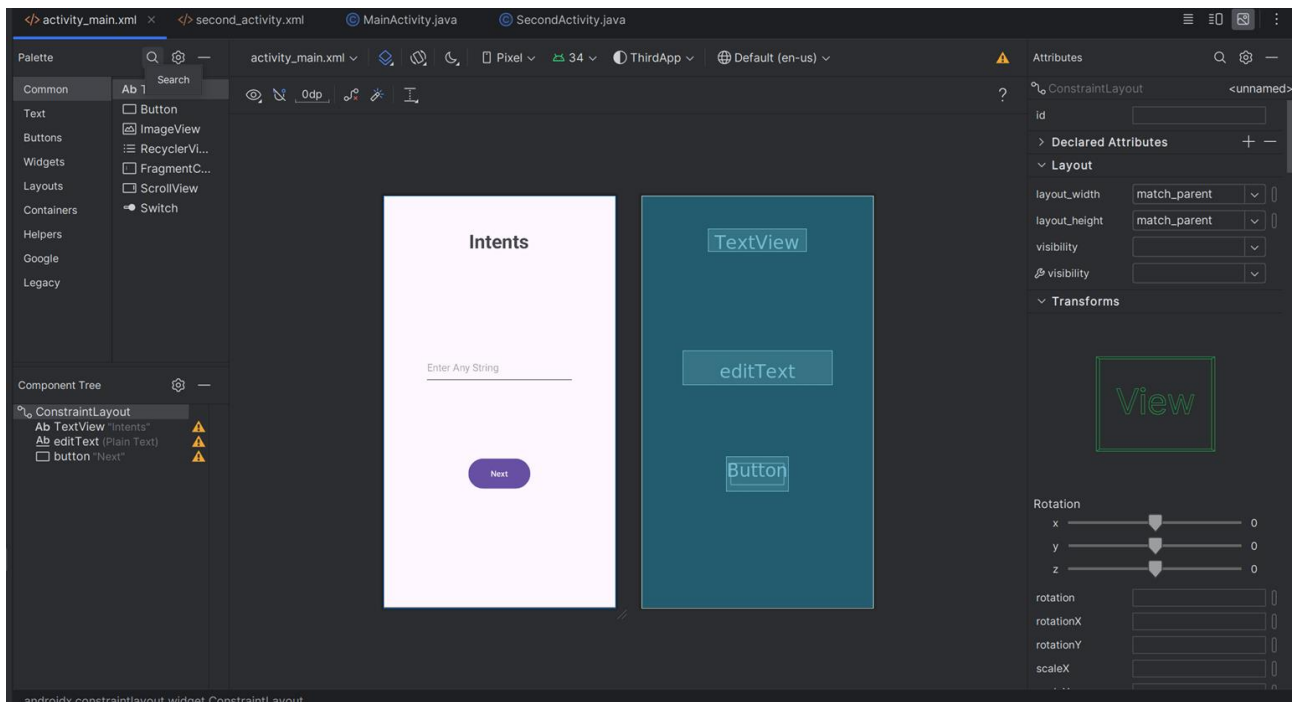
```

new Thread(new Runnable() {
    @Override
    public void run() {
        while(progressStatus < 100){
            progressStatus += 1;
            handler.post(new Runnable() {
                @Override
                public void run() {
                    pg.setProgress(progressStatus);
                    tv.setText(progressStatus + "%");
                }
            });
            try{
                Thread.sleep(800);
            }catch(InterruptedException e){
                e.printStackTrace();
            }
        }
    }
}).start();

bt.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        AlertDialog.Builder builder = new AlertDialog.Builder(MainActivity.this);
        builder.setTitle("Warning!");
        builder.setIcon(R.mipmap.ic_launcher);
        builder.setMessage("Are you sure buddy?");
        builder.setPositiveButton("yes", (dialog, which) -> {
            finish();
        });
        builder.setNegativeButton("no", (dialog, which) -> {
            dialog.cancel();
        });
        builder.setNeutralButton("cancel", (dialog, which) -> {
            dialog.cancel();
        });
        builder.setCancelable(false);
        AlertDialog ad = builder.create();
        ad.show();
    }
});
}
}

```

3. Program Three



MainActivity.java

```
package com.example.thirdapp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    EditText edt;
    Button btn;

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

        edt = findViewById(R.id.editText);
        btn = findViewById(R.id.button);

        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String str = edt.getText().toString();
                Intent i = new Intent(MainActivity.this, SecondActivity.class);
                i.putExtra("message", str);
                startActivity(i);
            }
        });
    }
}

```

SecondActivity.java

```

package com.example.thirdapp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class SecondActivity extends AppCompatActivity {

    TextView tv;

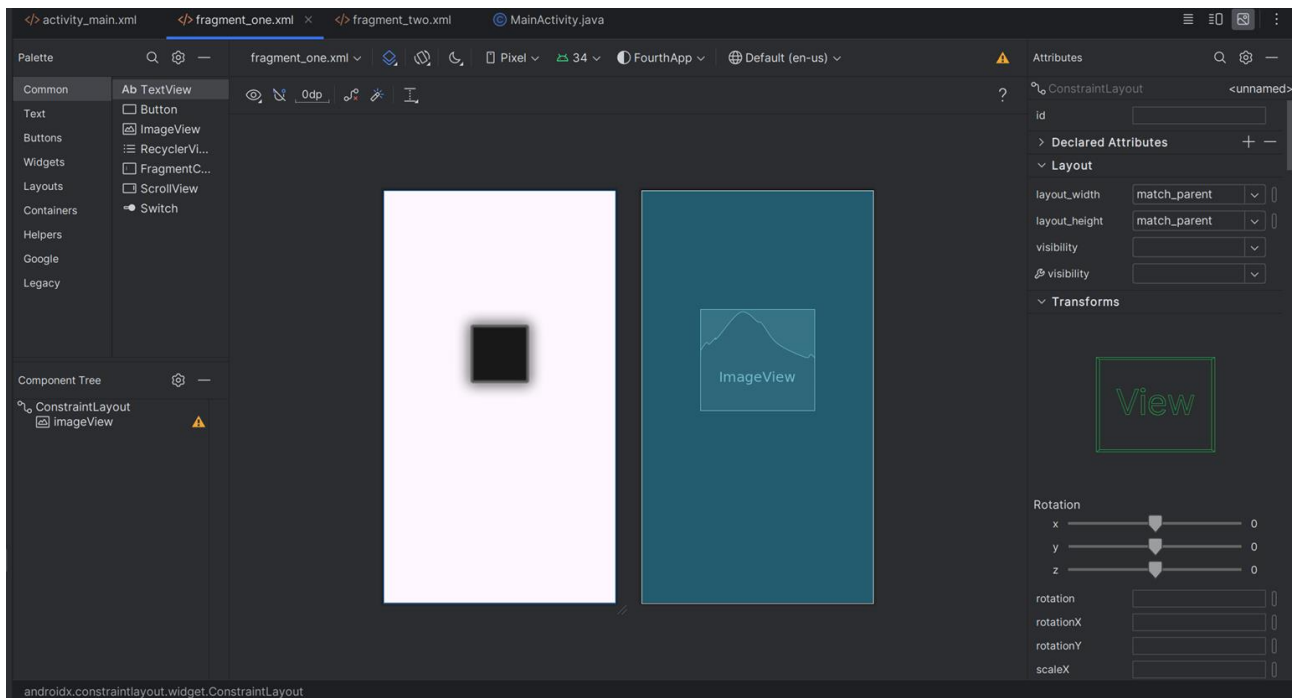
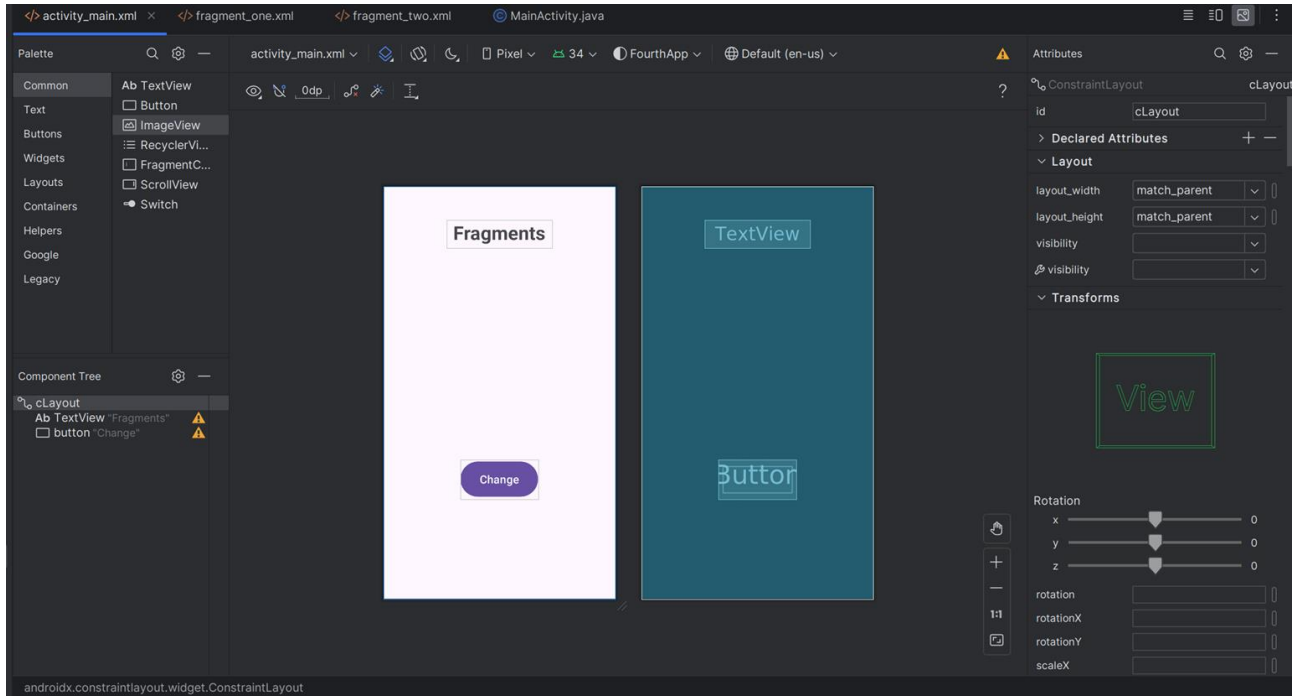
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.second_activity);

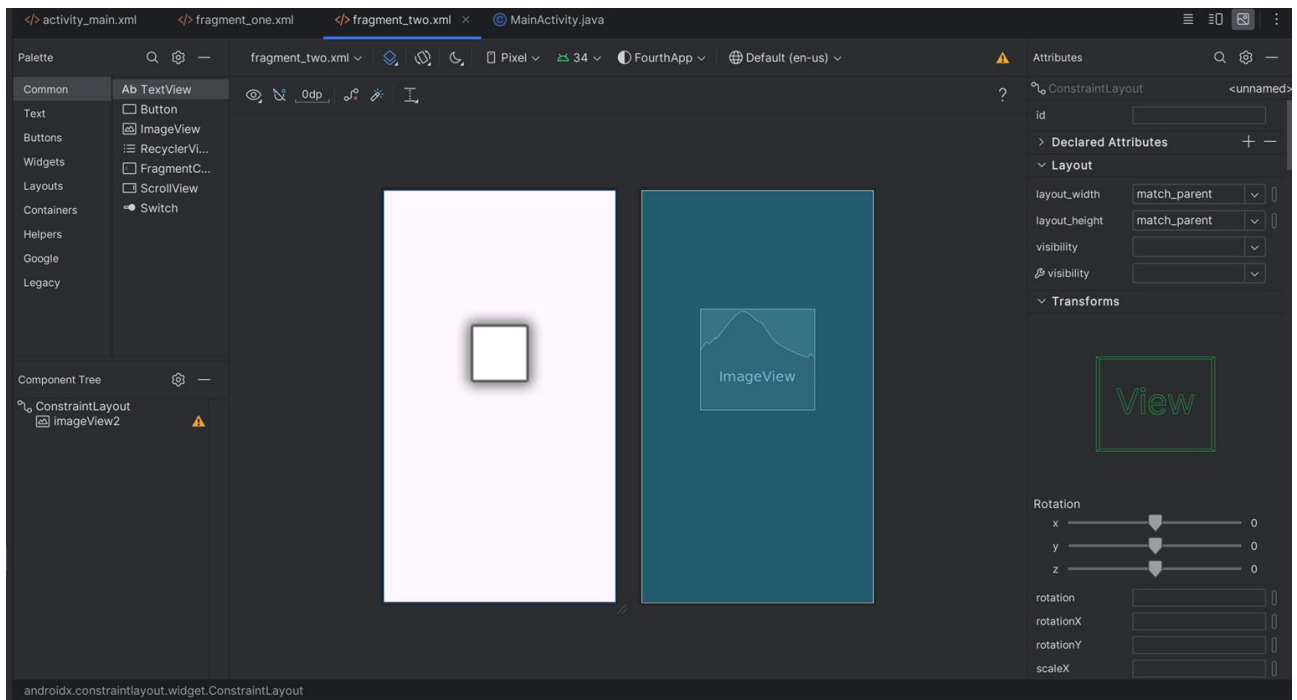
        tv = findViewById(R.id.textView);
        Intent i = getIntent();
        String str = i.getStringExtra("message");
        tv.setText("The String you sent is: " + str);
    }
}

```

```
}  
}
```

4. Program Four





MainActivity.java

```
package com.example.fourthapp;

import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {

    FragmentOne fragmentOne = new FragmentOne();
    FragmentTwo fragmentTwo = new FragmentTwo();

    int switchFragment = 0;

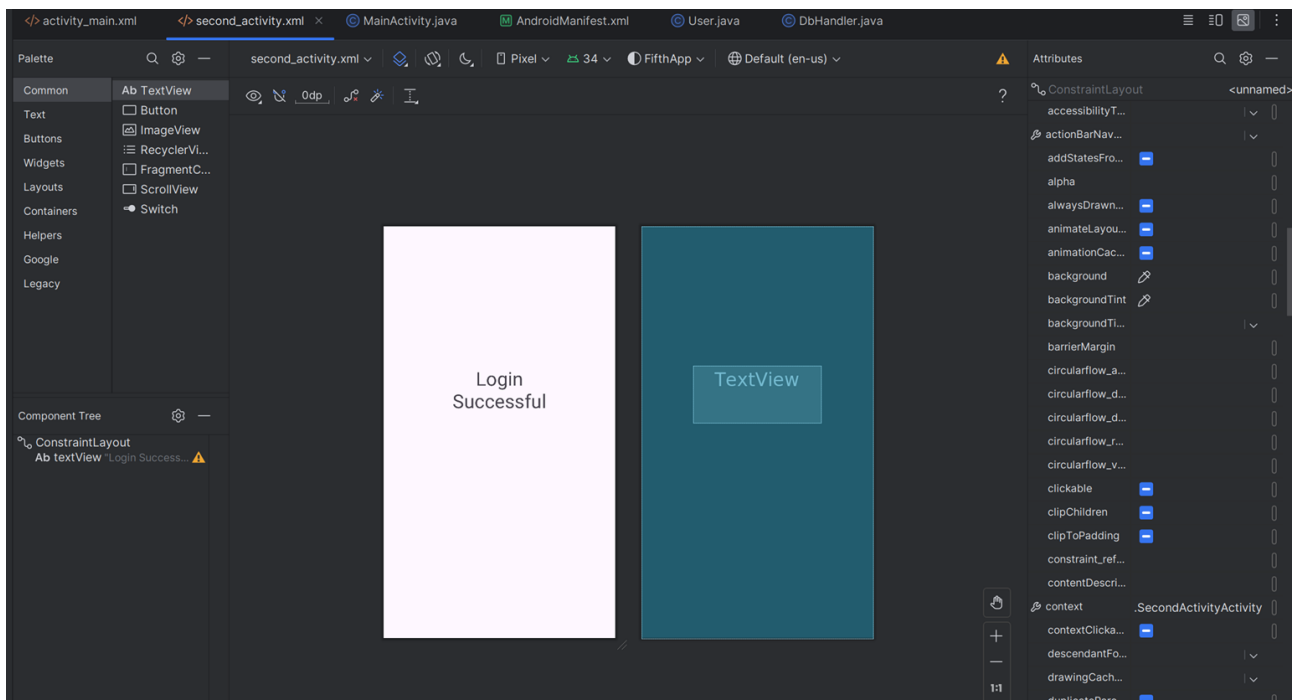
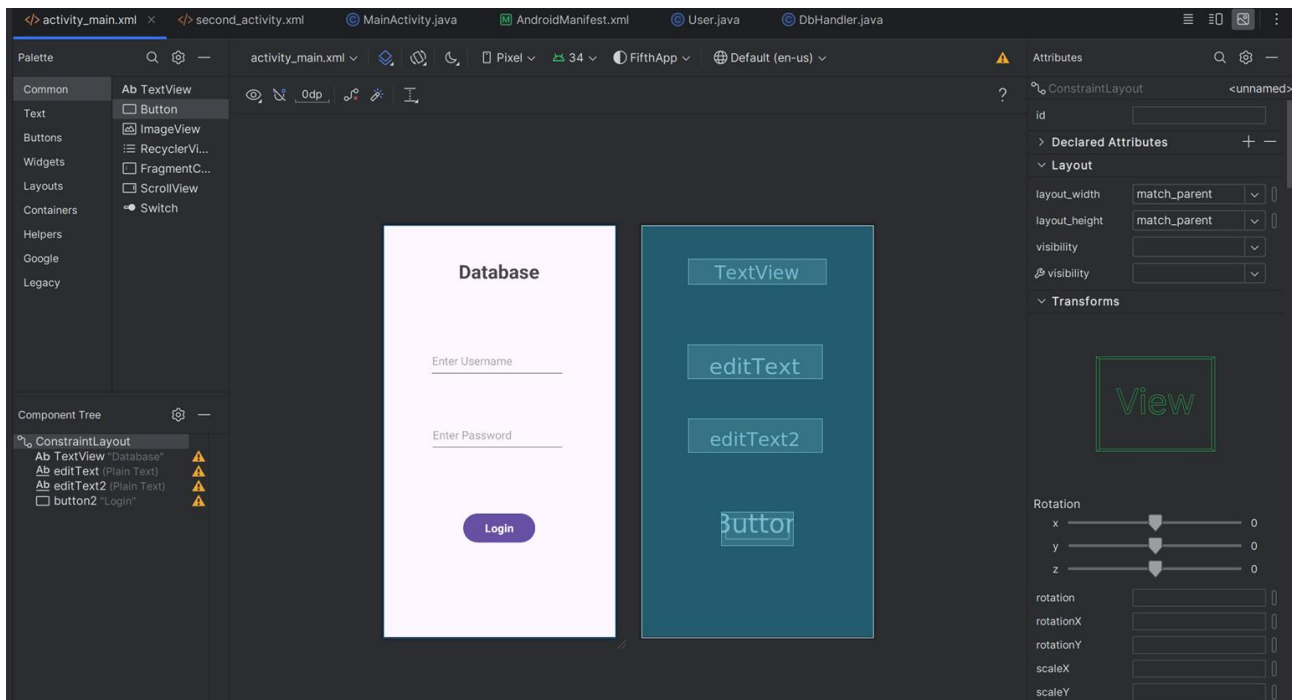
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        FragmentManager fm = getSupportFragmentManager();
        FragmentTransaction ft = fm.beginTransaction();
        ft.add(R.id.cLayout, fragmentOne);
        switchFragment = 1;
        ft.commit();
    }
}
```



```
public void switchNow(View v){
    FragmentManager fm = getSupportFragmentManager();
    FragmentTransaction ft = fm.beginTransaction();
    if(switchFragment == 1){
        ft.replace(R.id.cLayout, fragmentTwo);
        switchFragment = 2;
    }else{
        ft.replace(R.id.cLayout, fragmentOne);
        switchFragment = 1;
    }
    ft.commit();
}
}
```

5. Program Five



MainActivity.java

```
package com.example.fifthapp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
```

```

import com.google.android.material.snackbar.Snackbar;

public class MainActivity extends AppCompatActivity {

    EditText uname, passwd;
    Button sub;
    DbHandler db;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        uname = findViewById(R.id.editText);
        passwd = findViewById(R.id.editText2);
        sub = findViewById(R.id.button2);

        sub.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                String username = uname.getText().toString();
                String password = passwd.getText().toString();
                int id = checkUser(new User(username, password));
                if(id == -1){
                    Snackbar.make(v, "User "+username+" does not exist",
                        Snackbar.LENGTH_LONG).show();
                }else{
                    Snackbar.make(v, "User "+username+" exists", Snackbar.LENGTH_LONG).show();
                    Intent i = new Intent(MainActivity.this, SecondActivity.class);
                    startActivity(i);
                }
            }
        });
        db = new DbHandler(MainActivity.this);
        db.addUser(new User("User1", "Pass1"));
        db.addUser(new User("User2", "Pass2"));
        db.addUser(new User("Pratheek", "Tmp@123"));
        db.addUser(new User("User4", "Pass4"));
    }
    public int checkUser(User user){
        return db.checkUser(user);
    }
}

```

DbHandler.java

```

package com.example.fifthapp;

import android.content.ContentValues;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;

```

```

import android.database.sqlite.SQLiteOpenHelper;

public class DbHandler extends SQLiteOpenHelper {
    private static final int Db_version = 1;
    private static final String Db_name="users", Table_Name="user", User_id="id",
        User_name="name", User_password="password";
    public DbHandler(MainActivity context) {
        super(context,Db_name,null, Db_version);
    }
    @Override
    public void onCreate(SQLiteDatabase db){
        String Create_Table = "CREATE TABLE " + Table_Name + "(" + User_id + " INTEGER
PRIMARY KEY, " + User_name + " TEXT, " + User_password + " TEXT" + ")";
        db.execSQL(Create_Table);
    }
    @Override
    public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion){//
        db.execSQL("DROP TABLE IF EXISTS " + Table_Name);
        onCreate(db);
    }
    public void addUser(User usr) {
        SQLiteDatabase db = this.getWritableDatabase();
        ContentValues cv = new ContentValues();
        cv.put(User_name, usr.getName());
        cv.put(User_password, usr.getPassword());
        db.insert(Table_Name, null, cv);
        db.close();
    }
    public int checkUser(User user) {
        int id = -1;
        SQLiteDatabase db = this.getReadableDatabase();
        Cursor cursor = db.rawQuery("SELECT name FROM user WHERE name=? AND
password=?", new
            String[]{
                user.getName(), user.getPassword()
            });
        if(cursor.getCount() > 0){
            cursor.moveToFirst();
            id=cursor.getInt(0);
            cursor.close();
        }
        return id;
    }
}

```

User.java

```

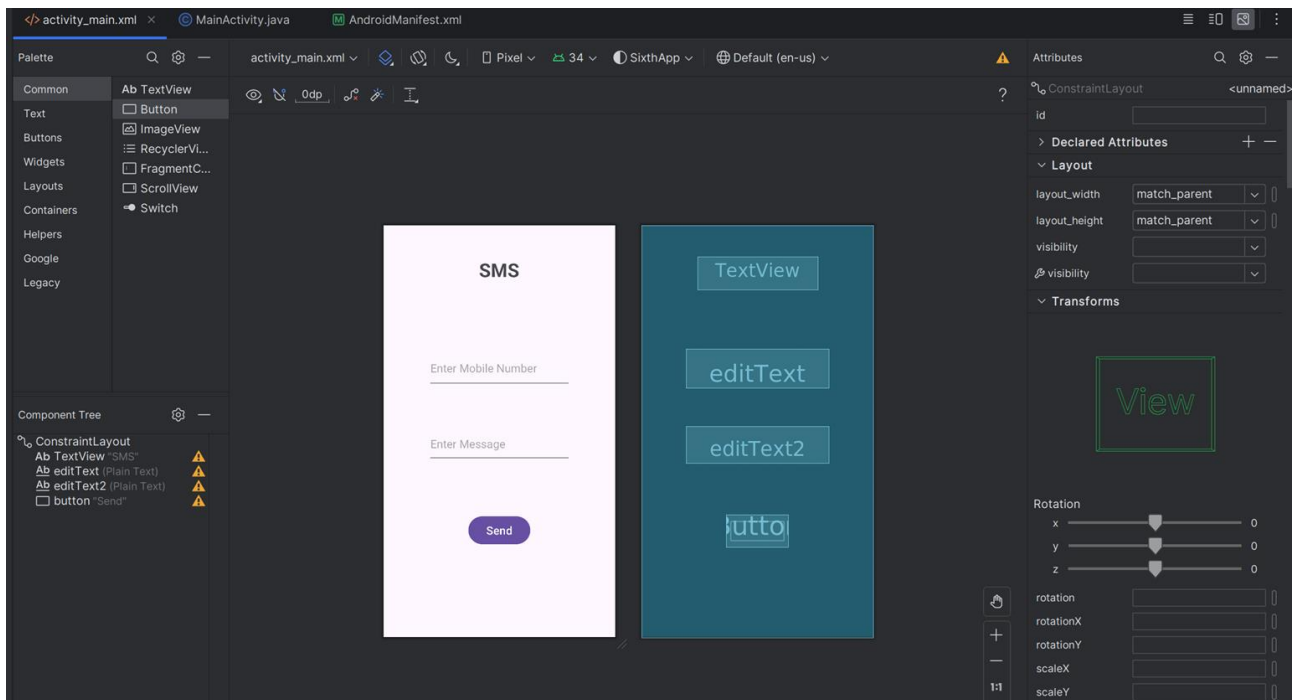
package com.example.fifthapp;

public class User {

```

```
int id;
String name, password;
public User(String name, String password){
    this.name = name;
    this.password = password;
}
public User(int id, String name, String password){
    this.id = id;
    this.name = name;
    this.password = password;
}
public String getName() {return name;
}
public void setName(String name) {
    this.name = name;
}
public int getId() {
    return id;
}
public void setId(int id) {
    this.id = id;
}
public String getPassword() {
    return password;
}
public void setPassword(String password) {
    this.password = password;
}
}
```

6. Program Six



Manifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <uses-feature
        android:name="android.hardware.telephony"
        android:required="false"/>

    <uses-permission android:name="android.permission.SEND_SMS"/>

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.SixthApp"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

```
</application>

</manifest>
```

MainActivity.java

```
package com.example.sixthapp;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    EditText edt1, edt2;
    Button btn;

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

        edt1 = findViewById(R.id.editText);
        edt2 = findViewById(R.id.editText2);
        btn = findViewById(R.id.button);

        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try{
                    String phone = edt1.getText().toString();
                    String message = edt2.getText().toString();
                    SmsManager smgr = SmsManager.getDefault();
                    smgr.sendTextMessage(phone, null, message, null, null);
                    Toast.makeText(getApplicationContext(), "Message Sent",
Toast.LENGTH_LONG).show();
                }catch (Exception e){
                    Toast.makeText(getApplicationContext(), "Message Not Sent",
Toast.LENGTH_LONG).show();
                }
            }
        });
    }
}
```

7&8. Program Seven and Eight

index.html

```
<!DOCTYPE html>
<html>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<title>Login Page</title>
<style>
  h1,
  p {
    color: "blue";
    font-family: "Comic Sans MS";
  }

  .button {
    background-color: #4CAF50;
    /* Green */
    border: none;
    color: white;
    padding: 15px 32px;
    text-align: center;
    font-family: "Comic Sans MS";
    display: inline-block;
    font-size: 16px;
    margin: 4px 2px;
    cursor: pointer;
    background-color: #008CBA;
    width: 30%;
  }

  input[type=text],
  [type=password] {
    width: 30%;
    padding: 12px 20px;
    margin: 8px 0;
    display: inline-block;
    border: 1px solid #ccc;
    border-radius: 4px;
    box-sizing: border-box;
  }
</style>
<link rel="manifest" href="manifest.json">
<body>
  <form action="/login" method="post">
    <div style="margin-top:150px; text-align: center;">
      <h1>
```



```

        Login</h1><br><br>
        <input type="text" placeholder="Enter Username" name="username" id="username" /><br>
        <input type="password" placeholder="Enter Password" name="password" id="password"
/><br><br>
        <input type="submit" value="Login" class="button" />
    </div>
</form>
<script>
if('serviceWorker' in navigator){
    Window.addEventListener('load', () => {
        navigator.serviceWorker.register('sw.js', {
            scope: "/"
        }).then(register => {
            console.log("Registered", register)
        }).catch(error => {
            console.log("Not registered", error)
        })
    });
}
</script>
<script src="main.js"></script>
</body>
</html>

```

sw.js

```

const cacheName = "site-cache-v1";
const assetsToCache = ["/", "index.html", "error.html"];

```

```

self.addEventListener("install", (event) => {
    event.waitUntil(
        caches.open(cacheName).then((cache) => {
            return cache.addAll(assetsToCache);
        })
    );
});

```

```

self.addEventListener("activate", (event) => {
    event.waitUntil(
        caches.open(cacheName).then((cache) => {
            return cache.addAll(assetsToCache);
        })
    );
});

```

```

self.addEventListener("fetch", (event) => {
    event.respondWith(
        caches.match(event.request).then((cacheResponse) => {
            return cacheResponse || fetch(event.request);
        })
    );
});

```

```
});
```

manifest.json(additional for 8th)

```
{
  "name": "login_page",
  "short_name": "login",
  "description": "a simple app",
  "id": "./",
  "start_url": "./",
  "scope": ".",
  "display": "standalone",
  "theme_color": "#008BAC",
  "background_color": "#008BAC",
  "orientation": "portrait",
  "display_override": ["window-controls-overlay"],
  "protocol_handlers": [
    {
      "protocol": "web+tea",
      "url": "/tea?type=%s"
    },
    {
      "protocol": "web+coffee",
      "url": "/coffee?type=%s"
    }
  ],
  "icons": [
    {
      "src": "/images/icons/icon-72x72.png",
      "sizes": "72x72",
      "type": "image/png",
      "purpose": "any"
    },
    {
      "src": "/images/icons/icon-96x96.png",
      "sizes": "96x96",
      "type": "image/png",
      "purpose": "any"
    },
    {
      "src": "/images/icons/icon-128x128.png",
      "sizes": "128x128",
      "type": "image/png",
      "purpose": "any"
    },
    {
      "src": "/images/icons/icon-144x144.png",
      "sizes": "144x144",
      "type": "image/png",
      "purpose": "any"
    }
  ]
}
```

```

    },
    {
      "src":"/images/icons/icon-152x152.png",
      "sizes":"152x152",
      "type":"image/png",
      "purpose":"any"
    },
    {
      "src":"/images/icons/icon-192x192.png",
      "sizes":"192x192",
      "type":"image/png",
      "purpose":"any"
    },
    {
      "src":"/images/icons/icon-384x384.png",
      "sizes":"384x384",
      "type":"image/png",
      "purpose":"any"
    },
    {
      "src":"/images/icons/icon-512x512.png",
      "sizes":"512x512",
      "type":"image/png",
      "purpose":"any"
    }
  ],
  "screenshots":[
    {
      "src":"/images/screenshot1.png",
      "sizes":"1919x1052",
      "type":"/image/png",
      "form_factor":"narrow",
      "label":"PWAs"
    },
    {
      "src":"/images/screenshot2.jpg",
      "sizes":"1919x1052",
      "type":"/image/jpg",
      "form_factor":"wide",
      "label":"PWAs"
    }
  ],
  "splash_page":"null"
}

```

9. Program Nine

index.html and other files are as same as 7 and 8. New paths should exist in **server.js**

Additional Files

gitpro.html

```
<!DOCTYPE html>

<html>

<head>

</head>

<link rel="manifest" href="manifest.json">


<body>
  <h1>Github Profile</h1>
  <input type="text" id="text_input">
  <input type="button" onclick="gitdata()" value="get profile">
  <div id='git_image'>
    <img src="" alt="profile image" id="image">
    <p id='para'></p>
  </div>
</body>


<!-- Github API - https://api.github.com/users -->
<script>
  function gitdata()
  {
    var url = 'https://api.github.com/users/'+document.getElementById('text_input').value;

    fetch(url)
    .then(response => response.json())
    .then(data =>{
      console.log(data.avatar_url)
      var im = document.getElementById("image");
      im.setAttribute("src",data.avatar_url);

      var gi = document.getElementById('para');
      gi.innerHTML=JSON.stringify(data);

    })
  }
```

```

        .catch(function(reponse){
            return response.status;
            console.log(response.status);
        });
    }
</script>
</html>

```

sw.js

```

(function ()
{

    self.addEventListener('install', event =>{
        console.log('service worker is installing');

        event.waitUntil(
            caches
                .open('PWD_app')
                .then(cache =>
                    caches.addAll([
                        '/git'
                    ])
                )
            )
        self.skipWaiting();
    })

    self.addEventListener('activate',event=>{
        event.waitUntil(caches.delete('PWD_app'));
        console.log('service worker is activating');
    })

    self.addEventListener('fetch', event=>{
        console.log('fetching', event.request.url);
        event.respondWith(

```

```

    caches.match(event.request).then(async (response)=>
    {
        if(response){
            return response
        }

        let data = fetch(event.request);
        let data_clone = (await data).clone();
        event.waitUntil(caches.open('PWD_app').then(cache =>
cache.put(event.request,data_clone)));
        return data

    })
    )
    })
}
)

```

10 Program Ten

All files are as same as 7 and 8. New path for stock.html should exist in **server.js**

Additional Files

stock.html (A stock.json should also exist locally to access the json data)

```

<!DOCTYPE html>
<html>
<head>
</head>

```

```

<body>
<center>
<h1>Real Time Fetch with Simple Balance Sheet Statement</h1>
<table id='tbl' border=1>
<tr>
<th style="width: 120px;"> date </th>
<th style="width: 120px;"> netReceivables </th>
<th style="width: 120px;"> cashAndCashEquivalents </th>
<th style="width: 120px;"> taxAssets </th>
<th style="width: 120px;"> otherCurrentLiabilities </th>
<th style="width: 120px;"> commonStock </th>
<th style="width: 120px;"> totalInvestments </th>
</tr>
</table>
</center>

</body>
<!-- https://financialmodelingprep.com/api/v3/balance-sheet-
statement/AAPL?period=annual&apikey=RsIEVBRQCqRMloHRNgFZKgkM1UhHPCKM" -->
<script>
  window.addEventListener('DOMContentLoaded',(event) => {
    let source = ["/stock.json"]
    let index = 0
    while(index < source.length){
      console.log("fetching from "+ source[index]);
      fetch(source[index])
        .then(response => response.json())
        .then(data => {
          console.log(data);
          let dat = JSON.stringify(data);
          dat1 = data;
          console.log(dat1);
          let bod = document.getElementById("body");
          // var tb = document.getElementById("tb1");
          var tb = document.getElementById("tbl");

```

```
for(let i=0; i<dat1.length;i++)
{
    var tr = document.createElement('tr');
    var td = document.createElement('td');

    td.innerHTML = dat1[i]["date"];
    tr.appendChild(td);
    tb.appendChild(tr);

    var td = document.createElement('td');

    td.innerHTML = dat1[i]["netReceivables"];
    tr.appendChild(td);
    tb.appendChild(tr);

    var td = document.createElement('td');

    td.innerHTML = dat1[i]["cashAndCashEquivalents"];
    tr.appendChild(td);
    tb.appendChild(tr);

    var td = document.createElement('td');

    td.innerHTML = dat1[i]["taxAssets"];
    tr.appendChild(td);
    tb.appendChild(tr);

    var td = document.createElement('td');

    td.innerHTML = dat1[i]["otherCurrentLiabilities"];
    tr.appendChild(td);
    tb.appendChild(tr);
```



```

        var td = document.createElement('td');

        td.innerHTML = dat1[i]["commonStock"];
        tr.appendChild(td);
        tb.appendChild(tr);

        var td = document.createElement('td');

        td.innerHTML = dat1[i]["totalInvestments"];
        tr.appendChild(td);
        tb.appendChild(tr);
    }
})
.catch(err => console.log('err', err));
index+=1;
}
});
</script>
</html>

```

sw.js

```

(function(){
    self.addEventListener('install',event =>{
        console.log('service worker installing');
        self.skipWaiting();
    })
    self.addEventListener('activate',event=>{
        console.log('service worker activating...')
    })
    self.addEventListener('fetch',event=>{
        console.log('fetching',event.request.url);
    })

```

})

})