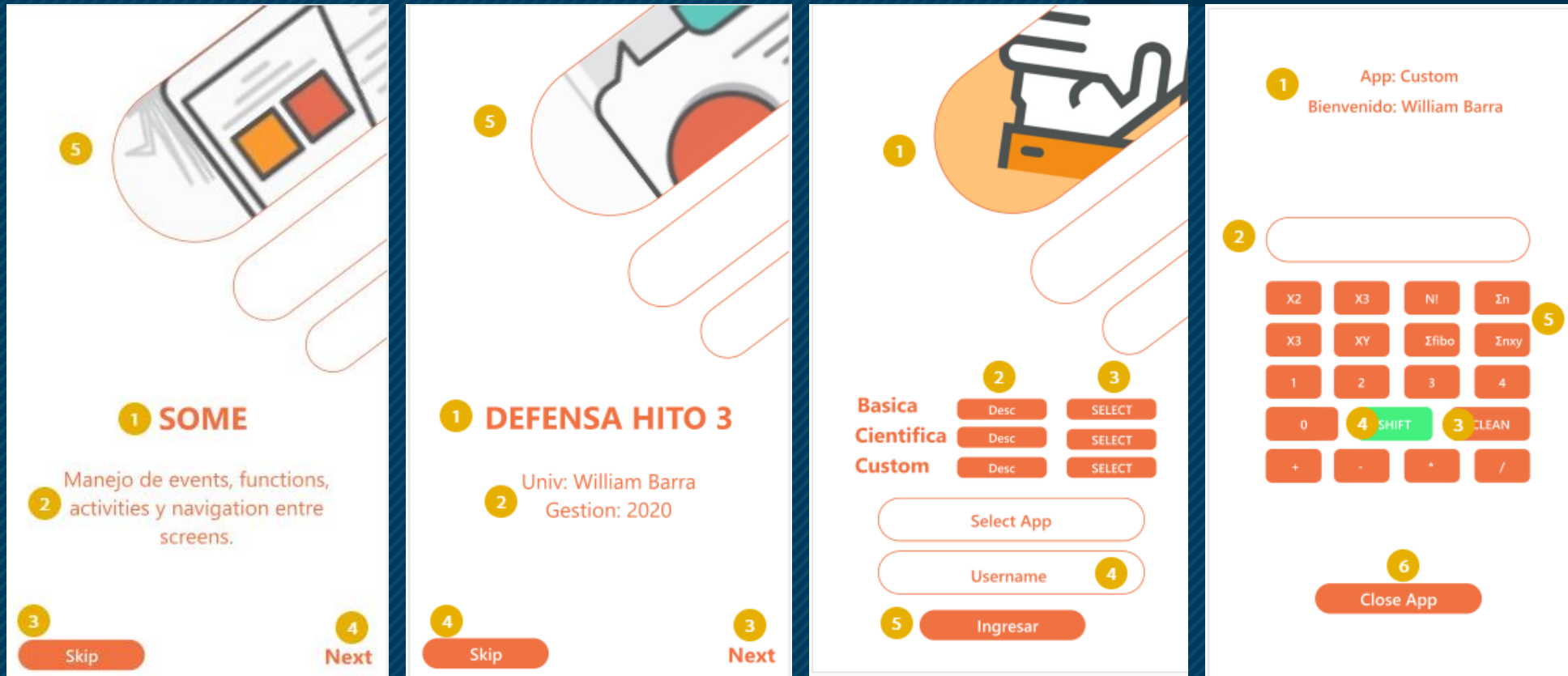


Defensa Hito 3 - Manejo de events, functions, activities y navigation entre screens.

Estudiante: Jhelson Carrillo Ortega

Manejo de events, functions, activities y navigation entre screens.

Para dar solución a la presente defensa debe crear una aplicación para la plataforma Android de acuerdo al siguiente diseño:



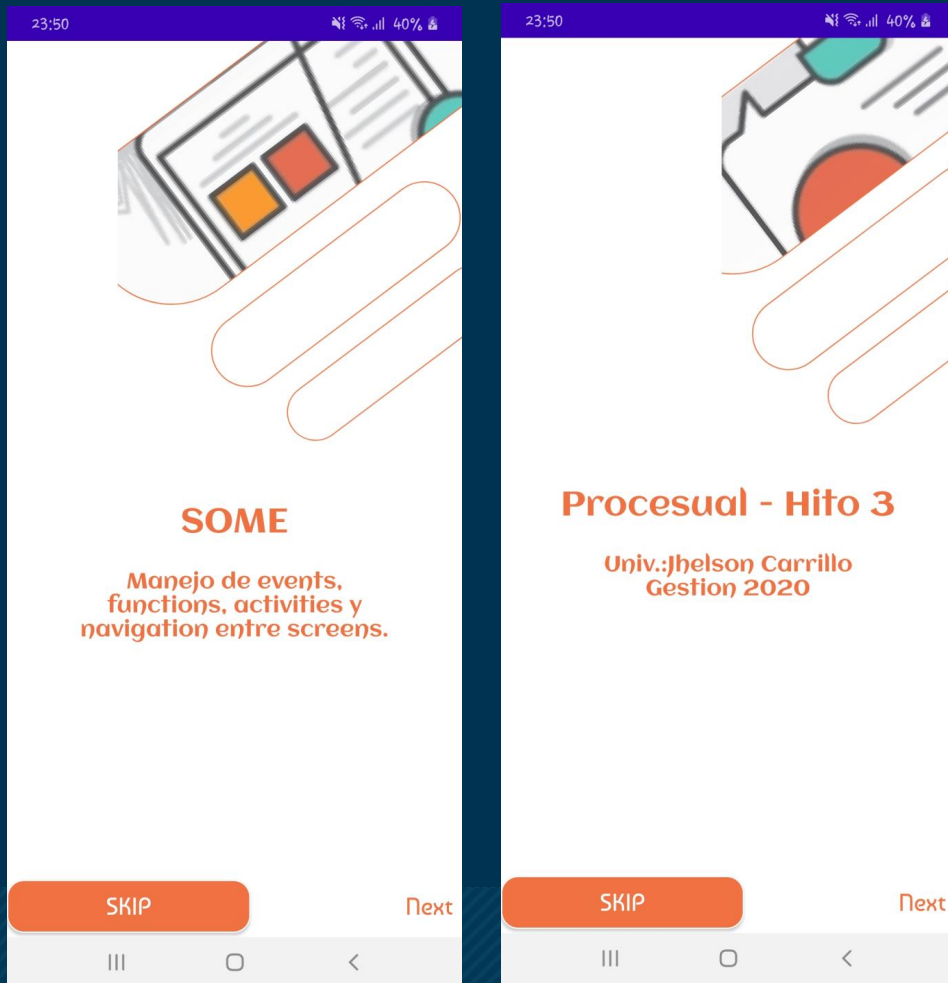
1ra Pregunta

2ra Pregunta

3ra Pregunta

Pregunta 1:

Crear una APP Android de nombre (DefensaHito3), generar las primeras ACTIVITIES(Pantalla 1 y 2) de la aplicacion. Debe estar presente diseño y funcionalidad.



- Se logró generar los primeros 2 activities (pantalla 1 y 2), para esto se usaron estilos, strings para que la aplicación tenga un diseño amigable al usuario.
- A continuación en las siguientes diapositivas se mostrará todo el código para llegar a desarrollar estas dos primeras vistas.

Código .java del MainActivity:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega;

import androidx.appcompat.app.AppCompatActivity;
import androidx.viewpager.widget.ViewPager;

import android.os.Bundle;

import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Adapters.OnboardingAdapter
;

public class MainActivity extends AppCompatActivity
{
    private ViewPager viewPagerContainer;
    @Override
    protected void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        //initializeComponents
        _initializeComponents();

        //initializeAdapter
        _initializeFragmentAdapter();
    }

    public void _initializeComponents()
    {
        viewPagerContainer = findViewById(R.id.viewPagerContainer);
    }

    public void _initializeFragmentAdapter()
    {
        OnboardingAdapter adapter = new
        OnboardingAdapter(getSupportFragmentManager());
        viewPagerContainer.setAdapter(adapter);
    }
}
```

Código .xml del activity_main:

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

```
<LinearLayout  
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=".MainActivity">
```

```
    <androidx.viewpager.widget.ViewPager
```

```
        android:id="@+id/viewPagerContainer"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="match_parent">
```

```
    </androidx.viewpager.widget.ViewPager>
```

```
</LinearLayout>
```

Código .xml de los string necesarios:

```
<resources>

    <string name="app_name">Procesual Hito 3</string>

    <!-- TODO: Remove or change this placeholder text -->
    <string name="hello_blank_fragment">Hello blank fragment</string>
    <string name="title1">SOME</string>
    <string name="title2">Procesual - Hito 3</string>
    <string name="desc1">Manejo de events, functions, activities y
navigation entre screens.</string>
    <string name="desc2">Univ.:Jhelson Carrillo Gestion 2020</string>
    <string name="next">Next</string>
    <string name="skip">Skip</string>
    <string name="username">Username</string>
    <string name="app">Select App</string>
    <string name="login">Ingresar</string>
    <string name="tip1">Basica</string>
    <string name="tip2">Cientifica</string>
    <string name="tip3">Custom</string>

    <string name="mens">Desc</string>
    <string name="select">Select</string>
</resources>
```

Código .xml para el estilo de los botones:

```
<?xml version="1.0" encoding="utf-8"?>
<shape xmlns:android="http://schemas.android.com/apk/res/android">
    <solid android:color="@color/colorNaranja"/>
    <corners android:radius="15dp"/>
    <stroke android:width="1dp" android:color="@color/colorWhite"/>
    <padding
        android:bottom="10sp"
        android:left="10sp"
        android:right="10sp"
        android:top="10sp">
    </padding>
</shape>
```

Código .xml para el estilo de las cajas de texto:

```
<?xml version="1.0" encoding="utf-8"?>  
<shape xmlns:android="http://schemas.android.com/apk/res/android">  
    <solid android:color="@color/colorWhite"></solid>  
    <corners android:radius="15dp"></corners>  
    <stroke android:width="2dp"  
    android:color="@color/colorNaranja"></stroke>  
    <padding android:top="12dp" android:bottom="12dp"  
    android:left="12dp" android:right="12dp"></padding>  
  
</shape>
```


Código .java del OnboardingAdapter:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Adapters;

import android.util.Log;

import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentPagerAdapter;

import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding.LoginFragment;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding.PersonFragment;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding.WelcomeFragment;

public class OnboardingAdapter extends FragmentPagerAdapter
{
    public OnboardingAdapter(FragmentManager fm)
    {
        super(fm);
    }

    @NonNull
    @Override
```

```
public Fragment getItem(int position)
{
    switch (position)
    {
        case 0:
            return new WelcomeFragment();
        case 1:
            return new PersonFragment();
        case 2:
            return new LoginFragment();
        default:
            return null;
    }
}

@Override
public int getCount()
{
    return 3;
}
}
```

Código .java del WelcomeFragment:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding;
```

```
import android.os.Bundle;
```

```
import androidx.fragment.app.Fragment;
```

```
import androidx.viewpager.widget.ViewPager;
```

```
import android.view.LayoutInflater;
```

```
import android.view.View;
```

```
import android.view.ViewGroup;
```

```
import android.widget.Button;
```

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

```
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.R;
```

```
/**  
 * A simple {@link Fragment} subclass.  
 */  
public class WelcomeFragment extends Fragment  
{
```

```
    private TextView textNext;
```

```
    private ViewPager viewPager;
```

```
    private Button btnskip;
```

```
    private View view;
```

```
    public WelcomeFragment()  
{
```

```
        // Required empty public constructor  
    }
```

```
    @Override
```

```
    public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle  
savedInstanceState)
```

```
    {
```

```
        //initialize viewpager from main activity
```

```
        initializeInflater(inflater, container);
```

```
        //initialize components
```

```
        initializeComponents();
```

```
        //add click event to text Next
```

```
        eventClickNext();
```

```
        //return
```

```
        return view;
```

```
    }
```

Continuación del código .java del WelcomeFragment:

```
public void initializeInflater(LayoutInflater inflater, ViewGroup container)
{
    view = inflater.inflate(R.layout.fragment_welcome, container, false);
}

public void initializeComponents()
{
    viewPager = getActivity().findViewById(R.id.viewPagerContainer);
    textNext = view.findViewById(R.id.textNext);
    btnskip = view.findViewById(R.id.btnskip);
}

public void eventClickNext()
{
    textNext.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View v)
        {
            viewPager.setCurrentItem(2);
        }
    });
}

viewPager.setCurrentItem(1);
});
btnskip.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        viewPager.setCurrentItem(2);
    }
});
});
}
```

Código .xml del fragment_welcome:

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

```
<LinearLayout 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=".Onboarding.WelcomeFragment"
```

```
    android:orientation="vertical"
```

```
    android:background="@color/colorWhite">
```

```
    <ImageView
```

```
        android:id="@+id/imgWelcome"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:scaleType="centerCrop"
```

```
        android:layout_marginLeft="100dp"
```

```
        android:layout_marginTop="-110dp"
```

```
        android:src="@drawable/img1" />
```

```
    <TextView
```

```
        android:id="@+id/textTitle1"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="40dp"
```

```
        android:fontFamily="@font/aclonica"
```

```
        android:gravity="center"
```

```
        android:text="@string/title1"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:textSize="28sp" />
```

```
    <TextView
```

```
        android:id="@+id/textDesc1"
```

```
        android:layout_width="300dp"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="20dp"
```

```
        android:text="@string/desc1"
```

```
        android:textSize="18sp"
```

```
        android:layout_gravity="center"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:gravity="center"
```

```
        android:fontFamily="@font/aclonica"/>
```

Continuación del código .xml del fragment_welcome:

```
<LinearLayout
```

```
    android:id="@+id/layoutNext"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

```
    android:orientation="horizontal">
```

```
    <Button
```

```
        android:id="@+id/btnskip"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="bottom|end"
```

```
        android:layout_marginEnd="8dp"
```

```
        android:layout_marginBottom="2dp"
```

```
        android:layout_weight="1"
```

```
        android:clickable="true"
```

```
        android:focusable="true"
```

```
        android:background="@drawable/styles_btn"
```

```
        android:fontFamily="@font/baumans"
```

```
        android:text="@string/skip"
```

```
        android:textColor="@color/colorWhite"
```

```
        android:textSize="20sp" />
```

```
    <TextView
```

```
        android:id="@+id/textNext"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="bottom|end"
```

```
        android:layout_marginEnd="8dp"
```

```
        android:layout_marginBottom="2dp"
```

```
        android:layout_weight="1"
```

```
        android:clickable="true"
```

```
        android:focusable="true"
```

```
        android:fontFamily="@font/baumans"
```

```
        android:gravity="bottom|end"
```

```
        android:text="@string/next"
```

```
        android:textColor="@color/colorNaranja"
```

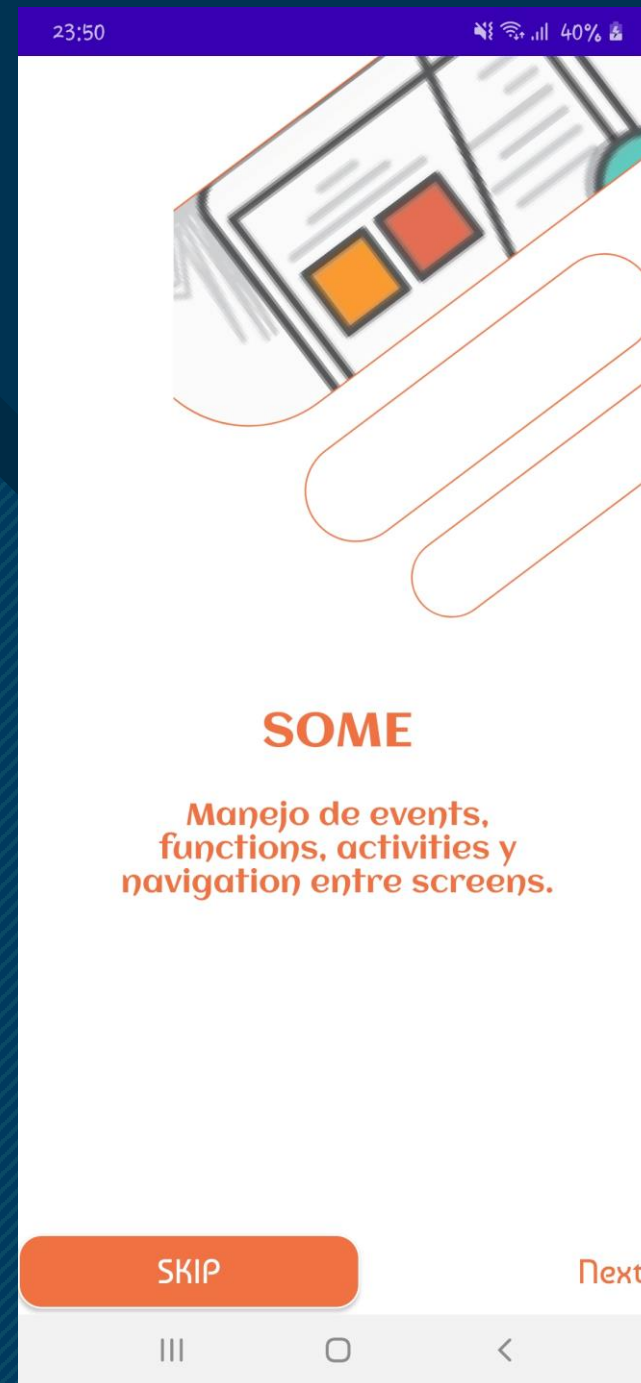
```
        android:textSize="20sp" />
```

```
    </LinearLayout>
```

```
</LinearLayout>
```



Hasta este punto se tiene el diseño de la primera vista de la aplicación:



Código .java de PersonFragment:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding;
```

```
import android.os.Bundle;
```

```
import androidx.fragment.app.Fragment;
```

```
import androidx.viewpager.widget.ViewPager;
```

```
import android.view.LayoutInflater;
```

```
import android.view.View;
```

```
import android.view.ViewGroup;
```

```
import android.widget.Button;
```

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

```
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.R;
```

```
/**
```

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

```
 */
```

```
public class PersonFragment extends Fragment
```

```
{
```

```
    private TextView textNext;
```

```
    private ViewPager viewPager;
```

```
    private Button btSkip;
```

```
    private View view;
```

```
    public PersonFragment()
```

```
{
```

```
    // Required empty public constructor
```

```
}
```

```
    @Override
```

```
    public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState)
```

```
{
```

```
    //initialize viewPager from main activity
```

```
    initializeInflater(inflater, container);
```

```
    //initialize components
```

```
    initializeComponents();
```

```
    //add click event to text Next
```

```
    eventClickNext();
```

```
    //return
```

```
    return view;
```

```
}
```

Continuación del código .java de PersonFragment:

```
public void initializeInflater(LayoutInflater inflater, ViewGroup container)
{
    view = inflater.inflate(R.layout.fragment_person, container, false);
}

public void initializeComponents()
{
    viewPager = getActivity().findViewById(R.id.viewPagerContainer);
    textNext = view.findViewById(R.id.textNext);
    btskip = view.findViewById(R.id.btskip);
}

public void eventClickNext()
{
    textNext.setOnClickListener(new View.OnClickListener()
    {
        @Override
        public void onClick(View v)
        {
            viewPager.setCurrentItem(2);
        }
    });
}

    viewPager.setCurrentItem(2);
}
});
btskip.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        viewPager.setCurrentItem(2);
    }
});
}
```


Código .xml del fragment_person:

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

```
<LinearLayout 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=".Onboarding.WelcomeFragment"
```

```
    android:orientation="vertical"
```

```
    android:background="@color/colorWhite">
```

```
    <ImageView
```

```
        android:id="@+id/imgWelcome"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:scaleType="centerCrop"
```

```
        android:layout_marginLeft="200dp"
```

```
        android:layout_marginTop="-110dp"
```

```
        android:src="@drawable/img2" />
```

```
    <TextView
```

```
        android:id="@+id/textTitle1"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="40dp"
```

```
        android:fontFamily="@font/aclonica"
```

```
        android:gravity="center"
```

```
        android:text="@string/title2"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:textSize="28sp" />
```

```
    <TextView
```

```
        android:id="@+id/textDesc1"
```

```
        android:layout_width="250dp"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="20dp"
```

```
        android:text="@string/desc2"
```

```
        android:textSize="18sp"
```

```
        android:layout_gravity="center"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:gravity="center"
```

```
        android:fontFamily="@font/aclonica"/>
```

Continuación del código .xml del fragment_person:

```
<LinearLayout
```

```
    android:id="@+id/layoutNext"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="match_parent"
```

```
    android:orientation="horizontal">
```

```
    <Button
```

```
        android:id="@+id/btnskip"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="bottom|end"
```

```
        android:layout_marginEnd="8dp"
```

```
        android:layout_marginBottom="2dp"
```

```
        android:layout_weight="1"
```

```
        android:clickable="true"
```

```
        android:focusable="true"
```

```
        android:background="@drawable/styles_btn"
```

```
        android:fontFamily="@font/baumans"
```

```
        android:text="@string/skip"
```

```
        android:textColor="@color/colorWhite"
```

```
        android:textSize="20sp" />
```

```
    <TextView
```

```
        android:id="@+id/textNext"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_gravity="bottom|end"
```

```
        android:layout_marginEnd="8dp"
```

```
        android:layout_marginBottom="2dp"
```

```
        android:layout_weight="1"
```

```
        android:clickable="true"
```

```
        android:focusable="true"
```

```
        android:fontFamily="@font/baumans"
```

```
        android:gravity="bottom|end"
```

```
        android:text="@string/next"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:textSize="20sp" />
```

```
    </LinearLayout>
```

```
</LinearLayout>
```

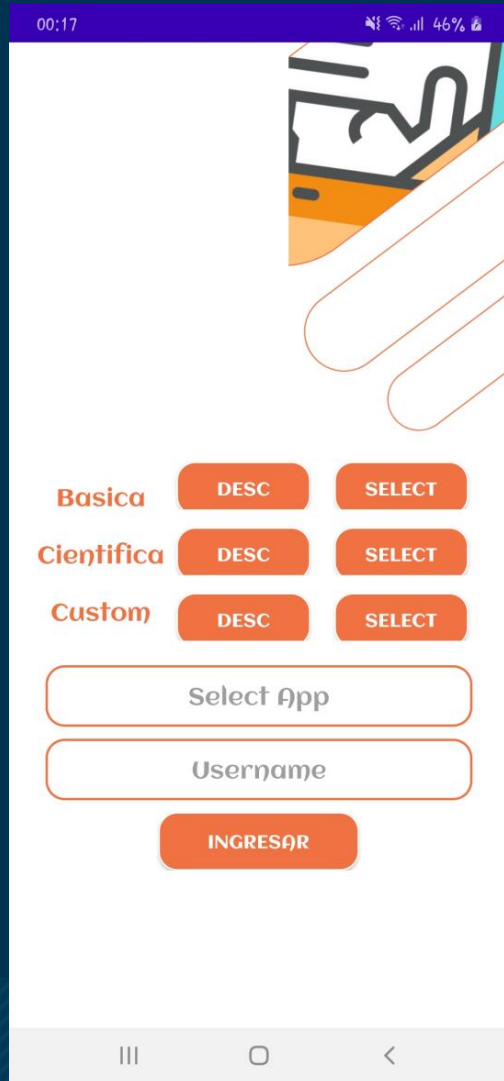


Hasta este punto se tiene el diseño de la primera y segunda vista de la aplicación con su respectiva funcionalidad:



Pregunta 2:

Generar la ACTIVITY de acceso a la aplicacion. Debe estar presente diseño y funcionalidad.



- Se logró desarrollar todo el código y diseño de acuerdo a lo solicitado.
- A continuación en las siguientes diapositivas se mostrará todo el código para llegar a desarrollar estas la vista de login que nos llevara a la calculadora seleccionada.

Código .java de LoginFragment:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega.Onboarding;
```

```
import android.content.Intent;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import androidx.viewpager.widget.ViewPager;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.App.CalcBasica;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.App.CalcCientifica;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.App.CalcCustom;
import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.R;

/**
 * A simple {@link Fragment} subclass.
 */
public class LoginFragment extends Fragment
{
    private ViewPager viewPager;
```

```
private View view;
private Button btmensBasic, btmensCient, btmensCust;
private Button btselecBasic, btselectCient, btselectCust;
private Button btIngresar;
private EditText etUsername, etType;

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

@Override
public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState)
{
    //initialize viewpager from main activity
    initializeInflater(inflater, container);
    //initialize components
    initializeComponents();
    //add click event to text Next and prev text
    eventClickAction();
    //return
    return view;
}
```

Continuación del código .java de LoginFragment:

```
public void initializeInflater(LayoutInflater inflater, ViewGroup container)
```

```
{  
    view = inflater.inflate(R.layout.fragment_login, container, false);  
}
```

```
public void initializeComponents()
```

```
{  
    viewPager = getActivity().findViewById(R.id.viewPagerContainer);
```

```
    btMensBasic = view.findViewById(R.id.btMensBasic);  
    btMensCient = view.findViewById(R.id.btMensCientif);  
    btMensCust = view.findViewById(R.id.btMensCustom);
```

```
    btselecBasic = view.findViewById(R.id.btSelectBasic);  
    btselectCient = view.findViewById(R.id.btSelectCient);  
    btselectCust = view.findViewById(R.id.btSelectCust);
```

```
    etType = view.findViewById(R.id.etType);
```

```
    etUsername = view.findViewById(R.id.etUsername);
```

```
    btIngresar = view.findViewById(R.id.btLogin);
```

```
}
```

```
public void eventClickAction()
```

```
{
```

```
    btMensBasic.setOnClickListener(new View.OnClickListener() {
```

```
        @Override
```

```
        public void onClick(View v)
```

```
        {
```

```
            Toast.makeText(getActivity(), "Calculadora con operaciones  
simples basica", Toast.LENGTH_SHORT).show();
```

```
        }
```

```
    });
```

Continuación del código .java de LoginFragment:

```
btmensCient.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v)  
    {  
        Toast.makeText(getActivity(), "Calculadora con operaciones  
avanzadas", Toast.LENGTH_SHORT).show();  
    }  
});
```

```
btmensCust.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v)  
    {  
        Toast.makeText(getActivity(), "Calculadora con operaciones para  
programadores", Toast.LENGTH_SHORT).show();  
    }  
});
```

```
btselecBasic.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v)  
    {
```

```
        etType.setText("Basica");  
    }  
});
```

```
btselectCient.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v)  
    {  
        etType.setText("Cientifica");  
    }  
});
```

```
btselectCust.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v)  
    {  
        etType.setText("Custom");  
    }  
});
```

Continuación del código .java de LoginFragment:

```
btIngresar.setOnClickListener(new View.OnClickListener()
{
    @Override
    public void onClick(View v)
    {
        String tipocalc = etType.getText().toString().trim();
        String username = etUsername.getText().toString().trim();

        if( tipocalc.equals("") || username.equals(""))
        {
            Toast.makeText(getActivity(), "Faltan campos que llenar!",
            Toast.LENGTH_SHORT).show();
        }

        else if(tipocalc.equals("Basica"))
        {
            Intent intent = new Intent(getActivity(), CalcBasica.class);
            intent.putExtra("CALCULADORA", tipocalc);
            intent.putExtra("USERNAME", username);
            startActivity(intent);
            getActivity().finish();
        }
    }
});
```

```
else if(tipocalc.equals("Cientifica"))
{
    Intent intent = new Intent(getActivity(), CalcCientifica.class);
    intent.putExtra("CALCULADORA", tipocalc);
    intent.putExtra("USERNAME", username);
    startActivity(intent);
    getActivity().finish();
}

else if(tipocalc.equals("Custom"))
{
    Intent intent = new Intent(getActivity(), CalcCustom.class);
    intent.putExtra("CALCULADORA", tipocalc);
    intent.putExtra("USERNAME", username);
    startActivity(intent);
    getActivity().finish();
}
});
```


Código .xml del fragment_login:

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

```
<LinearLayout 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=".Onboarding.LoginFragment"
```

```
    android:orientation="vertical"
```

```
    android:background="@color/colorWhite">
```

```
    <ImageView
```

```
        android:id="@+id/imgLog"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:scaleType="centerCrop"
```

```
        android:layout_marginLeft="230dp"
```

```
        android:layout_marginTop="-140dp"
```

```
        android:src="@drawable/img3" />
```

```
    <LinearLayout
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
```

```
        android:orientation="horizontal"
```

```
        android:gravity="center">
```

```
    <LinearLayout
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:orientation="vertical">
```

```
    <TextView
```

```
        android:id="@+id/textDesc1"
```

```
        android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="20dp"
```

```
        android:text="@string/tip1"
```

```
        android:textSize="18sp"
```

```
        android:layout_gravity="center"
```

```
        android:textColor="@color/colorNaranja"
```

```
        android:gravity="center"
```

```
        android:fontFamily="@font/aclonica"/>
```

Continuación del código .xml del fragment_login:

```
<TextView
```

```
    android:id="@+id/textDesc2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="20dp"  
    android:text="@string/tip2"  
    android:textSize="18sp"  
    android:layout_gravity="center"  
    android:textColor="@color/colorNaranja"  
    android:gravity="center"  
    android:fontFamily="@font/aclonica"/>
```

```
<TextView
```

```
    android:id="@+id/textDesc3"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_marginTop="20dp"  
    android:text="@string/tip3"
```

```
    android:textSize="18sp"
```

```
    android:layout_gravity="center"
```

```
    android:textColor="@color/colorNaranja"
```

```
    android:gravity="center"
```

```
    android:fontFamily="@font/aclonica"/>
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:orientation="vertical">
```

```
<LinearLayout
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:orientation="horizontal">
```

Continuación del código .xml del fragment_login:

<Button

```
    android:id="@+id/btMensBasic"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/mens"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

<Button

```
    android:id="@+id/btSelectBasic"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/select"
    android:background="@drawable/styles_btn"
```

```
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

</LinearLayout>

<LinearLayout

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
```

<Button

```
    android:id="@+id/btMensCientif"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/mens"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

Continuación del código .xml del fragment_login:

<Button

```
    android:id="@+id/btSelectCient"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/select"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

</LinearLayout>

<LinearLayout

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

android:orientation="horizontal">

<Button

```
    android:id="@+id/btMensCustom"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/mens"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

Continuación del código .xml del fragment_login:

<Button

```
    android:id="@+id/btSelectCust"
    android:layout_width="100sp"
    android:layout_height="40sp"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="10dp"
    android:layout_marginLeft="10dp"
    android:text="@string/select"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">
```

</Button>

</LinearLayout>

</LinearLayout>

</LinearLayout>

<LinearLayout

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:layout_gravity="center">
```

<EditText

```
    android:id="@+id/etType"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="20dp"
    android:layout_marginRight="30dp"
    android:layout_marginLeft="30dp"
    android:hint="@string/app"
    android:background="@drawable/style_et"
    android:fontFamily="@font/aclonica"
    android:textAlignment="center">
```

</EditText>

Continuación del código .xml del fragment_login:

```
<EditText
    android:id="@+id/etUsername"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="30dp"
    android:layout_marginLeft="30dp"
    android:hint="@string/username"
    android:background="@drawable/style_et"
    android:fontFamily="@font/aclonica"
    android:textAlignment="center">

    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:layout_marginTop="10dp"
    android:layout_marginRight="30dp"
    android:layout_marginLeft="30dp"
    android:text="@string/login"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:fontFamily="@font/aclonica">

</EditText>

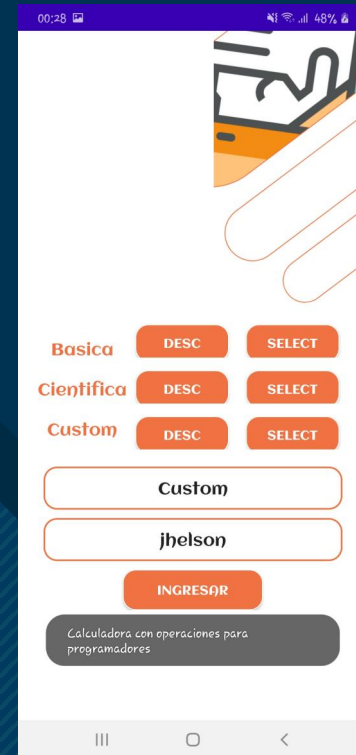
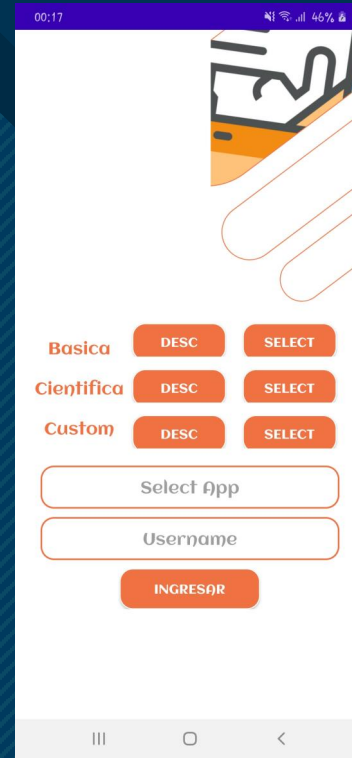
</Button>
</LinearLayout>

</LinearLayout>

<Button
    android:id="@+id/btLogin"
    android:layout_width="150sp"
```

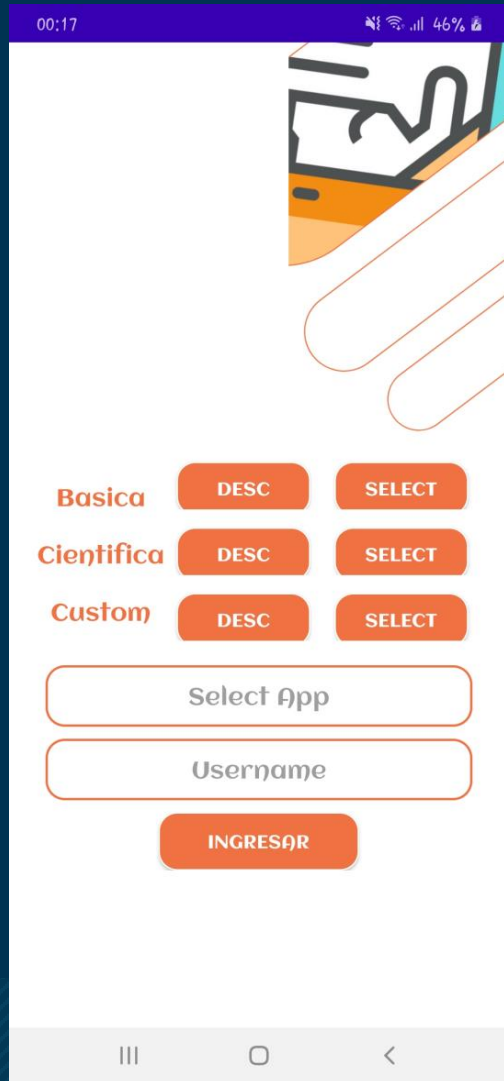


Hasta este punto se tiene el diseño de los primeros 3 fragments de la aplicación con su respectiva funcionalidad incluyendo los toast del login y también el seteo de boton:



Pregunta 3:

Implementar una APP calculadora CUSTOM.



- Se logró desarrollar todo el código para mostrar una calculadora custom.
- A continuación en las siguientes diapositivas se mostrará todo el código para llegar a desarrollar las operaciones según lo solicitado, del mismo modo el diseño de la calculadora.

Código .java de CalcCustom:

```
package com.jhelsoncarrillo.hito3jhelsoncarrilloortega.App;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import com.jhelsoncarrillo.hito3jhelsoncarrilloortega.R;

public class CalcCustom extends AppCompatActivity implements
View.OnClickListener
{
    public Button btnuno, btndos, btntres, btncuatro, btncero, btnclose;
    public Button btnsuma, btnresta, btnmulti, btndiv, btnigual, btnexp2,
btnexp3, btnfac, btnsumatoria, btnshift, btnborrar;

    public EditText etpantalla;
    public double op1 = 0.0;
    public double op2;
    public double res;
    public String operacion;
```

```
    public int c=0;
    public Double op3 = 1.0;
    private TextView tvTypeCalc, tvShowUsername;

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

    private void initializeComponents()
    {
        tvTypeCalc = findViewById(R.id.tvShowTypeCalc);
        tvShowUsername = findViewById(R.id.tvShowUsername);
        String tipocalc = getIntent().getStringExtra("CALCULADORA");
        String msg1 = "App: " + tipocalc;
        String username = getIntent().getStringExtra("USERNAME");
        String msg2 = "Bienvenido: " + username;
```

Continuación del código .java de CalcCustom:

```
tvTypeCalc.setText(msg1);
```

```
    tvShowUsername.setText(msg2);
```

```
    etpantalla = findViewById(R.id.texto);
```

```
    btncero = findViewById(R.id.btncero);
```

```
    btnuno = findViewById(R.id.btuno);
```

```
    btndos = findViewById(R.id.btdos);
```

```
    btntres = findViewById(R.id.bttres);
```

```
    btncuatro = findViewById(R.id.btcuatro);
```

```
    btnsuma = findViewById(R.id.btsuma);
```

```
    btnresta = findViewById(R.id.btresta);
```

```
    btnmulti = findViewById(R.id.btmulti);
```

```
    btndiv = findViewById(R.id.btdiv);
```

```
    btnigual = findViewById(R.id.btigual);
```

```
    btnexp2 = findViewById(R.id.btexp2);
```

```
    btnexp3 = findViewById(R.id.btexp3);
```

```
    btnfac = findViewById(R.id.btfac);
```

```
    btnsumatoria = findViewById(R.id.btsumatoria);
```

```
    btnshift = findViewById(R.id.btshift);
```

```
    btnborrar = findViewById(R.id.btborrar);
```

```
    btnclose = findViewById(R.id.btclose);
```

```
    btncero.setOnClickListener(this);
```

```
    btnuno.setOnClickListener(this);
```

```
    btndos.setOnClickListener(this);
```

```
    btntres.setOnClickListener(this);
```

```
    btncuatro.setOnClickListener(this);
```

```
    btnsuma.setOnClickListener(this);
```

```
    btnresta.setOnClickListener(this);
```

```
    btnmulti.setOnClickListener(this);
```

```
    btndiv.setOnClickListener(this);
```

```
    btnigual.setOnClickListener(this);
```

```
    btnexp2.setOnClickListener(this);
```

```
    btnexp3.setOnClickListener(this);
```

```
    btnfac.setOnClickListener(this);
```

```
    btnsumatoria.setOnClickListener(this);
```

```
    btnshift.setOnClickListener(this);
```

```
    btnborrar.setOnClickListener(this);
```

```
    btnclose.setOnClickListener(this);
```

```
}
```

Continuación del código .java de CalcCustom:

@Override

```
public void onClick(View v)
```

```
{  
    switch (v.getId())  
    {  
        case R.id.btceros:  
            String capc = etpantalla.getText().toString();  
            capc=capc+"0";  
            etpantalla.setText(capc);  
            break;  
        case R.id.btuno:  
            String cap = etpantalla.getText().toString();  
            cap=cap+"1";  
            etpantalla.setText(cap);  
            break;  
        case R.id.btdos:  
            String cap1 = etpantalla.getText().toString();  
            cap1=cap1+"2";  
            etpantalla.setText(cap1);  
            break;  
        case R.id.bttres:  
            String cap3 = etpantalla.getText().toString();  
            cap3=cap3+"3";
```

```
            etpantalla.setText(cap3);  
            break;  
        case R.id.btcuatro:  
            String cap4 = etpantalla.getText().toString();  
            cap4=cap4+"4";  
            etpantalla.setText(cap4);  
            break;  
        case R.id.btsuma:  
            suma();  
            break;  
        case R.id.btresta:  
            resta();  
            break;  
        case R.id.btmulti:  
            multi();  
            break;  
        case R.id.btdiv:  
            div();  
            break;  
        case R.id.btigual:  
            todoslossignos();  
            break;
```

Continuación del código .java de CalcCustom:

case R.id.btshift:

```
String mod1;
mod1 = btnexp2.getText().toString();
if(mod1.equals("x2"))
{
    btnexp2.setText("x3");
    btnexp3.setText("xy");
    btnfac.setText("Σfibonacci");
    btnsumatoria.setText("Σnxy");
}
else
{
    btnexp2.setText("x2");
    btnexp3.setText("x3");
    btnfac.setText("N!");
    btnsumatoria.setText("Σn");
}
break;
```

case R.id.btexp2:

```
exponente();
break;
```

case R.id.btexp3:

```
exponentecub();
break;
```

case R.id.btfac:

```
factorial();
break;
```

case R.id.btsumatoria:

```
sumatoria();
break;
```

case R.id.btborrar:

```
etpantalla.setText("");
break;
```

case R.id.btclose:

```
finish();
break;
```

}

}

Continuación del código .java de CalcCustom:

```
public void exponente()
```

```
{  
    String mod = btnexp2.getText().toString();  
    if(mod.equals("x2"))  
    {  
        String a = etpantalla.getText().toString();  
        Double cua = Double.parseDouble(a);  
        Double resp = Math.pow(cua,2);  
        etpantalla.setText(""+resp);  
    }  
    else  
    {  
        String a = etpantalla.getText().toString();  
        Double cua = Double.parseDouble(a);  
        Double resp = Math.pow(cua,3);  
        etpantalla.setText(""+resp);  
    }  
}
```

```
public void exponentecub()
```

```
{  
    String mod = btnexp3.getText().toString();  
    if(mod.equals("x3"))  
    {  
        String a = etpantalla.getText().toString();  
        Double cua = Double.parseDouble(a);  
        Double resp = Math.pow(cua,3);  
        etpantalla.setText(""+resp);  
    }  
    else  
    {  
        String auxi = etpantalla.getText().toString();  
        op1 = Double.parseDouble(auxi);  
        etpantalla.setText("");  
        operacion = "expoxy";  
    }  
}
```

Continuación del código .java de CalcCustom:

```
public void factorial()
{
    String mod = btnfac.getText().toString();
    if(mod.equals("N!"))
    {
        double fact=1.0;
        String auxi = etpantalla.getText().toString();
        Double op11 = Double.parseDouble(auxi);
        for(Double i = op11; i>0; i--)
        {
            fact = fact*i;
        }
        etpantalla.setText(""+fact);
    }
    else
    {
        String auxi = etpantalla.getText().toString();
        op1 = Double.parseDouble(auxi);
        int f =0;
        int t1 =1;
        int t2;
        int sum =0;
        for(double i = 1;i<=op1;i++)
        {
            t2 = f;
            f = t1 +f;
            t1 = t2;
```

```
            sum = sum + t1;
        }
        etpantalla.setText(""+sum);
        op1=0;
    }
}

public void sumatoria()
{
    String mod = btnsumatoria.getText().toString();
    if(mod.equals("Σn"))
    {
        int suma=0;
        int num = Integer.parseInt(etpantalla.getText().toString());
        for(int i=1;i<=num;i++)
        {
            suma=suma+i;
        }
        etpantalla.setText(""+suma);
    }
    else
    {
        String auxi = etpantalla.getText().toString();
        op1 = Double.parseDouble(auxi);
        etpantalla.setText("");
        operacion="sumnxy";
    }
}
```

Continuación del código .java de CalcCustom:

```
public void todoslossignos()
```

```
{
    try
    {
        String auxi2 = etpantalla.getText().toString();
        op2 = Double.parseDouble(auxi2);
        //limpiar pantalla al preionar suma
    }
    catch (NumberFormatException e){
    }
    //limpiar pantalla al preionar suma
    etpantalla.setText("");
    if(operacion.equals("suma"))
    {
        res = op1+op2;
    }
    else if(operacion.equals("resta"))
    {
        res=op1-op2;
    }
    else if(operacion.equals("multi"))
    {
        res=op1*op2;
    }
    else if(operacion.equals("div"))
    {
```

```
if(op2==0)
```

```
{
    etpantalla.setText("No puede dividir entre cero!");
}
else
{
    res=op1/op2;
}
}
else if(operacion=="expoxy")
{
    res = Math.pow(op1,op2);
}
else if(operacion=="sumnxy")
{
    for(Double i = op1;i<=op2;i++)
    {
        res = res+i;
    }
}
etpantalla.setText(""+res);
op1 =0.0;
op3=1.0;
c=0;
}
```

Continuación del código .java de CalcCustom:

```
public void suma()
```

```
{
    try
    {
        String auxi = etpantalla.getText().toString();
        op1 = op1+Double.parseDouble(auxi);
    }
    catch (NumberFormatException e)
    {

    }
    etpantalla.setText("");
    operacion = "suma";
}
```

```
public void resta()
```

```
{
    try
    {
        op1=0;
        if(c<1)
        {
```

```
String auxi = etpantalla.getText().toString();
op1 = (Double.parseDouble(auxi))-op1;
op3=op1;
```

```
}
else if(c>0)
{
    String auxi = etpantalla.getText().toString();
    op1 = op3-(Double.parseDouble(auxi));
}
```

```
//limpiar pantalla al preionar suma
```

```
}
catch (NumberFormatException e)
{
```

```
}
etpantalla.setText("");
operacion = "resta";
c++;
```

```
}
```


Continuación del código .java de CalcCustom:

```
public void multi()
```

```
{
    try
    {
        op1=1;
        String auxi = etpantalla.getText().toString();
        op1 = op3*Double.parseDouble(auxi);
        op3 = op1;
        //numeros[c] = Double.parseDouble(aux);
        //limpiar pantalla al preionar suma
    }
    catch (NumberFormatException e)
    {

    }
    etpantalla.setText("");
    operacion = "multi";
}
```

```
public void div()
```

```
{
    try
    {
        if(c<1)
```

```
{
    String auxi = etpantalla.getText().toString();
    op1 = Double.parseDouble(auxi)/op3;
    op3 = op1;
}
else if(c>0)
{
    String auxi = etpantalla.getText().toString();
    op1 = op3/Double.parseDouble(auxi);
    op3=op1;
}
//limpiar pantalla al preionar suma

}
catch (NumberFormatException e)
{

}
etpantalla.setText("");
operacion = "divi";
c++;
}
}
```

Código .xml del fragment_calc_custom:

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

```
<LinearLayout  
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=".App.CalcCustom"
```

```
android:orientation="vertical"
```

```
android:gravity="center"
```

```
android:layout_marginLeft="20dp"
```

```
android:layout_marginRight="20dp"
```

```
android:layout_marginTop="20dp">
```

```
<LinearLayout
```

```
android:layout_width="match_parent"
```

```
android:layout_height="wrap_content"
```

```
android:padding="32dp"
```

```
android:orientation="vertical"
```

```
android:gravity="center">
```

```
<TextView
```

```
android:id="@+id/tvShowTypeCalc"
```

```
android:layout_width="match_parent"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginTop="5dp"
```

```
android:layout_marginBottom="5dp"
```

```
android:textColor="@color/colorNaranja"
```

```
android:textSize="15sp">
```

```
</TextView>
```

```
<TextView
```

```
android:id="@+id/tvShowUsername"
```

```
android:layout_width="match_parent"
```

```
android:layout_height="wrap_content"
```

```
android:layout_marginTop="5dp"
```

```
android:layout_marginBottom="5dp"
```

```
android:textColor="@color/colorNaranja"
```

```
android:textSize="15sp">
```

```
</TextView>
```

```
</LinearLayout>
```

Continuación del código .xml del fragment_calc_custom:

```
<LinearLayout
```

```
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:orientation="vertical"  
    android:layout_gravity="center"  
    android:layout_marginTop="20dp">
```

```
    <EditText
```

```
        android:id="@+id/texto"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"  
        android:layout_marginRight="20dp"  
        android:layout_marginLeft="20dp"  
        android:layout_marginBottom="20dp"  
        android:background="@drawable/style_et"/>
```

```
</LinearLayout>
```

```
<LinearLayout
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:orientation="vertical"  
    android:layout_gravity="center">
```

```
    <LinearLayout
```

```
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"  
        android:orientation="horizontal"  
        android:gravity="center">
```

```
        <Button
```

```
            android:id="@+id/btexp2"  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:background="@drawable/styles_btn"  
            android:textColor="@color/colorWhite"  
            android:text="x2"/>
```

Continuación del código .xml del fragment_calc_custom:

```
<Button
    android:id="@+id/btexp3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="x3"/>

<Button
    android:id="@+id/btfac"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="N!"/>

<Button
    android:id="@+id/btsumatoria"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="Σn"/>

    android:textColor="@color/colorWhite"
    android:text="Σn"/>

</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center">

    <Button
        android:id="@+id/btuno"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:background="@drawable/styles_btn"
        android:textColor="@color/colorWhite"
        android:text="1"/>
```

Continuación del código .xml del fragment_calc_custom:

<Button

```
    android:id="@+id/btdos"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="2"/>
```

<Button

```
    android:id="@+id/bttres"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="3"/>
```

<Button

```
    android:id="@+id/btcuatro"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="4"/>
```

</LinearLayout>

<LinearLayout

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:gravity="center">
```

<Button

```
    android:id="@+id/btcero"
    android:layout_width="117dp"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="0"/>
```

<Button

```
    android:id="@+id/btshift"
    android:layout_width="117dp"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="Shift"/>
```

Continuación del código .xml del fragment_calc_custom:

<Button

```
    android:id="@+id/btborrar"
    android:layout_width="117dp"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="Clean"/>
```

</LinearLayout>

<LinearLayout

```
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
```

<Button

```
    android:id="@+id/btsuma"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="+"/>
```

<Button

android:id="@+id/btresta"

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="-"/>
```

<Button

```
    android:id="@+id/btdiv"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="/"/>
```

<Button

```
    android:id="@+id/btmulti"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:background="@drawable/styles_btn"
    android:textColor="@color/colorWhite"
    android:text="*/>
```

</LinearLayout>

Continuación del código .xml del fragment_calc_custom:

```
<LinearLayout
```

```
android:text="Close App"/>
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
</LinearLayout>
```

```
    android:orientation="vertical"
```

```
    android:gravity="center">
```

```
</LinearLayout>
```

```
<Button
```

```
</LinearLayout>
```

```
    android:id="@+id/btigual"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:background="@drawable/styles_btn"
```

```
    android:textColor="@color/colorWhite"
```

```
    android:text=""/>
```

```
<Button
```

```
    android:id="@+id/btclose"
```

```
    android:layout_width="match_parent"
```

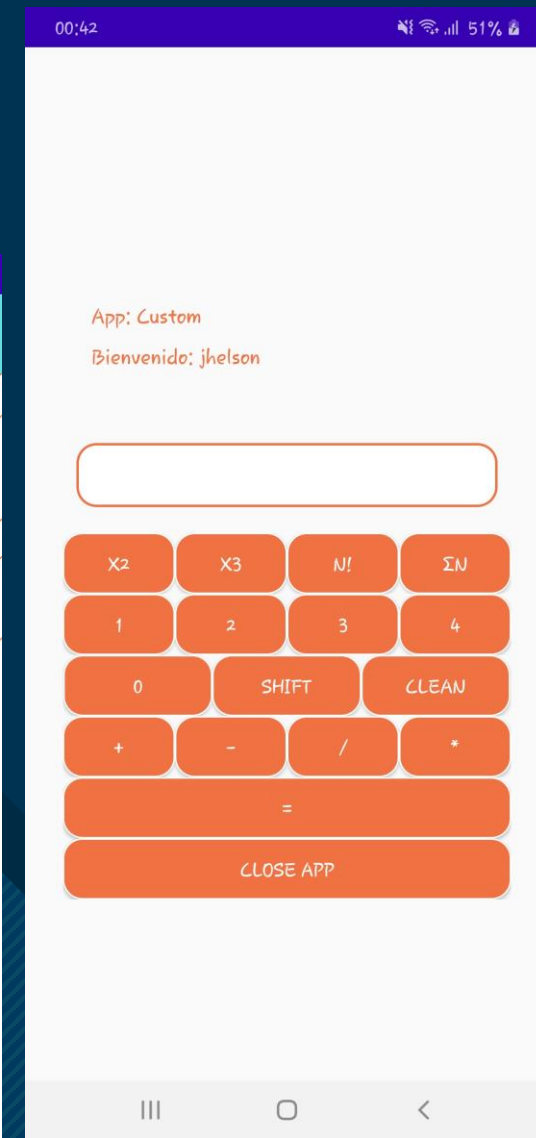
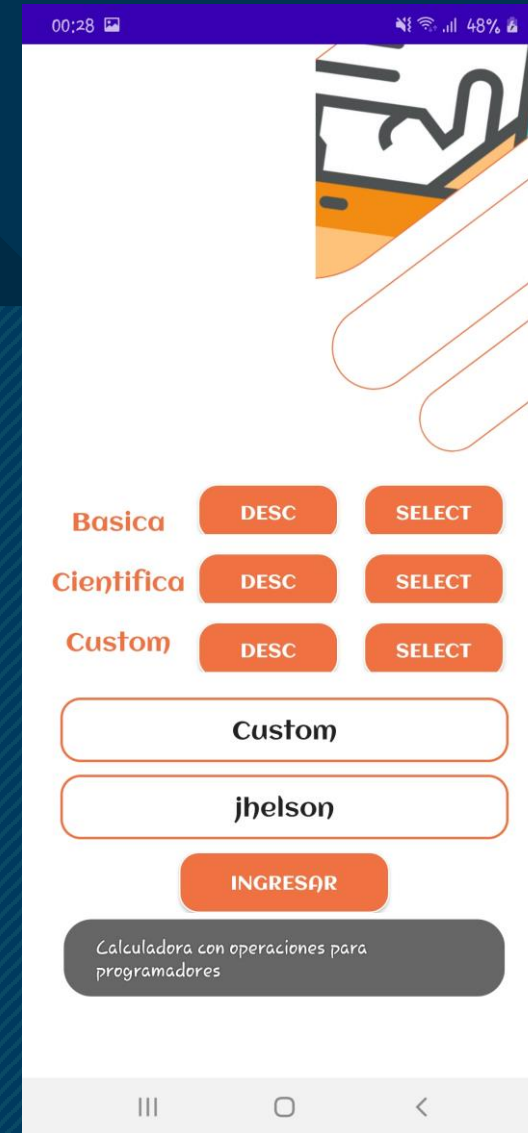
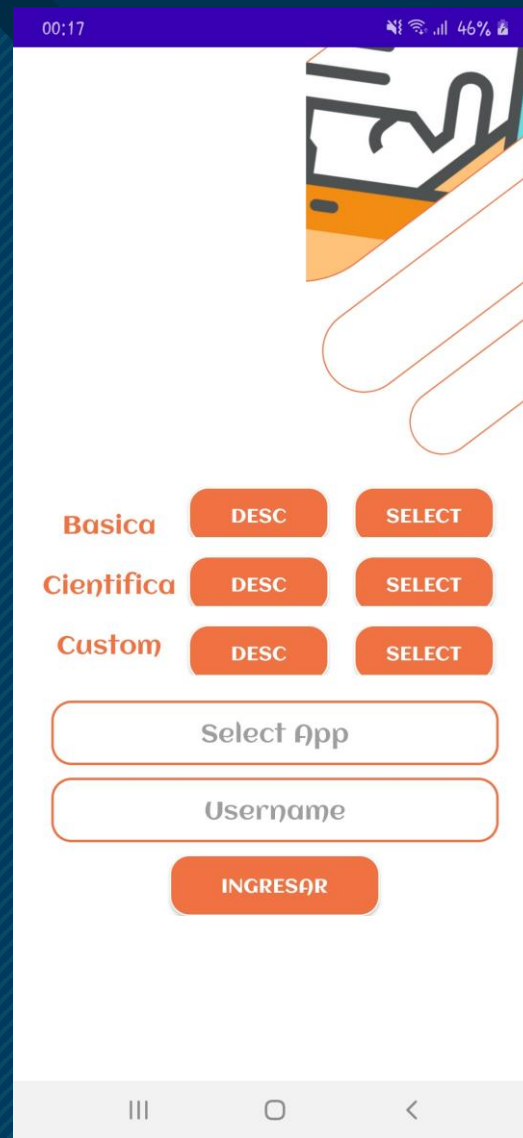
```
    android:layout_height="wrap_content"
```

```
    android:background="@drawable/styles_btn"
```

```
    android:textColor="@color/colorWhite"
```



Hasta este punto se obtiene como resultado el diseño de la calculadora con su respectiva funcionalidad a partir de la pantalla de login:





A continuación se muestra un video de la funcionalidad de la aplicación, con sus respectivos requerimientos:

