

UCS6611 - MOBILE APPLICATION DEVELOPMENT LABORATORY

Ex. No. 2 Develop an application to simulate a keyboard

Date: 29/7/21

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Question:

Develop an application to simulate a keyboard

Code:

Activity_main.xml:

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

<androidx.constraintlayout.widget.ConstraintLayout
    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">

    <TableLayout
        android:id="@+id/table"
        android:layout_width="match_parent"
        android:layout_height="250dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.461"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.983">

        <TableRow
            android:layout_width="match_parent"
            android:layout_height="match_parent">

            <Button
                android:id="@+id/q"
                android:layout_width="wrap_content"
                android:layout_height="60dp"
                android:layout_weight="1"
                android:backgroundTint="@color/cardview_dark_background"
                android:text="q"
                android:textAllCaps="false"
```

```

        tools:ignore="TouchTargetSizeCheck" />

<Button
    android:id="@+id/w"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="w"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />

<Button
    android:id="@+id/e"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="e"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />

<Button
    android:id="@+id/r"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="r"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />

<Button
    android:id="@+id/t"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="t"
    android:textAllCaps="false"

```

```
tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
```

```
    android:id="@+id/y"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="y"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
```

```
    android:id="@+id/u"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="u"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
```

```
    android:id="@+id/i"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="i"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
```

```
    android:id="@+id/o"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="o"  
    android:textAllCaps="false"
```

```

        tools:ignore="TouchTargetSizeCheck" />

<Button
    android:id="@+id/p"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="p"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
</TableRow>

<TableRow
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <Button
        android:id="@+id/a"
        android:layout_width="wrap_content"
        android:layout_height="60dp"
        android:layout_marginRight="1dp"
        android:layout_weight="1"
        android:backgroundTint="@color/cardview_dark_background"
        android:text="a"
        android:textAllCaps="false"
        tools:ignore="TouchTargetSizeCheck" />

    <Button
        android:id="@+id/s"
        android:layout_width="wrap_content"
        android:layout_height="60dp"
        android:layout_marginLeft="1dp"
        android:layout_marginRight="1dp"
        android:layout_weight="1"
        android:backgroundTint="@color/cardview_dark_background"
        android:text="s"
        android:textAllCaps="false"
        tools:ignore="TouchTargetSizeCheck" />

    <Button
        android:id="@+id/d"
        android:layout_width="wrap_content"
        android:layout_height="60dp"
        android:layout_marginLeft="1dp"
        android:layout_marginRight="1dp"
        android:layout_weight="1"
        android:backgroundTint="@color/cardview_dark_background"

```

```
        android:text="d"
        android:textAllCaps="false"
        tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/f"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="f"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/g"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="g"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/h"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="h"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/j"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
```

```
        android:text="j"  
        android:textAllCaps="false"  
        tools:ignore="TouchTargetSizeCheck" />
```

```
<Button  
    android:id="@+id/k"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="k"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button  
    android:id="@+id/l"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_weight="1"  
    android:backgroundTint="@color/cardview_dark_background"  
    android:text="l"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
</TableRow>
```

```
<TableRow  
    android:layout_width="match_parent"  
    android:layout_height="match_parent">
```

```
<Button  
    android:id="@+id/cap"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"  
    android:layout_marginRight="1dp"  
    android:layout_weight="1"  
    android:text="^"  
    android:textAllCaps="false"  
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button  
    android:id="@+id/z"  
    android:layout_width="wrap_content"  
    android:layout_height="60dp"  
    android:layout_marginLeft="1dp"
```

```
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="z"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/x"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="x"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/c"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="c"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/v"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="v"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/b"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
```

```
        android:layout_marginRight="1dp"
        android:layout_weight="1"
        android:backgroundTint="@color/cardview_dark_background"
        android:text="b"
        android:textAllCaps="false"
        tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/n"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="n"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/m"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="0.8"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="m"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/clr"
    android:layout_width="wrap_content"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="0.7"
    android:text="clr"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
</TableRow>
```

```
<TableRow
    android:layout_width="match_parent"
    android:layout_height="match_parent">
```

```
<Button
```



```
android:id="@+id/num"
android:layout_width="0dp"
android:layout_height="60dp"
android:layout_marginLeft="1dp"
android:layout_marginRight="1dp"
android:layout_weight="2"
android:text="123"
android:textAllCaps="false"
tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/comma"
    android:layout_width="0dp"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text=","
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/space"
    android:layout_width="0dp"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="4"
    android:text="Space"
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/period"
    android:layout_width="0dp"
    android:layout_height="60dp"
    android:layout_marginLeft="1dp"
    android:layout_marginRight="1dp"
    android:layout_weight="1"
    android:backgroundTint="@color/cardview_dark_background"
    android:text="."
    android:textAllCaps="false"
    tools:ignore="TouchTargetSizeCheck" />
```

```
<Button
    android:id="@+id/enter"
    android:layout_width="0dp"
```

```

        android:layout_height="60dp"
        android:layout_marginLeft="1dp"
        android:layout_marginRight="1dp"
        android:layout_weight="2"
        android:text="Enter"
        android:textAllCaps="false"
        tools:ignore="TouchTargetSizeCheck" />
    </TableRow>
</TableLayout>

<EditText
    android:id="@+id/type_here"
    android:layout_width="333dp"
    android:layout_height="100dp"
    android:ems="10"
    android:gravity="start|top"
    android:inputType="textMultiLine"
    android:hint="Type here"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.212" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

Activity_main.java:

```

package com.example.ex2_keyboard;

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

import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.TableLayout;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    int cap_count=0;
    int num_count=0;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
}

```

```
AppCompatActivity.setDefaultNightMode(AppCompatActivity.MODE_NIGHT_NO)
;

TableLayout table= findViewById(R.id.table);
table.setVisibility(View.INVISIBLE);
TextView type_here= findViewById(R.id.type_here);
type_here.setShowSoftInputOnFocus(false);
type_here.setCursorVisible(false);
type_here.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        table.setVisibility(View.VISIBLE);
    }
});
type_here.setOnFocusChangeListener(new View.OnFocusChangeListener() {
    @Override
    public void onFocusChange(View v, boolean hasFocus) {
        if (hasFocus)
            table.setVisibility(View.VISIBLE);
        else
            table.setVisibility(View.INVISIBLE);
    }
});

Button q= findViewById(R.id.q);
q.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=q.getText().toString();
        type_here.setText(txt);
    }
});

Button w= findViewById(R.id.w);
w.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=w.getText().toString();
        type_here.setText(txt);
    }
});

Button e= findViewById(R.id.e);
e.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
```

```

        txt+=e.getText().toString();
        type_here.setText(txt);
    }
});

Button r= findViewById(R.id.r);
r.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=r.getText().toString();
        type_here.setText(txt);
    }
});

Button t= findViewById(R.id.t);
t.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=t.getText().toString();
        type_here.setText(txt);
    }
});

Button y= findViewById(R.id.y);
y.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=y.getText().toString();
        type_here.setText(txt);
    }
});

Button u= findViewById(R.id.u);
u.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=u.getText().toString();
        type_here.setText(txt);
    }
});

Button i= findViewById(R.id.i);
i.setOnClickListener(new View.OnClickListener() {
    @Override

```

```

        public void onClick(View v) {
            String txt=type_here.getText().toString();
            txt+=i.getText().toString();
            type_here.setText(txt);
        }
    });

    Button o= findViewById(R.id.o);
    o.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String txt=type_here.getText().toString();
            txt+=o.getText().toString();
            type_here.setText(txt);
        }
    });

    Button p= findViewById(R.id.p);
    p.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String txt=type_here.getText().toString();
            txt+=p.getText().toString();
            type_here.setText(txt);
        }
    });

    Button a= findViewById(R.id.a);
    a.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String txt=type_here.getText().toString();
            txt+=a.getText().toString();
            type_here.setText(txt);
        }
    });

    Button s= findViewById(R.id.s);
    s.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            String txt=type_here.getText().toString();
            txt+=s.getText().toString();
            type_here.setText(txt);
        }
    });

    Button d= findViewById(R.id.d);

```

```
d.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String txt=type_here.getText().toString();  
        txt+=d.getText().toString();  
        type_here.setText(txt);  
    }  
});
```

```
Button f= findViewById(R.id.f);  
f.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String txt=type_here.getText().toString();  
        txt+=f.getText().toString();  
        type_here.setText(txt);  
    }  
});
```

```
Button g= findViewById(R.id.g);  
g.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String txt=type_here.getText().toString();  
        txt+=g.getText().toString();  
        type_here.setText(txt);  
    }  
});
```

```
Button h= findViewById(R.id.h);  
h.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String txt=type_here.getText().toString();  
        txt+=h.getText().toString();  
        type_here.setText(txt);  
    }  
});
```

```
Button j= findViewById(R.id.j);  
j.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        String txt=type_here.getText().toString();  
        txt+=j.getText().toString();  
        type_here.setText(txt);  
    }  
});
```

```
Button k= findViewById(R.id.k);
k.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=k.getText().toString();
        type_here.setText(txt);
    }
});
```

```
Button l= findViewById(R.id.l);
l.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=l.getText().toString();
        type_here.setText(txt);
    }
});
```

```
Button z= findViewById(R.id.z);
z.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=z.getText().toString();
        type_here.setText(txt);
    }
});
```

```
Button x= findViewById(R.id.x);
x.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=x.getText().toString();
        type_here.setText(txt);
    }
});
```

```
Button c= findViewById(R.id.c);
c.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=c.getText().toString();
        type_here.setText(txt);
    }
});
```

```

    }
});

Button v= findViewById(R.id.v);
v.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View w) {
        String txt=type_here.getText().toString();
        txt+=v.getText().toString();
        type_here.setText(txt);
    }
});

Button b= findViewById(R.id.b);
b.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=b.getText().toString();
        type_here.setText(txt);
    }
});

Button n= findViewById(R.id.n);
n.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=n.getText().toString();
        type_here.setText(txt);
    }
});

Button m= findViewById(R.id.m);
m.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=m.getText().toString();
        type_here.setText(txt);
    }
});

Button space= findViewById(R.id.space);
space.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();

```



```

        txt+=" ";
        type_here.setText(txt);
    }
});

Button enter= findViewById(R.id.enter);
enter.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+="\n";
        type_here.setText(txt);
    }
});

Button comma= findViewById(R.id.comma);
comma.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=",";
        type_here.setText(txt);
    }
});

Button period= findViewById(R.id.period);
period.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        String txt=type_here.getText().toString();
        txt+=".";
        type_here.setText(txt);
    }
});

Button clr= findViewById(R.id.clr);
clr.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        if(!TextUtils.isEmpty(type_here.getText())) {
            String txt = type_here.getText().toString();
            txt = txt.substring(0, txt.length() - 1);
            type_here.setText(txt);
        }
    }
});

Button cap= findViewById(R.id.cap);

```

```
cap.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View vi) {
        cap_count+=1;
        if (cap_count%2==0) {
            q.setText("q");
            w.setText("w");
            e.setText("e");
            r.setText("r");
            t.setText("t");
            y.setText("y");
            u.setText("u");
            i.setText("i");
            o.setText("o");
            p.setText("p");
            a.setText("a");
            s.setText("s");
            d.setText("d");
            f.setText("f");
            g.setText("g");
            h.setText("h");
            j.setText("j");
            k.setText("k");
            l.setText("l");
            z.setText("z");
            x.setText("x");
            c.setText("c");
            v.setText("v");
            b.setText("b");
            n.setText("n");
            m.setText("m");

        }
        else{
            q.setText("Q");
            w.setText("W");
            e.setText("E");
            r.setText("R");
            t.setText("T");
            y.setText("Y");
            u.setText("U");
            i.setText("I");
            o.setText("O");
            p.setText("P");
            a.setText("A");
            s.setText("S");
            d.setText("D");
            f.setText("F");
        }
    }
});
```

```

        g.setText("G");
        h.setText("H");
        j.setText("J");
        k.setText("K");
        l.setText("L");
        z.setText("Z");
        x.setText("X");
        c.setText("C");
        v.setText("V");
        b.setText("B");
        n.setText("N");
        m.setText("M");
    }
}
});

Button num= findViewById(R.id.num);
num.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View vi) {
        num_count+=1;
        if (num_count%2==0) {
            q.setText("q");
            w.setText("w");
            e.setText("e");
            r.setText("r");
            t.setText("t");
            y.setText("y");
            u.setText("u");
            i.setText("i");
            o.setText("o");
            p.setText("p");
            a.setText("a");
            s.setText("s");
            d.setText("d");
            f.setText("f");
            g.setText("g");
            h.setText("h");
            j.setText("j");
            k.setText("k");
            l.setText("l");
            z.setText("z");
            x.setText("x");
            c.setText("c");
            v.setText("v");
            b.setText("b");
            n.setText("n");
            m.setText("m");
        }
    }
});

```

```

    }
    else{
        q.setText("1");
        w.setText("2");
        e.setText("3");
        r.setText("4");
        t.setText("5");
        y.setText("6");
        u.setText("7");
        i.setText("8");
        o.setText("9");
        p.setText("0");
        a.setText("@");
        s.setText("#");
        d.setText("?");
        f.setText("_");
        g.setText("&");
        h.setText("-");
        j.setText("+");
        k.setText("(");
        l.setText(")");
        z.setText("/");
        x.setText("*");
        c.setText("\");
        v.setText("'");
        b.setText(":");
        n.setText(";");
        m.setText("!");
    }
}
});
}
}

```

Outputs:

