

SOURCE CODE:

KEYBOARD:

```
<?xml version="1.0" encoding="utf-8"?>
<merge xmlns:android="http://schemas.android.com/apk/res/android">
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal">

        <Button
            android:id="@+id/button_1"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="1"/>

        <Button
            android:id="@+id/button_2"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="2"/>

        <Button
            android:id="@+id/button_3"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="3"/>

        <Button
            android:id="@+id/button_4"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="4"/>

        <Button
            android:id="@+id/button_5"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="5"/>

        <Button
            android:id="@+id/button_6"
            android:layout_width="0dp"
```

```
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="6"/>

<Button
    android:id="@+id/button_7"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="7"/>

<Button
    android:id="@+id/button_8"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="8"/>

<Button
    android:id="@+id/button_9"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="9"/>

<Button
    android:id="@+id/button_0"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="0"/>
</LinearLayout>

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

    <Button
        android:id="@+id/button_q"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="q"/>

    <Button
        android:id="@+id/button_w"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
```

```
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="w"/>

<Button
    android:id="@+id/button_e"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="e"/>

<Button
    android:id="@+id/button_r"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="r"/>

<Button
    android:id="@+id/button_t"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="t"/>

<Button
    android:id="@+id/button_y"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="y"/>

<Button
    android:id="@+id/button_u"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="u"/>

<Button
    android:id="@+id/button_i"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="i"/>

<Button
    android:id="@+id/button_o"
```

```
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="o"/>

<Button
    android:id="@+id/button_p"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="p"/>
</LinearLayout>

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

    <Button
        android:id="@+id/button_a"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="a"/>

    <Button
        android:id="@+id/button_s"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="s"/>

    <Button
        android:id="@+id/button_d"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="d"/>

    <Button
        android:id="@+id/button_f"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="f"/>

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

```
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="g"/>

<Button
    android:id="@+id/button_h"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="h"/>

<Button
    android:id="@+id/button_j"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="j"/>

<Button
    android:id="@+id/button_k"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="k"/>

<Button
    android:id="@+id/button_l"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="l"/>
</LinearLayout>

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

    <Button
        android:id="@+id/button_z"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="z"/>

    <Button
        android:id="@+id/button_x"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
```

```
        android:layout_weight="1"
        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="x"/>

<Button
    android:id="@+id/button_c"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="c"/>

<Button
    android:id="@+id/button_v"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="v"/>

<Button
    android:id="@+id/button_b"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="b"/>

<Button
    android:id="@+id/button_n"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="n"/>

<Button
    android:id="@+id/button_m"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="1"
    android:background="#0000ff"
    android:textColor="@android:color/white"
    android:text="m"/>
</LinearLayout>

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

    <Button
        android:id="@+id/button_delete"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="2"
```

```

        android:background="#0000ff"
        android:textColor="@android:color/white"
        android:text="Delete"/>

        <Button
            android:id="@+id/button_enter"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="3"
            android:background="#0000ff"
            android:textColor="@android:color/white"
            android:text="Enter"/>

    </LinearLayout>
</merge>

```

FUNCTIONALITY:

```

package com.example.keyboard;

import android.content.Context;
import android.text.TextUtils;
import android.util.AttributeSet;
import android.util.SparseArray;
import android.view.LayoutInflater;
import android.view.View;
import android.view.inputmethod.InputConnection;
import android.widget.Button;
import android.widget.LinearLayout;

public class CustomKeyboard extends LinearLayout implements
View.OnClickListener {

    private Button button1, button2, button3, button4,
        button5, button6, button7, button8,
        button9, button0, buttonDelete, buttonEnter;

    private Button
buttona,buttonb,buttonc,buttond,buttone,buttonf,buttong,buttonh,buttoni,
buttonj,buttonk,buttonl,buttonm,buttonn,buttono,buttonp,buttonq,buttonr,
button s,buttont,buttonu,buttonv,buttonw,buttonx,buttony,buttonz;

    private SparseArray<String> keyValues = new SparseArray<>();
    private InputConnection inputConnection;

    public CustomKeyboard(Context context) {
        this(context, null, 0);
    }

    public CustomKeyboard(Context context, AttributeSet attrs) {
        this(context, attrs, 0);
    }

    public CustomKeyboard(Context context, AttributeSet attrs, int
defStyleAttr) {
        super(context, attrs, defStyleAttr);
        init(context, attrs);
    }

```

```
    }

    private void init(Context context, AttributeSet attrs) {
        LayoutInflater.from(context).inflate(R.layout.keyboard, this,
true);
        button1 = (Button) findViewById(R.id.button_1);
        button1.setOnClickListener(this);
        button2 = (Button) findViewById(R.id.button_2);
        button2.setOnClickListener(this);
        button3 = (Button) findViewById(R.id.button_3);
        button3.setOnClickListener(this);
        button4 = (Button) findViewById(R.id.button_4);
        button4.setOnClickListener(this);
        button5 = (Button) findViewById(R.id.button_5);
        button5.setOnClickListener(this);
        button6 = (Button) findViewById(R.id.button_6);
        button6.setOnClickListener(this);
        button7 = (Button) findViewById(R.id.button_7);
        button7.setOnClickListener(this);
        button8 = (Button) findViewById(R.id.button_8);
        button8.setOnClickListener(this);
        button9 = (Button) findViewById(R.id.button_9);
        button9.setOnClickListener(this);
        button0 = (Button) findViewById(R.id.button_0);
        button0.setOnClickListener(this);
        buttonDelete = (Button) findViewById(R.id.button_delete);
        buttonDelete.setOnClickListener(this);
        buttonEnter = (Button) findViewById(R.id.button_enter);
        buttonEnter.setOnClickListener(this);

        buttona = (Button) findViewById(R.id.button_a);buttonb = (Button)
findViewById(R.id.button_b);
        buttona.setOnClickListener(this);buttonb.setOnClickListener(this);
        buttonc = (Button) findViewById(R.id.button_c);buttond = (Button)
findViewById(R.id.button_d);
        buttonc.setOnClickListener(this);buttond.setOnClickListener(this);
        buttone = (Button) findViewById(R.id.button_e);buttonf = (Button)
findViewById(R.id.button_f);
        buttone.setOnClickListener(this);buttonf.setOnClickListener(this);
        buttong = (Button) findViewById(R.id.button_g);buttonh = (Button)
findViewById(R.id.button_h);
        buttong.setOnClickListener(this);buttonh.setOnClickListener(this);
        buttoni = (Button) findViewById(R.id.button_i);buttonj = (Button)
findViewById(R.id.button_j);
        buttoni.setOnClickListener(this);buttonj.setOnClickListener(this);
        buttonk = (Button) findViewById(R.id.button_k);buttonl = (Button)
findViewById(R.id.button_l);
        buttonk.setOnClickListener(this);buttonl.setOnClickListener(this);
        buttonm = (Button) findViewById(R.id.button_m);buttonn = (Button)
findViewById(R.id.button_n);
        buttonm.setOnClickListener(this);buttonn.setOnClickListener(this);
        buttono = (Button) findViewById(R.id.button_o);buttonp = (Button)
findViewById(R.id.button_p);
        buttono.setOnClickListener(this);buttonp.setOnClickListener(this);
        buttonq = (Button) findViewById(R.id.button_q);buttonr = (Button)
findViewById(R.id.button_r);
        buttonq.setOnClickListener(this);buttonr.setOnClickListener(this);
        buttons = (Button) findViewById(R.id.button_s);buttont = (Button)
findViewById(R.id.button_t);
        buttons.setOnClickListener(this);buttont.setOnClickListener(this);
```



```

        buttonu = (Button) findViewById(R.id.button_u);buttonv = (Button)
findViewById(R.id.button_v);
        buttonu.setOnClickListener(this);buttonv.setOnClickListener(this);
        buttonw = (Button) findViewById(R.id.button_w);buttonx = (Button)
findViewById(R.id.button_x);
        buttonw.setOnClickListener(this);buttonx.setOnClickListener(this);
        buttony = (Button) findViewById(R.id.button_y);buttonz = (Button)
findViewById(R.id.button_z);
        buttony.setOnClickListener(this);buttonz.setOnClickListener(this);

        keyValues.put(R.id.button_1, "1");
        keyValues.put(R.id.button_2, "2");
        keyValues.put(R.id.button_3, "3");
        keyValues.put(R.id.button_4, "4");
        keyValues.put(R.id.button_5, "5");
        keyValues.put(R.id.button_6, "6");
        keyValues.put(R.id.button_7, "7");
        keyValues.put(R.id.button_8, "8");
        keyValues.put(R.id.button_9, "9");
        keyValues.put(R.id.button_0, "0");
        keyValues.put(R.id.button_enter, "\n");

        keyValues.put(R.id.button_a, "a");keyValues.put(R.id.button_b,
"b");
        keyValues.put(R.id.button_c, "c");keyValues.put(R.id.button_d,
"d");
        keyValues.put(R.id.button_e, "e");keyValues.put(R.id.button_f,
"f");
        keyValues.put(R.id.button_g, "g");keyValues.put(R.id.button_h,
"h");
        keyValues.put(R.id.button_i, "i");keyValues.put(R.id.button_j,
"j");
        keyValues.put(R.id.button_k, "k");keyValues.put(R.id.button_l,
"l");
        keyValues.put(R.id.button_m, "m");keyValues.put(R.id.button_n,
"n");
        keyValues.put(R.id.button_o, "o");keyValues.put(R.id.button_p,
"p");
        keyValues.put(R.id.button_q, "q");keyValues.put(R.id.button_r,
"r");
        keyValues.put(R.id.button_s, "s");keyValues.put(R.id.button_t,
"t");
        keyValues.put(R.id.button_u, "u");keyValues.put(R.id.button_v,
"v");
        keyValues.put(R.id.button_w, "w");keyValues.put(R.id.button_x,
"x");
        keyValues.put(R.id.button_y, "y");keyValues.put(R.id.button_z,
"z");
    }

    @Override
    public void onClick(View view) {
        if (inputConnection == null)
            return;

        if (view.getId() == R.id.button_delete) {
            CharSequence selectedText = inputConnection.getSelectedText(0);

            if (TextUtils.isEmpty(selectedText)) {
                inputConnection.deleteSurroundingText(1, 0);
            } else {

```

```
        inputConnection.commitText("", 1);
    }
    } else {
        String value = keyValues.get(view.getId());
        inputConnection.commitText(value, 1);
    }
}

public void setInputConnection(InputConnection ic) {
    inputConnection = ic;
}
}
```

OUTPUT:

DEL		ANSWER	
1	2	3	/
4	5	6	-
7	8	9	X
.	0	%	+