



Title: First Aid Guide App

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Introduction:

The **First Aid Guide App** is designed to provide essential first aid instructions for common emergencies such as 🌟 Poisoning, 💯 Bleeding, 💨 Choking, 😢 Fever, and ⚡ Electric Shock. The app is developed using **Android Studio** with **XML** for UI design and **Java** for logic implementation.

Objectives:

- 📌 To offer a quick reference guide for handling medical emergencies.
- 📌 To implement an interactive and user-friendly UI.
- 📌 To use expandable sections for concise information display.

System Requirements:

Hardware:

- **Android Device** (API Level 21 and above)
- **Minimum 2GB RAM**
- **Minimum 100MB storage space**

Software & Simulator:

- **Android Studio**
- **Java Development Kit (JDK)**
- **Android Emulator or Physical Device**

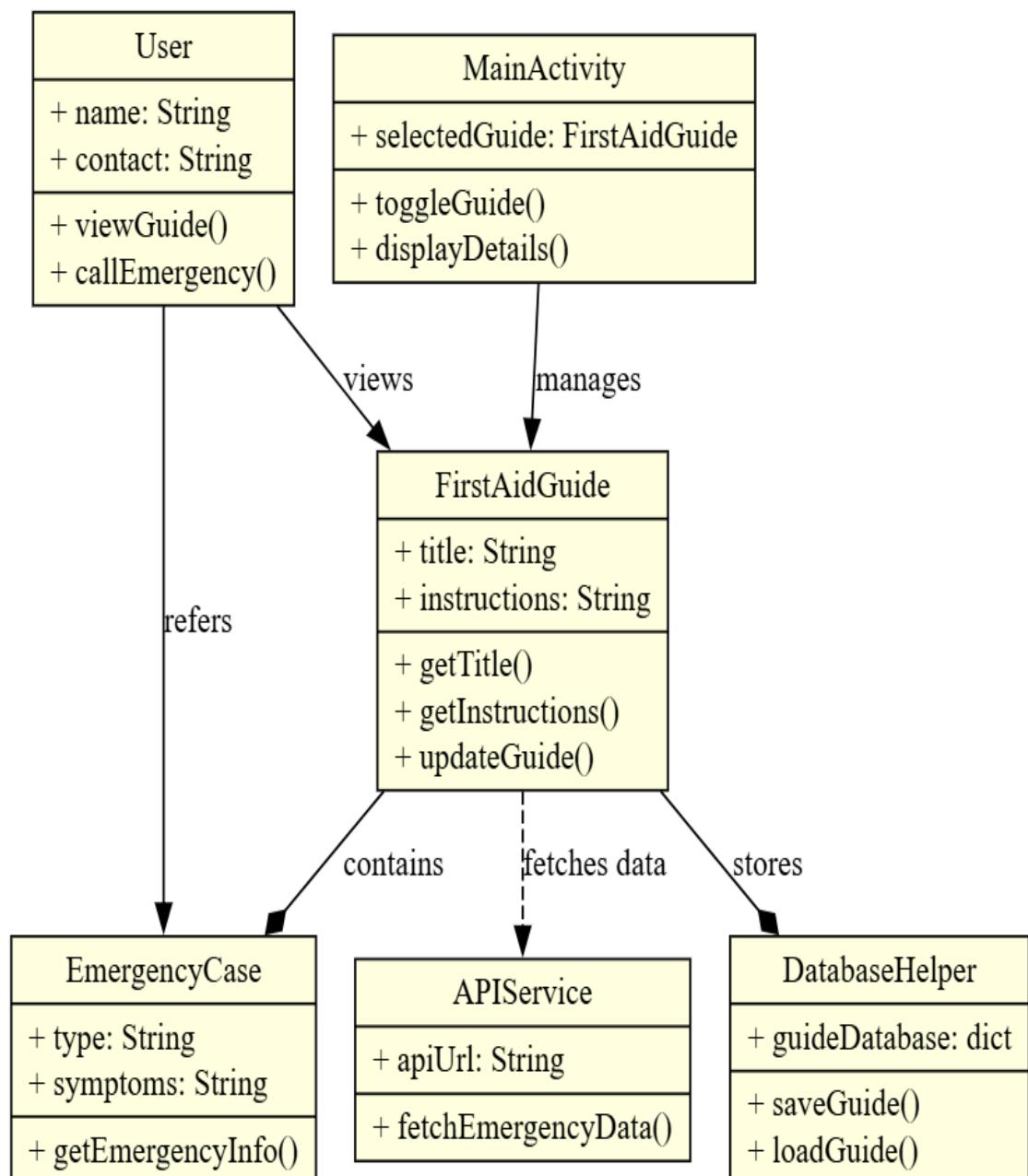
System Design & Architecture:

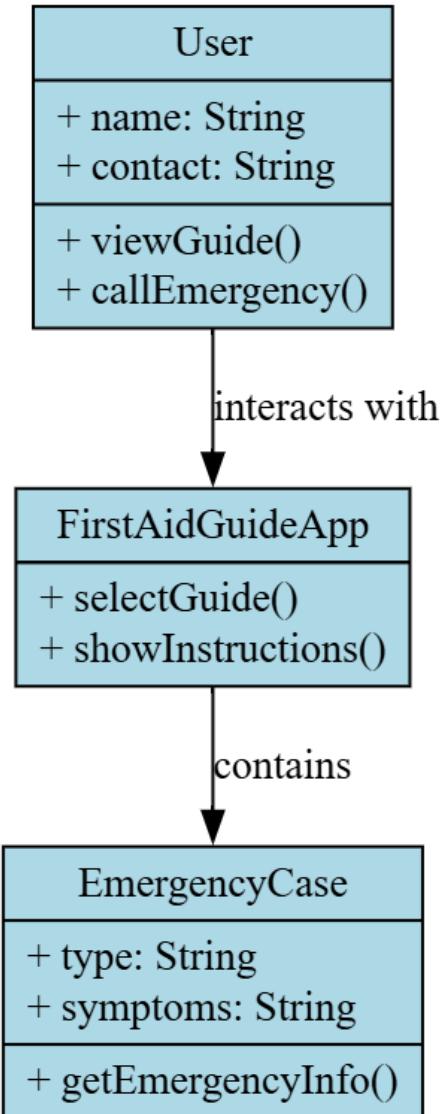
The application follows an **MVC (Model-View-Controller) architecture**:



- **Model:** Stores the first aid instructions.
- **View:** XML-based UI components including **ScrollView** and **LinearLayouts**.
- **Controller:** Java logic to toggle visibility of first aid instructions.

UML & Class Diagram:





Key Features:

- Interactive UI with emoji-based section representation
- Expandable and collapsible first aid guides
- Intuitive navigation and clean layout
- Predefined color themes for readability

Implementation:

-  **activity_main.xml**: Defines the layout using ScrollView and LinearLayouts.
-  **MainActivity.java**: Implements toggle functionality for first aid guides.
-  **colors.xml**: Stores theme colors.

Testing:

- Unit testing for toggle functionality**
- UI testing for proper visibility changes and layout alignment**
- Compatibility testing across different screen sizes**

Complete Coding:

MainActivity.java

```
package com.example.firstaidguideapp;

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

public class MainActivity extends AppCompatActivity {

    TextView poisoningGuide, bleedingGuide, chokingGuide, feverGuide,
electricShockGuide;
    TextView poisoningToggle, bleedingToggle, chokingToggle, feverToggle,
electricShockToggle;

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

        // Find Views
        poisoningGuide = findViewById(R.id.poisoningGuide);
        bleedingGuide = findViewById(R.id.bleedingGuide);
        chokingGuide = findViewById(R.id.chokingGuide);
        feverGuide = findViewById(R.id.feverGuide);
        electricShockGuide = findViewById(R.id.electricShockGuide);

        poisoningToggle = findViewById(R.id.poisoningToggle);
        bleedingToggle = findViewById(R.id.bleedingToggle);
        chokingToggle = findViewById(R.id.chokingToggle);
```



```

feverToggle = findViewById(R.id.ferverToggle);
electricShockToggle = findViewById(R.id.electricShockToggle);

// Toggle Visibility for each section
setupToggle(poisoningToggle, poisoningGuide);
setupToggle(bleedingToggle, bleedingGuide);
setupToggle(chokingToggle, chokingGuide);
setupToggle(feverToggle, feverGuide);
setupToggle(electricShockToggle, electricShockGuide);
}

private void setupToggle(TextView toggleButton, TextView guide) {
    toggleButton.setOnClickListener(v -> guide.setVisibility(
        guide.getVisibility() == View.VISIBLE ? View.GONE : View.VISIBLE
    ));
}
}

```

Activity_main.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<ScrollView 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"
    android:background="@color/backgroundColor"
    android:padding="16dp"
    tools:context=".MainActivity">

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

        <!-- Title -->
        <TextView
            android:id="@+id/titleText"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="🏡 First Aid Guide"
            android:textSize="28sp"
            android:textStyle="bold"
            android:textColor="@color/primaryColor"
            android:gravity="center"
            android:padding="12dp" />
    
```



```
<!-- First Aid Sections -->

<!-- Poisoning -->
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:background="@color/cardBackground"
    android:padding="20dp"
    android:layout_marginBottom="12dp"
    android:elevation="6dp">

    <TextView
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:text="💊"
        android:textSize="60sp"
        android:gravity="center" />

    <LinearLayout
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:orientation="vertical"
        android:paddingStart="16dp">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Poisoning"
            android:textSize="24sp"
            android:textStyle="bold"
            android:textColor="@color/textPrimary" />

        <TextView
            android:id="@+id/poisoningGuide"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="✓ Do not induce vomiting.\n✓ Seek medical help immediately."
            android:textSize="18sp"
            android:textColor="@color/textSecondary"
            android:visibility="gone" />
    </LinearLayout>

    <TextView
```



```
        android:id="@+id/poisoningToggle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="↓"
        android:textSize="28sp"
        android:clickable="true"
        android:padding="12dp"/>
    </LinearLayout>

    <!-- Bleeding -->
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="horizontal"
        android:background="@color/cardBackground"
        android:padding="20dp"
        android:layout_marginBottom="12dp"
        android:elevation="6dp">

        <TextView
            android:layout_width="80dp"
            android:layout_height="80dp"
            android:text="_bleeding"
            android:textSize="60sp"
            android:gravity="center" />

        <LinearLayout
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:orientation="vertical"
            android:paddingStart="16dp">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:text="Bleeding"
                android:textSize="24sp"
                android:textStyle="bold"
                android:textColor="@color/textPrimary" />

            <TextView
                android:id="@+id/bleedingGuide"
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
```



```
        android:text="✓ Apply direct pressure.\n✓ Use a clean cloth.\n✓ Seek help if
severe."
        android:textSize="18sp"
        android:textColor="@color/textSecondary"
        android:visibility="gone" />
    </LinearLayout>

<TextView
    android:id="@+id/bleedingToggle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="⬇"
    android:textSize="28sp"
    android:clickable="true"
    android:padding="12dp"/>
</LinearLayout>

<!-- Choking -->
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:background="@color/cardBackground"
    android:padding="20dp"
    android:layout_marginBottom="12dp"
    android:elevation="6dp">

    <TextView
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:text="气体"
        android:textSize="60sp"
        android:gravity="center" />

    <LinearLayout
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:orientation="vertical"
        android:paddingStart="16dp">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Choking"
            android:textSize="24sp"
```



```
        android:textStyle="bold"
        android:textColor="@color/textPrimary" />

    <TextView
        android:id="@+id/chokingGuide"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="✓ Encourage coughing.\n✓ Perform back blows.\n✓ Start CPR if
needed."
        android:textSize="18sp"
        android:textColor="@color/textSecondary"
        android:visibility="gone" />
    </LinearLayout>

    <TextView
        android:id="@+id/chokingToggle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="↓"
        android:textSize="28sp"
        android:clickable="true"
        android:padding="12dp"/>
    </LinearLayout>

<!-- Fever (Newly Added) -->
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:background="@color/cardBackground"
    android:padding="20dp"
    android:layout_marginBottom="12dp"
    android:elevation="6dp">

    <TextView
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:text="🤒 "
        android:textSize="60sp"
        android:gravity="center" />

    <LinearLayout
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:orientation="vertical"
```



```
        android:paddingStart="16dp">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Fever"
            android:textSize="24sp"
            android:textStyle="bold"
            android:textColor="@color/textPrimary" />

        <TextView
            android:id="@+id/feverGuide"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="✓ Drink fluids.\n✓ Use a cool cloth.\n✓ Rest well."
            android:textSize="18sp"
            android:textColor="@color/textSecondary"
            android:visibility="gone" />
    </LinearLayout>

    <TextView
        android:id="@+id/feverToggle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="↓"
        android:textSize="28sp"
        android:clickable="true"
        android:padding="12dp"/>
</LinearLayout>
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal"
    android:background="@color/cardBackground"
    android:padding="20dp"
    android:layout_marginBottom="12dp"
    android:elevation="6dp">

    <TextView
        android:layout_width="80dp"
        android:layout_height="80dp"
        android:text="⚡"
        android:textSize="60sp"
        android:gravity="center" />
<LinearLayout
```



```

        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:orientation="vertical"
        android:paddingStart="16dp">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Electric Shock"
        android:textSize="24sp"
        android:textStyle="bold"
        android:textColor="@color/textPrimary" />

    <TextView
        android:id="@+id/electricShockGuide"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="✓ Turn off the power source.\n✓ Do not touch the person with
bare hands.\n✓ Call emergency services immediately."
        android:textSize="18sp"
        android:textColor="@color/textSecondary"
        android:visibility="gone" />
    </LinearLayout>

    <TextView
        android:id="@+id/electricShockToggle"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="↓"
        android:textSize="28sp"
        android:clickable="true"
        android:padding="12dp"/>
    </LinearLayout>

</LinearLayout>
</ScrollView>

```

Colors.xml:

```

<resources>
    <!-- Background Color (Gradient-like Vibrant Blue) -->
    <color name="backgroundColor">#BBDEFB</color>

```



```
<!-- Primary Color (Bright Royal Blue for Headings) -->
<color name="primaryColor">#1976D2</color>

<!-- Card Background (Soft Pastel Yellow for Contrast) -->
<color name="cardBackground">#FFF9C4</color>

<!-- Primary Text Color (Deep Charcoal for Readability) -->
<color name="textPrimary">#1E1E1E</color>

<!-- Secondary Text Color (Warm Orange for Details) -->
<color name="textSecondary">#FF7043</color>

<!-- Accent Color (Bright Green for Highlights) -->
<color name="accentColor">#4CAF50</color>

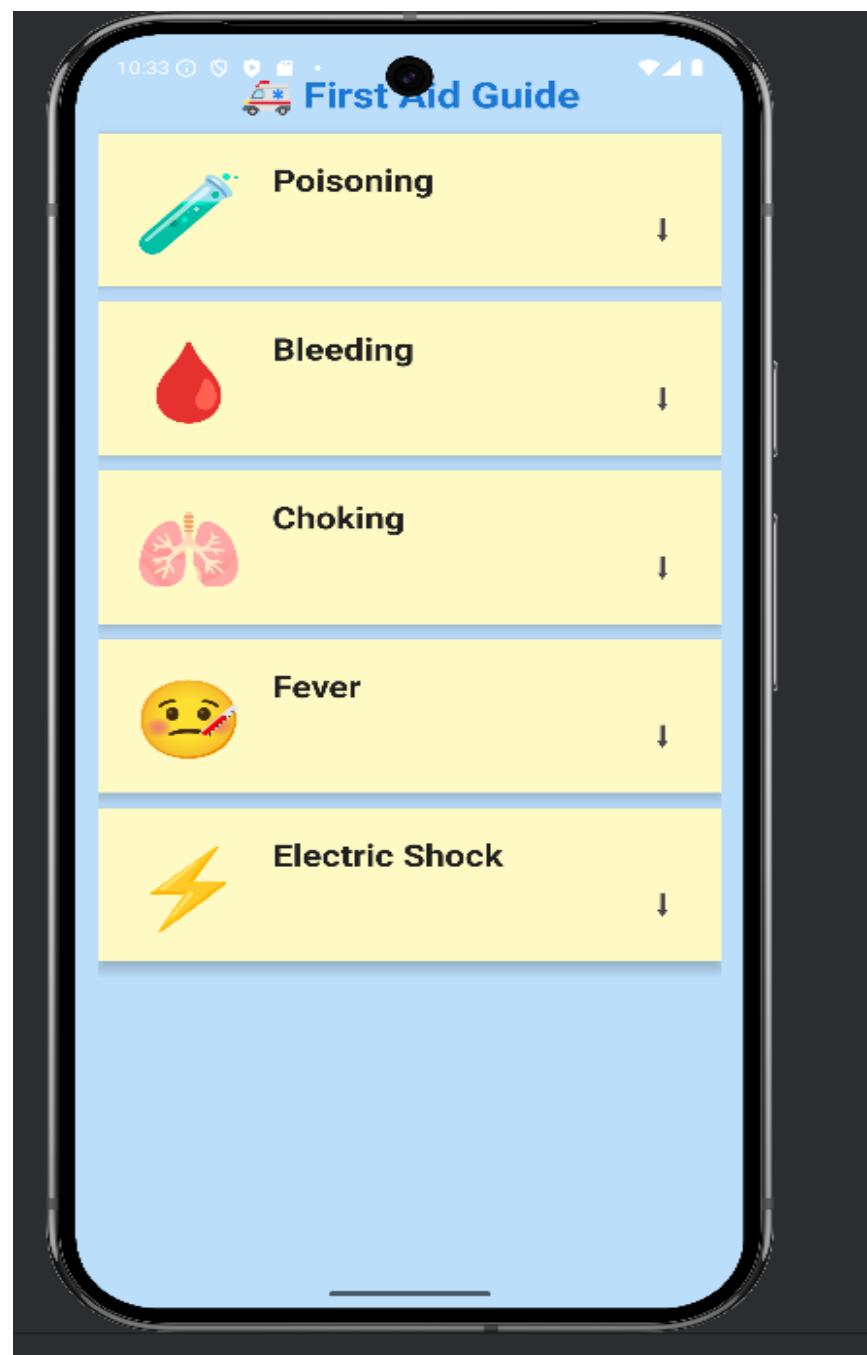
<!-- Button Background Color (Bold Red for Important Actions) -->
<color name="buttonColor">#D32F2F</color>

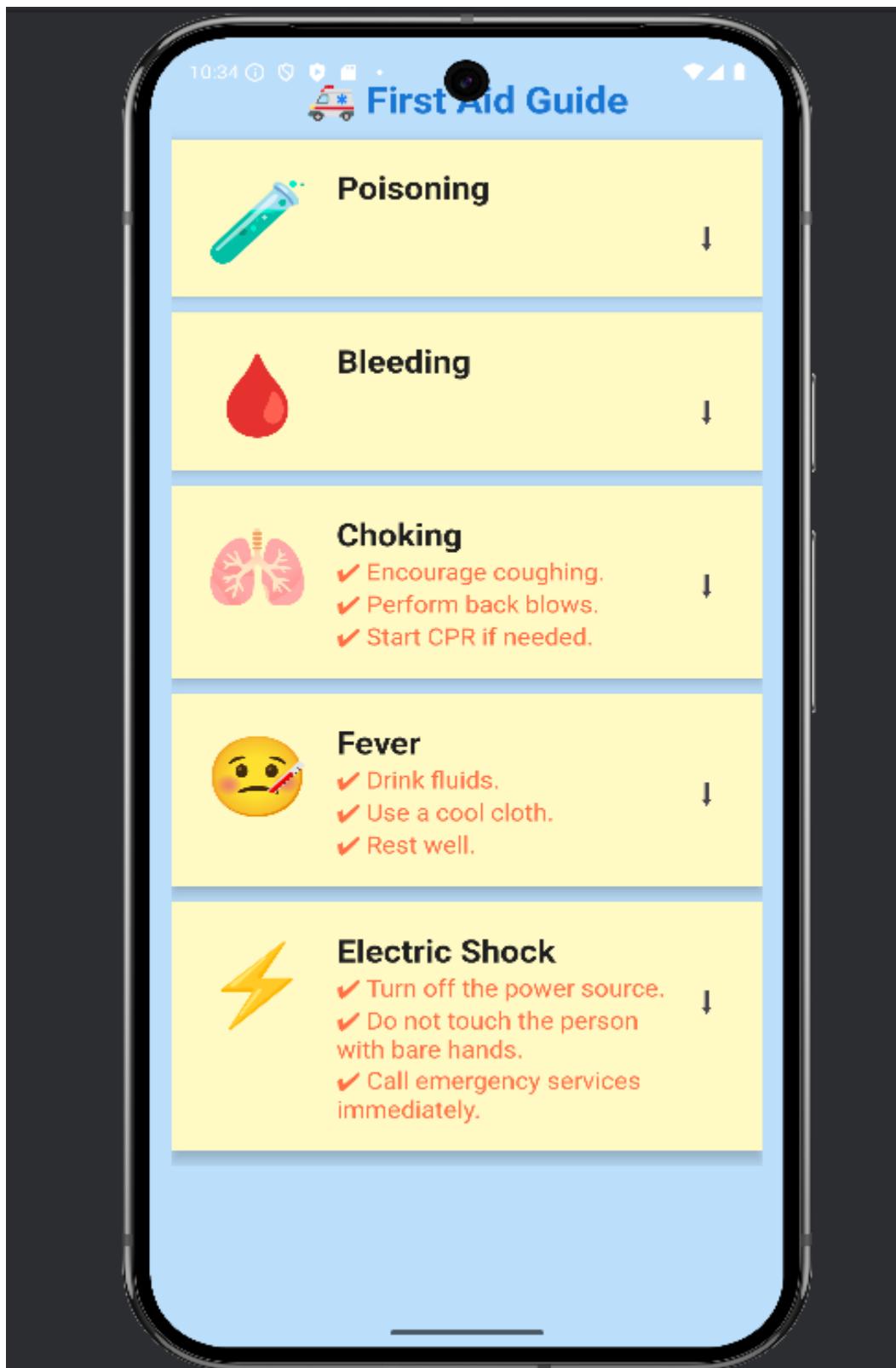
<!-- Toggle Arrow Color (Eye-catching Purple) -->
<color name="toggleColor">#9C27B0</color>
</resources>
```

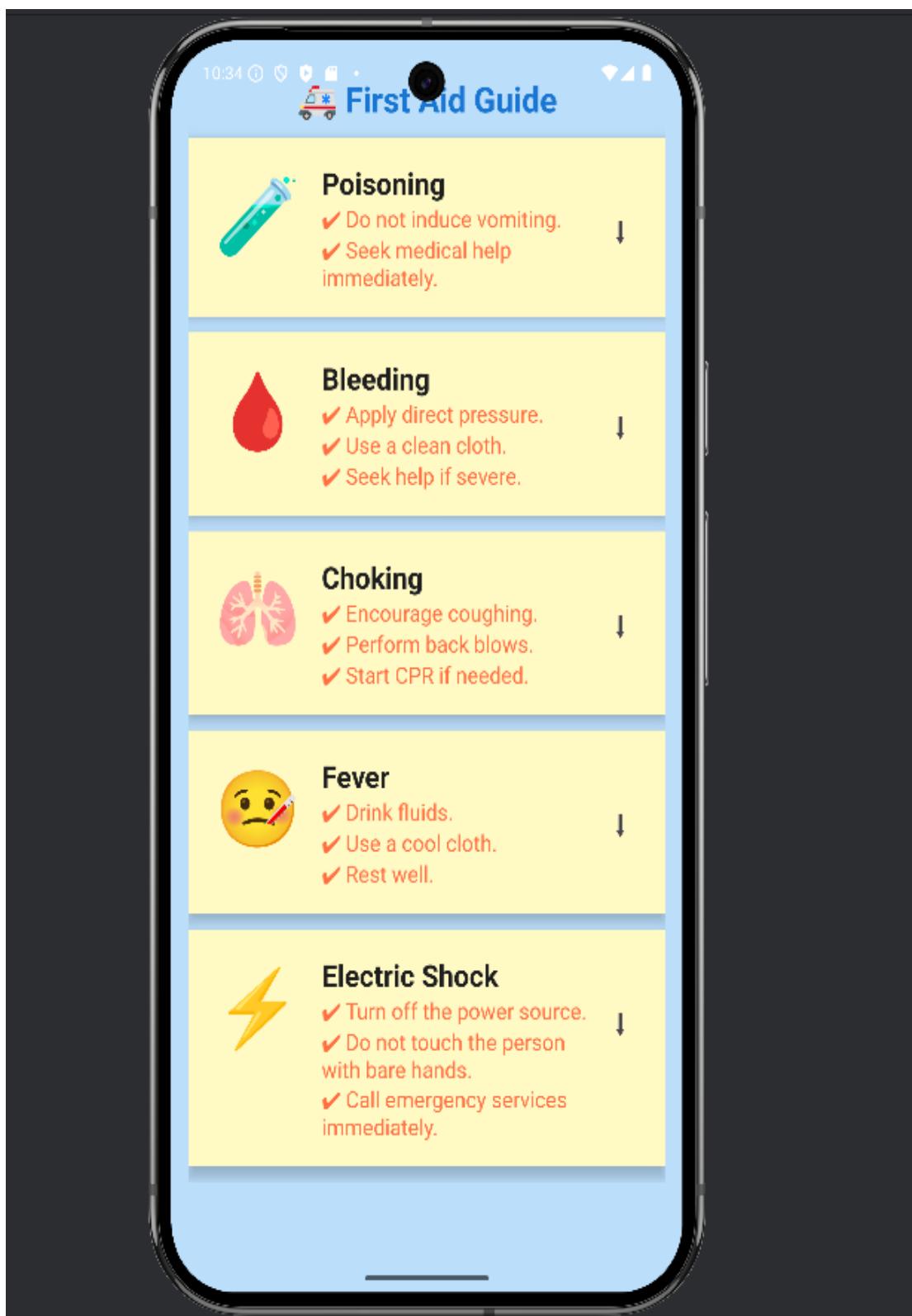


Screenshots :









Conclusion:

The First Aid Guide App successfully provides a structured and easy-to-use reference for medical emergencies, ensuring users can quickly access essential information during critical situations.

Future Scope:

Voice-enabled instructions :

Implementing audio guidance to assist users in hands-free emergency situations.

Multi-language support :

Expanding accessibility by incorporating multiple languages for a diverse user base.

Integration with emergency contact services :

Allowing users to directly call emergency responders or notify their contacts with a single tap.

