

AndroidManifest.xml File Security

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AndroidManifest.xml

File is an important component of an Android application as it contains essential information and configurations about the app. It serves as a roadmap for the Android system to understand and interact with the app. Therefore, it is crucial to ensure the security and integrity of the AndroidManifest.xml file to prevent unauthorized access or tampering.

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.deneme2.uygulama1">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="Uygulama1"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

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

</manifest>
```

WHAT INSIDE ANDROIDMANIFEST FILE

1 MinSDK Version:

MinSDK specifies the minimum API level on which the application can run. It is essential to ensure that your app functions correctly on different Android versions while keeping security features up-to-date.

2 Permissions:

Define what data and hardware components the app needs to access. Permissions should be explicitly declared for:

Camera

Contacts

Internet access

Read/write external storage

Package management

Bluetooth, etc.

Make sure that you request only the permissions necessary for your app's functionality to reduce the attack surface.

3 Activities:

Activities represent UI elements or screens in the application. Some activities, particularly those dealing with sensitive data, need extra protection. Consider using Intent filters to restrict access to screens containing:

Account details

Money transfer functions

Hidden screens

4 Content Providers:

Content providers serve data from your app to other applications. Be cautious about the data you expose and ensure it's adequately protected, especially if it's sensitive information.

Structure of AndroidManifest.xml

The basic structure of the AndroidManifest.xml file includes the following main elements:

- `<manifest>` tag
- `<application>` tag
- `<activity>`, `<service>`, `<receiver>`, and `<provider>` tags for components
- `<intent-filter>` for defining intent filters
- `<permission>` for specifying permissions

Security Issues in AndroidManifest.xml

