

Android Biometrics

Define

Physiological

VS

Behavioral

Verification
(one-to-one)



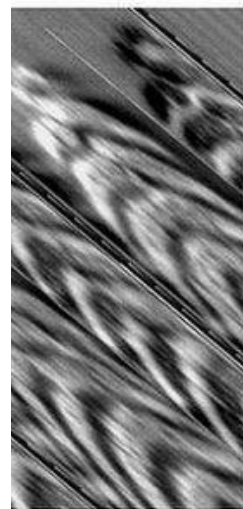
Identification
(one-to-many)



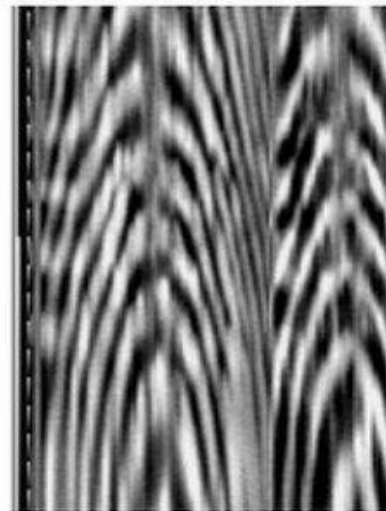
Innovate



Do mistakes



(a)



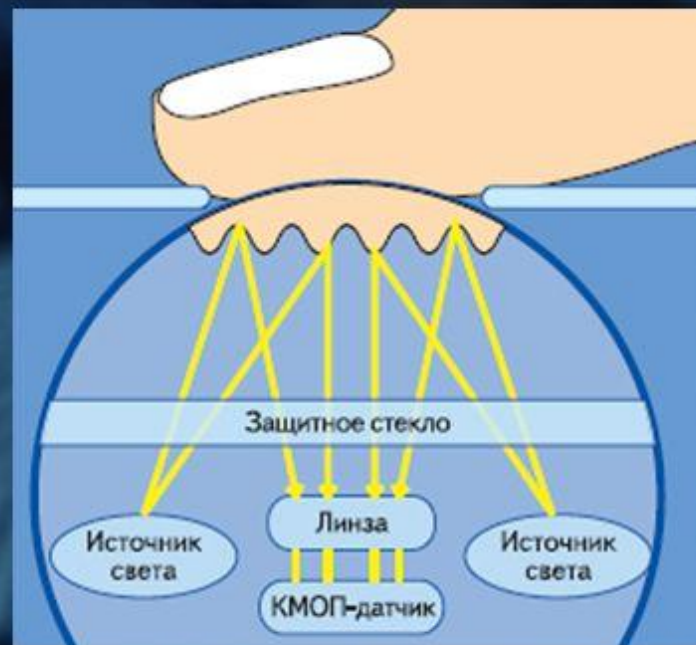
(b)

NOBODY

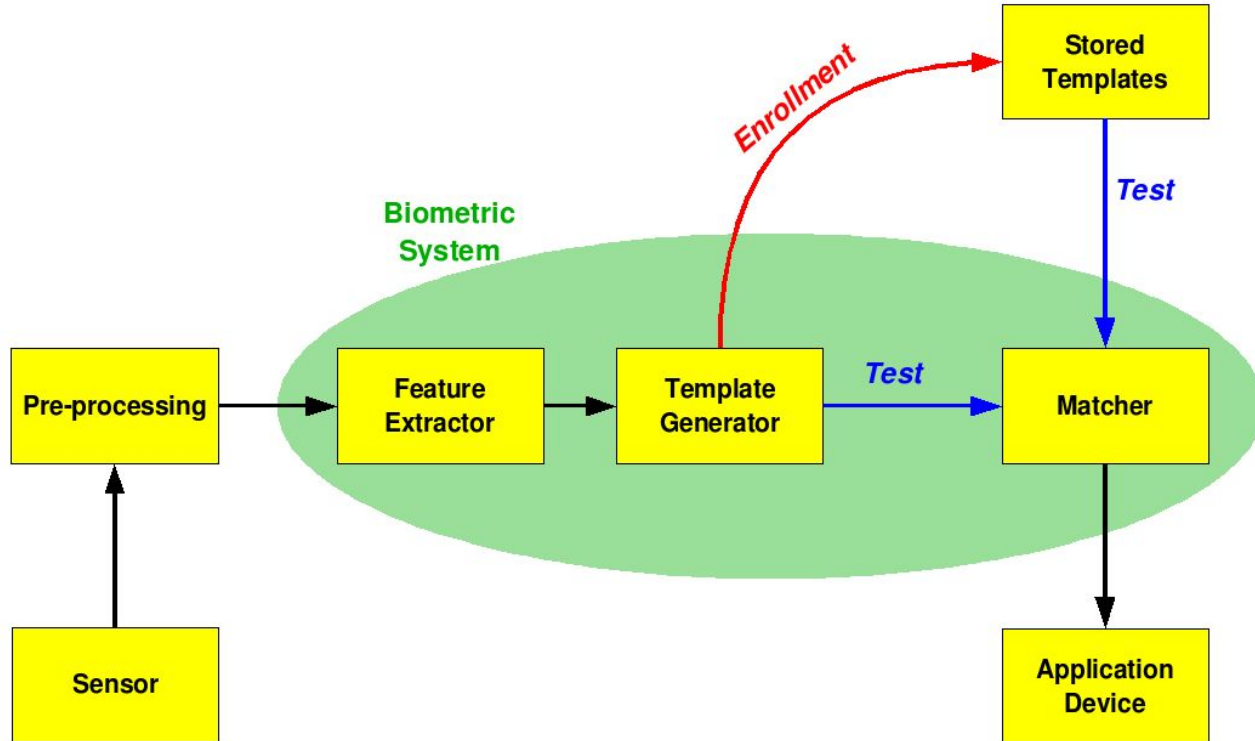


CARES

Investigate



Draw



Deploy

Gradle:

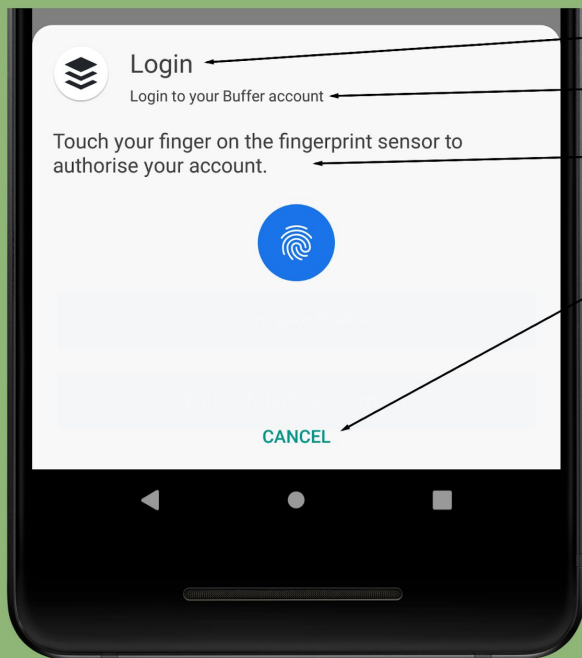
```
dependencies {  
    implementation "androidx.biometric:biometric:1.0.1"  
}
```

Deploy

```
private lateinit var executor: Executor
private lateinit var biometricPrompt: BiometricPrompt
private lateinit var promptInfo: BiometricPrompt.PromptInfo

override fun onCreate(savedInstanceState: Bundle?) {
    ...
    executor = ContextCompat.getMainExecutor(this)
    biometricPrompt = BiometricPrompt(this, executor,
        object : BiometricPrompt.AuthenticationCallback() {
            override fun onAuthenticationError(errorCode: Int, errString: CharSequence)
            override fun onAuthenticationSucceeded(result: BiometricPrompt.AuthenticationResult)
            override fun onAuthenticationFailed()
        }
    )
}
```

Deploy



Title

Subtitle

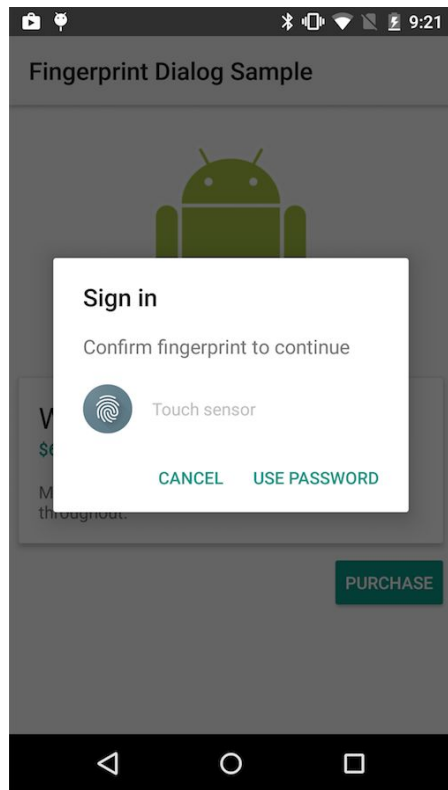
Description

Negative button

```
promptInfo = BiometricPrompt.PromptInfo.Builder()  
    .setTitle("Biometric login for my app")  
    .setSubtitle("Log in using your biometric credential")  
    .setNegativeButton("Use account password")  
    .build()
```

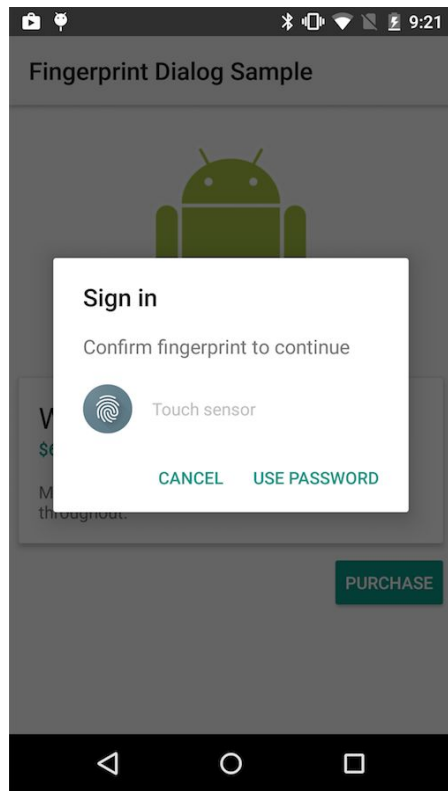
Deploy

```
// Allows user to authenticate using their lock screen
// PIN, pattern, or password.
promptInfo = BiometricPrompt.PromptInfo.Builder()
    .setTitle("Biometric login for my app")
    .setSubtitle("Log in using your biometric credential")
    // Cannot call setNegativeButton() and
    // setDeviceCredentialAllowed() at the same time.
    // .setNegativeButton("Use account password")
    .setDeviceCredentialAllowed(true)
    .build()
```



Deploy

```
// Allows user to authenticate using their lock screen
// PIN, pattern, or password.
promptInfo = BiometricPrompt.PromptInfo.Builder()
    .setTitle("Biometric login for my app")
    .setSubtitle("Log in using your biometric credential")
    // Cannot call setNegativeButton() and
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    // .setNegativeButton("Use account password")
    .setDeviceCredentialAllowed(true)
    .build()
```



Enjoy

Cryptographic solution that depends on authentication

Authenticate using only biometric credentials

Authenticate using either biometric or lock screen credentials

Authenticate without explicit user action

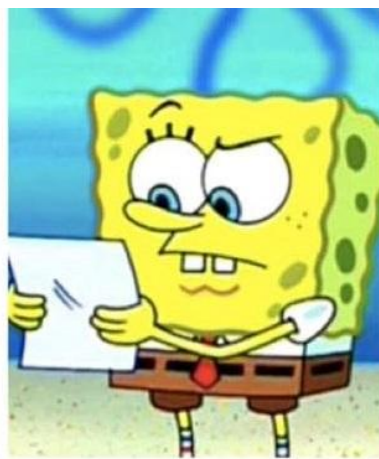
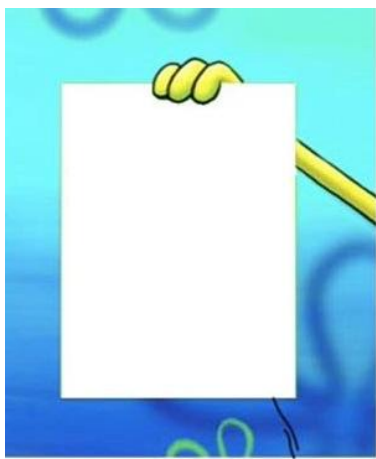
Update

Android 6

Android 8

Android 9

Android 10



Good luck!