# **Functions**

### **Search Movie**

Query Length between 1-100 character, character over 100 will be cut off Expect response time for 20 result = 200ms in normal network environment Seamless loading between pages during scroll

### **Movie Detail**

Expect response time = 20ms in normal network environment

#### Add / Remove Favorite Movie

Currently no limit on numbers

# **Network Requirement**

Favorite list is available in an offline environment. Search and detail require a network connection. It will just have no effect in an offline environment instead of popup an error.

#### **User Preference**

# **Search Options**

**Include Adult Content** 

(Yes / No)

Effect on Next Search

**Prefer Language** 

(options on values/language.xml)

Current query auto restart with new language

Clear Detail cache

Not effect on Favorite and current Detail Page

**Maximum Results to show** 

(options on values/max\_result.xml) (100 200 300 400 500, Default 200)

Effect on Current Search

# **SDK Target Version**

compileSdkVersion 30 targetSdkVersion 30

### Meet Google Play's target API level requirement:

New apps and app updates must target Android 10 (API level 29) or higher; except for Wear OS apps, which must target API level 28.

Starting in August 2021, new apps will need to: Target API level 30 (Android 11) or above and adjust for behavioral changes; except Wear OS apps, which must continue to target API level 28.

# **3rd Party Library**

#### Retrofit 2.9

Type-safe HTTP client for API

https://github.com/square/retrofit

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#### Fresco 2.4

Network Image loading and display

https://github.com/facebook/fresco

MIT License

#### Like Button 0.2

Button with animation effects similar to Twitter's heart

https://github.com/jd-alexander/LikeButton

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### **Gson 2.8.6**

https://github.com/google/gson

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# **UI Design**

# **Objective**

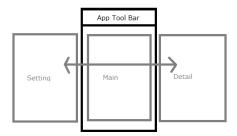
Base on Android developers design guide Light weight Independent on device screen resolution Most operation can complete by one hand No pop-up Dialog (Except confirm on exit)

# Component

App Toolbar Search, Favorite, Setting

Main Fragment Display search result or favorite

Detail Fragment Display movie detail
Setting Fragment User preference setting



# **Implementation**

# Transition between fragment

Implemented by the new androidx viewPager2
Which provide a very smooth swipe animation

# Search result / favorite list

Implemented by androidx recyleView
Which is lightweight and very high performance
With the help of the new FlexboxLayoutManager
Item is place as a grid fit on every screen / orientation

