Android - Camera2

- As of API level 21, Android has a new Camera API called Camera2.
- The new API is a bit more complex but offers more functionally, flexibility, and control.
  - NOTE that not every phone can take full advantage of the camer2 API.
  - Guaranteed full support is on Nexus 5 and Nexus 6 Phones.
  - Other manufacturers could fully support this API, but it is done at their discretion.

Camera2 - Pipeline

- The new pipeline for the camera2 API (general sense / high-level) :
  - Obtain a `CameraDevice` via a `CameraManager`
  - Create a `CaptureRequest`
  - `CaptureRequests` are sent to a `CameraDevice` via a `CaptureSession`
    - Multiple requests can be sent to a `CameraDevice`, and in this case requests are queued.
    - In order to setup a preview for a `CameraDevice`, you must build a `CaptureRequest` and add it to a `CaptureSession` with `CaptureSession.setRepeatingRequest()`
  - These quests are sent to the camera hardware where they can have two different destinations.
    - They go to preconfigured output Surfaces
    - Sent as CaptureResult where you can save a still images among other tasks.

Camera2

https://source.android.com/devices/camera/camera3.html
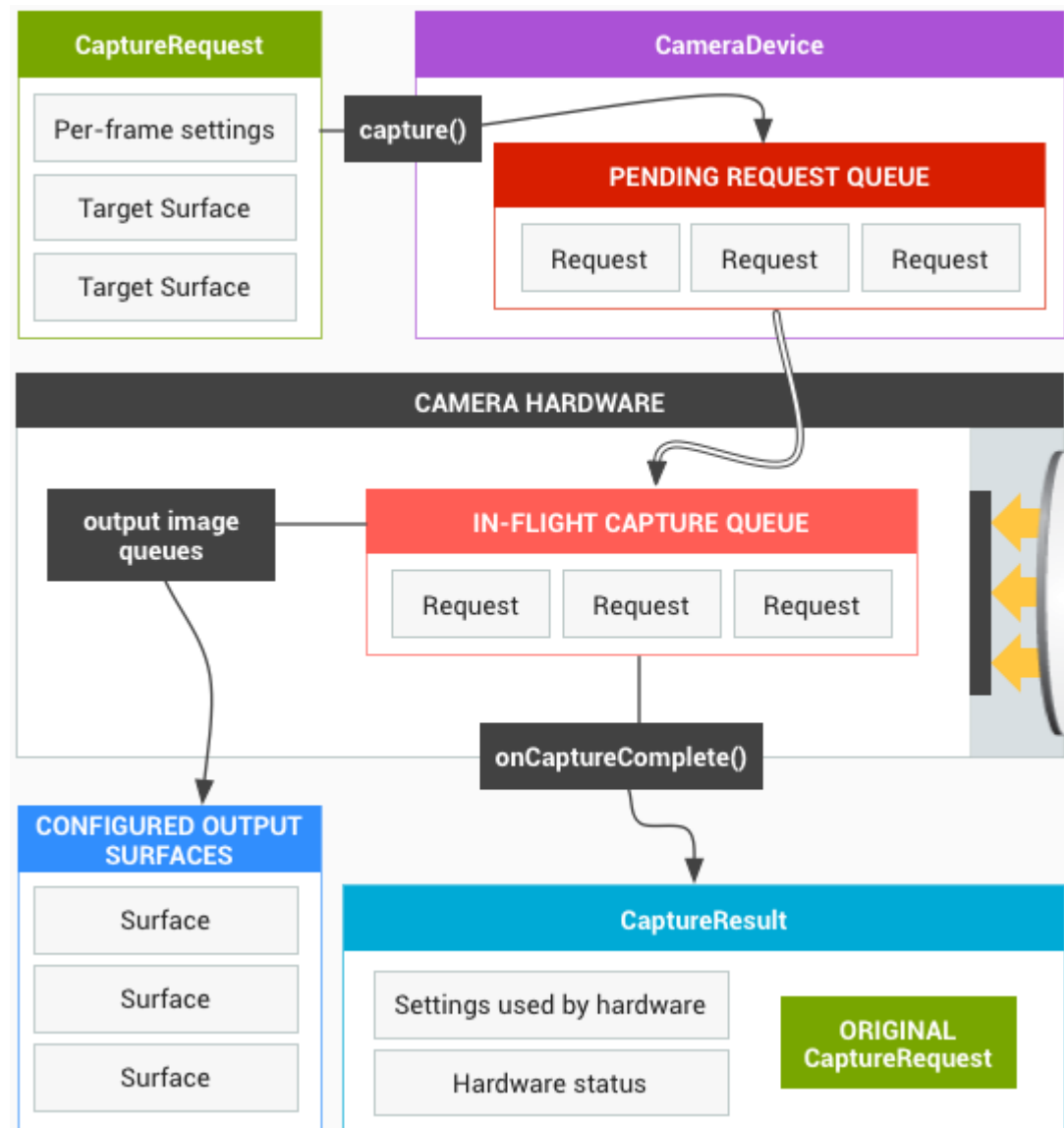
Camera2 - Tutorial

- In this tutorial, the app configures a preview session to be shown as a TextureView.

- This tutorial is a compressed version of Camera2Basic from Google Samples GitHub:
  - [Android-Camera2Basic](#)

- When the button is pressed a still image is captured and is saved the apps data folder.
  - Path on phone is /storage/emulated/legacy/Android/org.androidtutorials.sensor.camera2/data/files/pic.jpg

References

- Camera2
- CameraDevice
- CameraManager
- CameraCharacteristics
- CameraCaptureSession
- CaptureRequest
- CaptureResult
- CameraMetdata
- TotalCaptureRequest
- CameraDevice.StateCallback
- CameraCaptureSession.CaptureCallback
- CaptureRequest.Builder

- Handler
- HandlerThread
- SurfaceTexture
- TextureView
- ImageReader
- View.onClickListener
- TextureView.SurfaceTextureListener