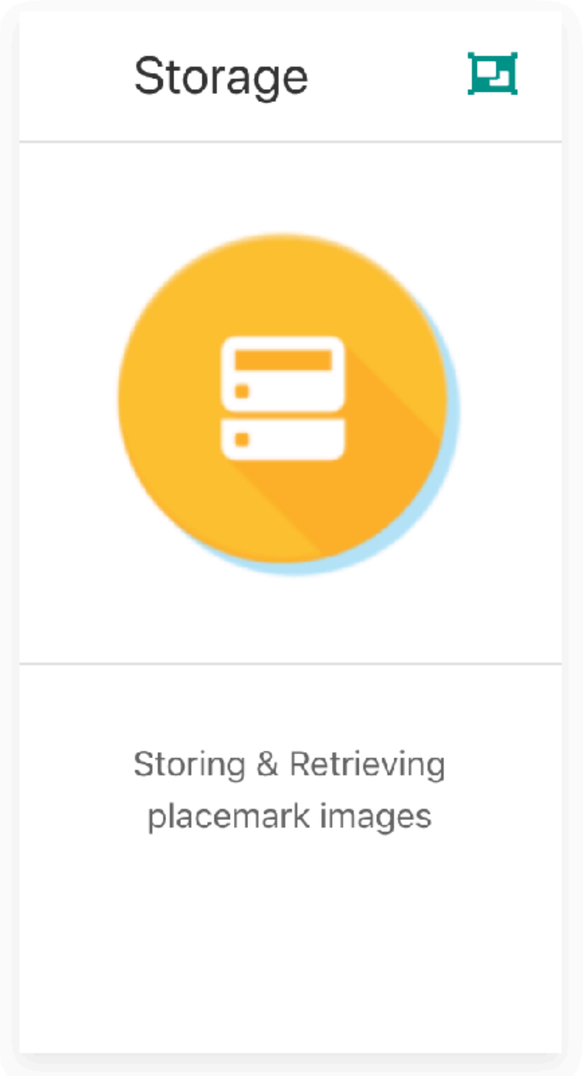
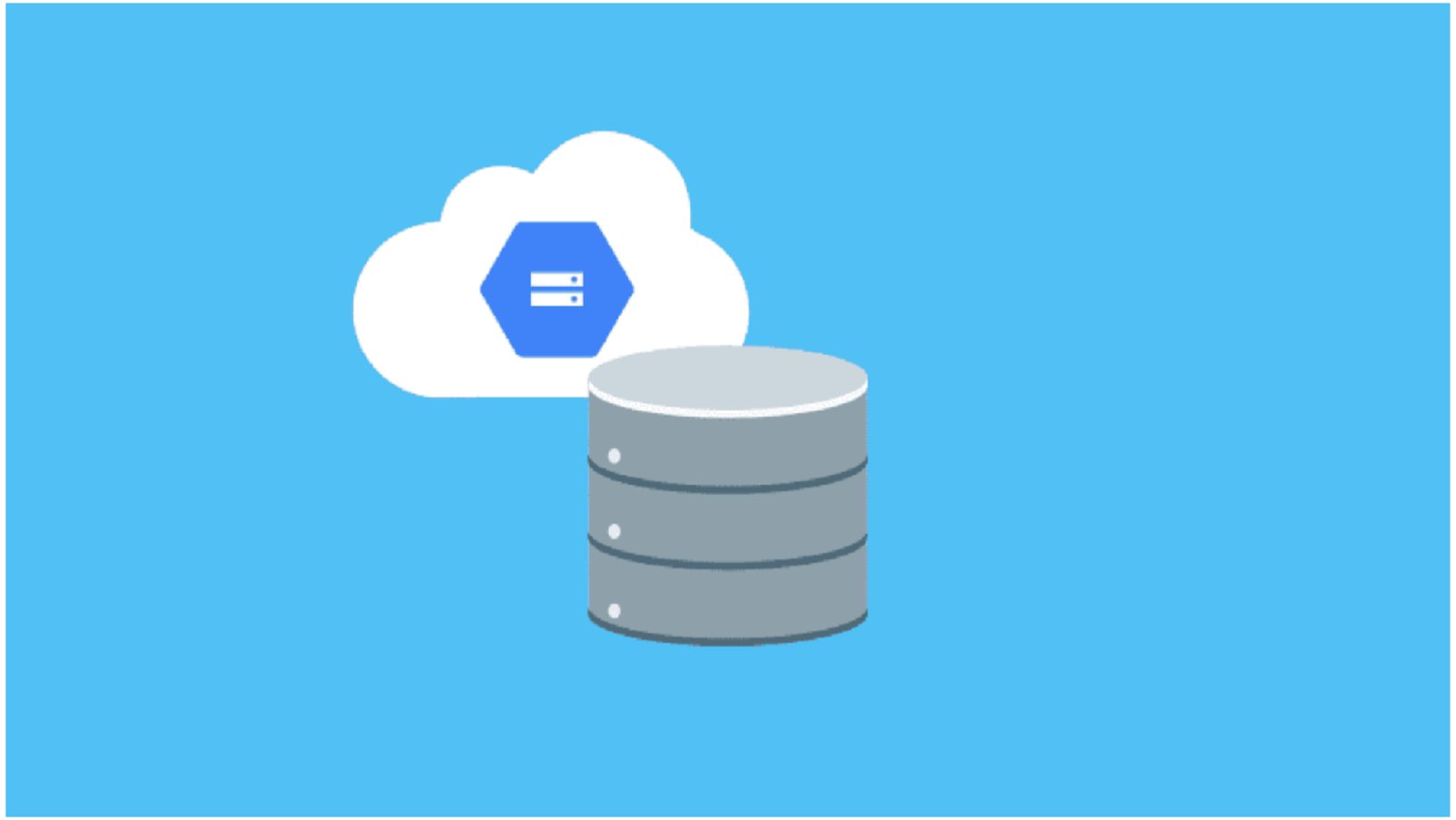
Firebase
Cloud Storage



Store your users' photos and videos

Cloud Storage is designed to help you quickly and easily store and serve user-generated content, such as photos and videos.

Cloud Storage



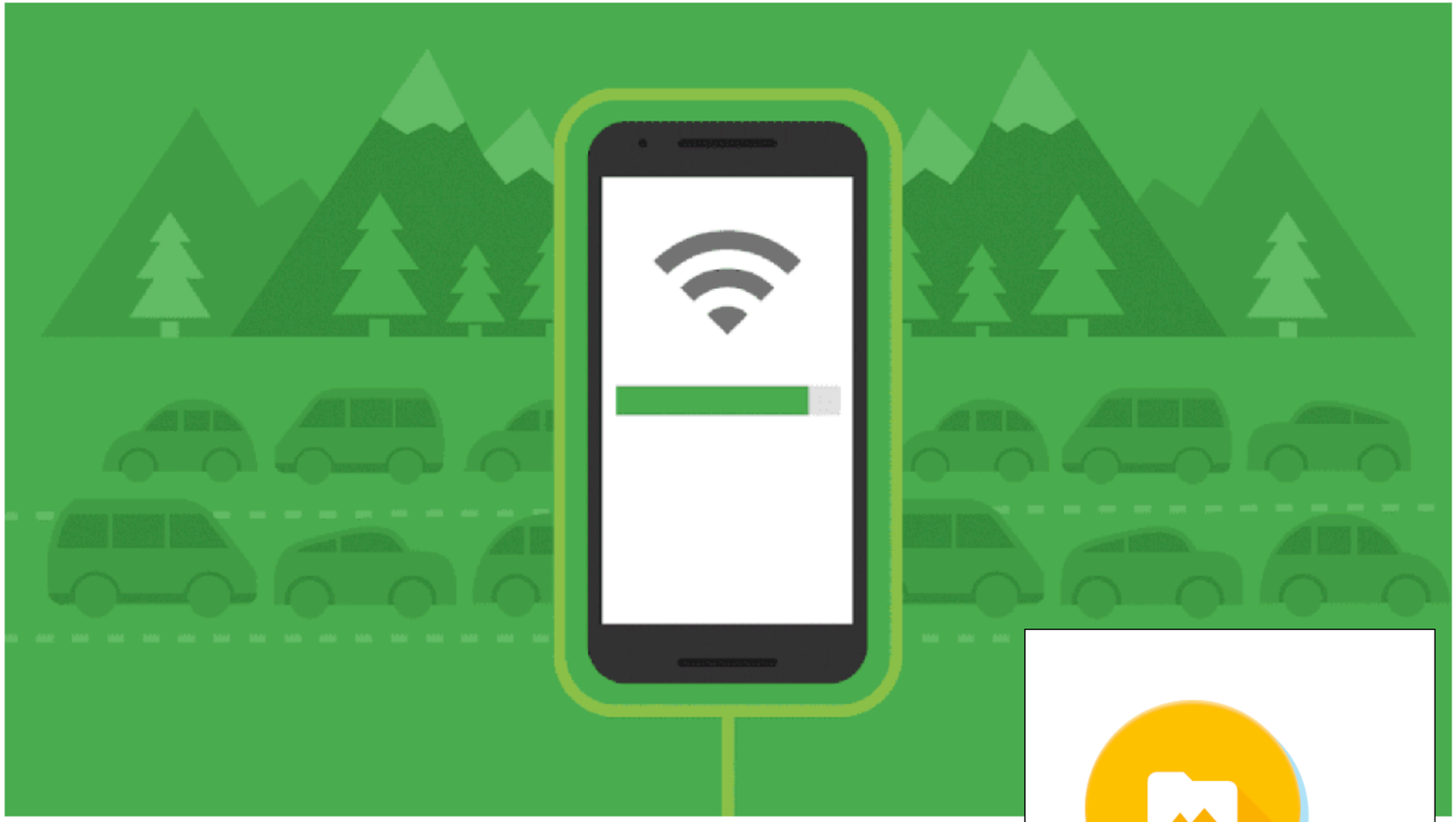
Build at Google scale

Our infrastructure is built for when your app goes viral. Effortlessly grow from prototype to production using the same technology that powers apps like Spotify and Google Photos.

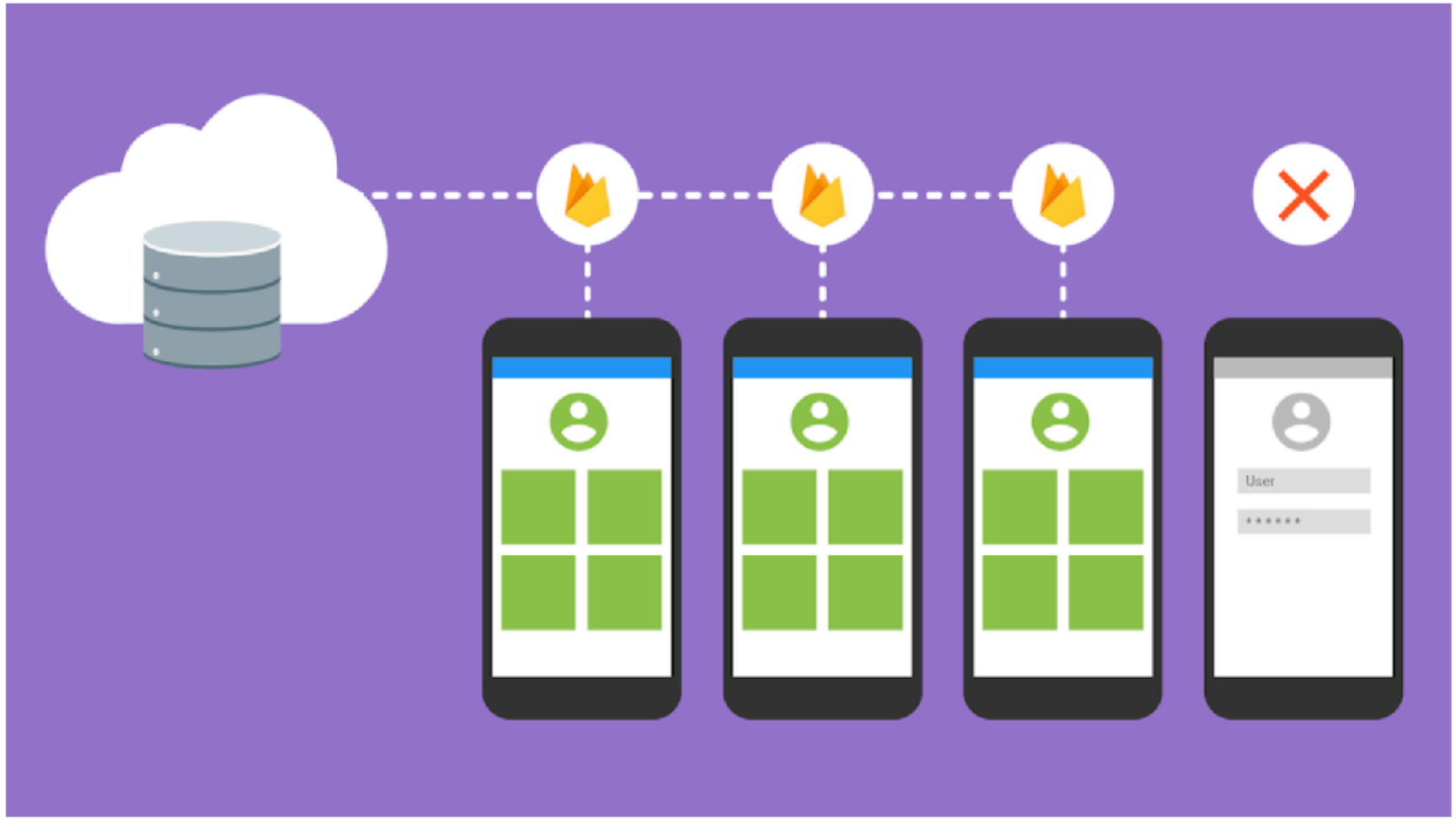
Cloud Storage

Robust uploads and downloads

Your users aren't always online, so we built the Firebase SDK for Cloud Storage with mobile connectivity in mind. It will automatically pause and resume your transfers as the app loses and regains mobile connectivity, saving your users time and bandwidth.



Cloud Storage



Strong user-based security

The Firebase SDK for Cloud Storage integrates with Firebase Authentication to provide simple and intuitive access control. You can use our declarative security model to allow access based on user identity or properties of a file, such as name, size, content type, and other metadata.

Cloud Storage

First Introduce Glide Library: https://github.com/bumptech/glide

Provides a range or image manipulation features

Including loading images into ImageView via a URL

Glide

maven central 4.10.0 | build passing | View Glide's documentation | 简体中文文档 | Report an issue with Glide

Glide is a fast and efficient open source media management and image loading framework for Android that wraps media decoding, memory and disk caching, and resource pooling into a simple and easy to use interface.

glide

Glide supports fetching, decoding, and displaying video stills, images, and animated GIFs. Glide includes a flexible API that allows developers to plug in to almost any network stack. By default Glide uses a custom `HttpUrlConnection` based stack, but also includes utility libraries plug in to Google's Volley project or Square's OkHttp library instead.

Glide's primary focus is on making scrolling any kind of a list of images as smooth and fast as possible, but Glide is also effective for almost any case where you need to fetch, resize, and display a remote image.

build.gradle

```
...
implementation 'com.github.bumptech.glide:glide:4.10.0'
...
```

Replace all calls to setImage:

```
placemarkImage.setImageBitmap(readImageFromPath(this, placemark.image))
```

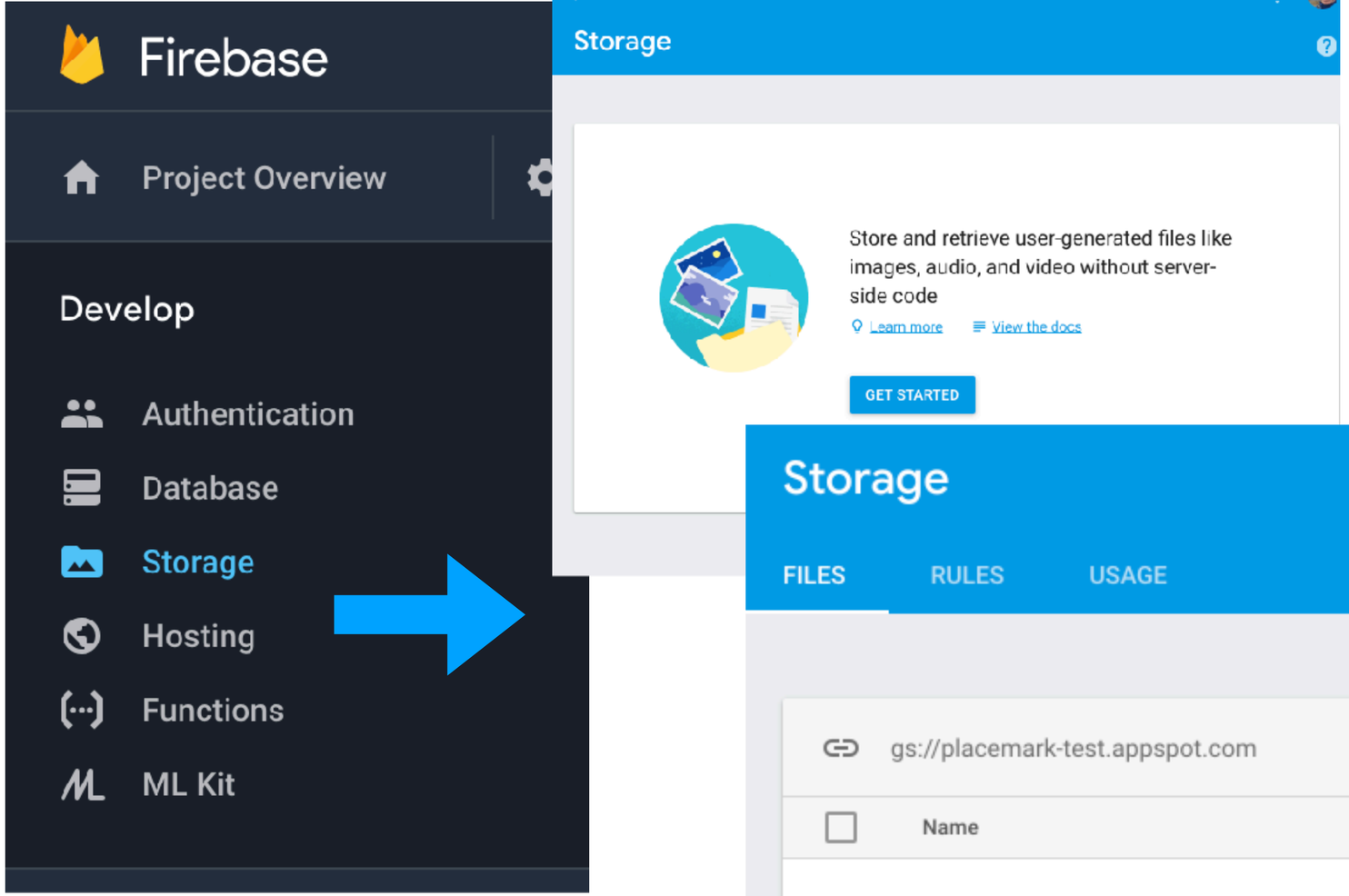
with

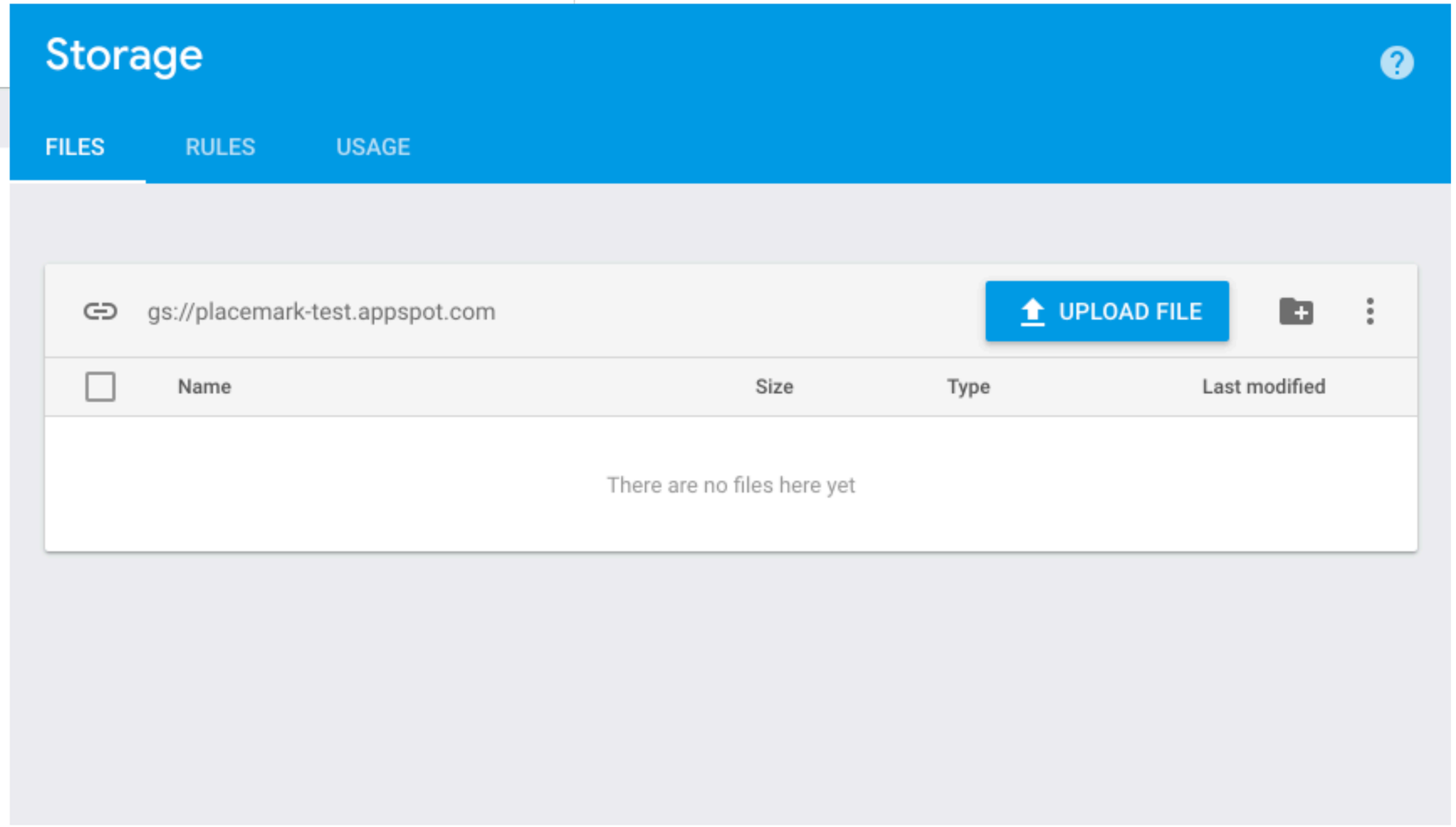
```
Glide.with(this).load(placemark.image).into(placemarkImage);
```

This will continue to render locally stored images
But will also work with firebase storage hosted images

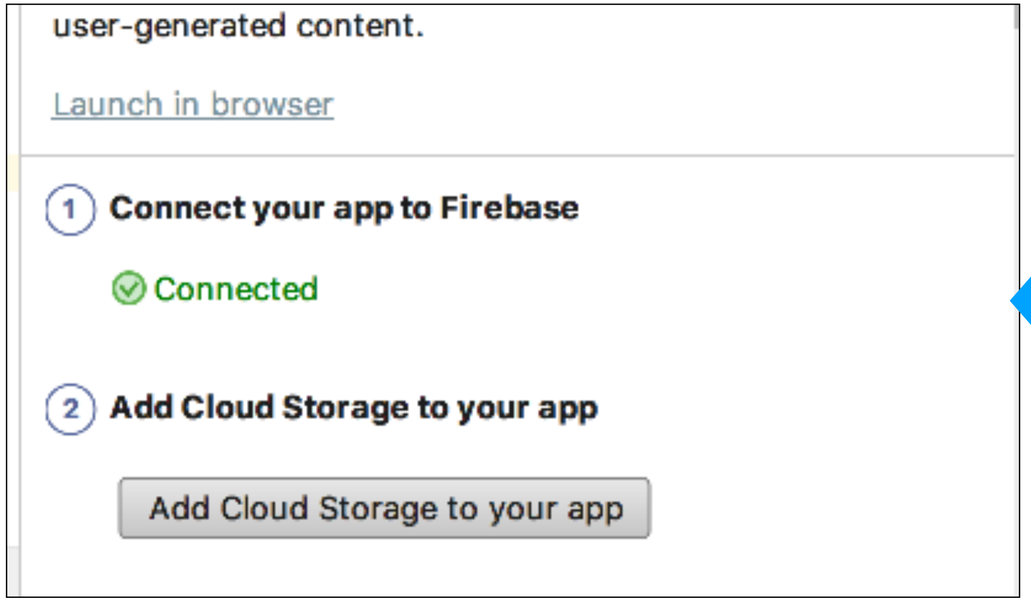
Change PlacemarkAdapter, PlacemarkView, PlacemarkMapView

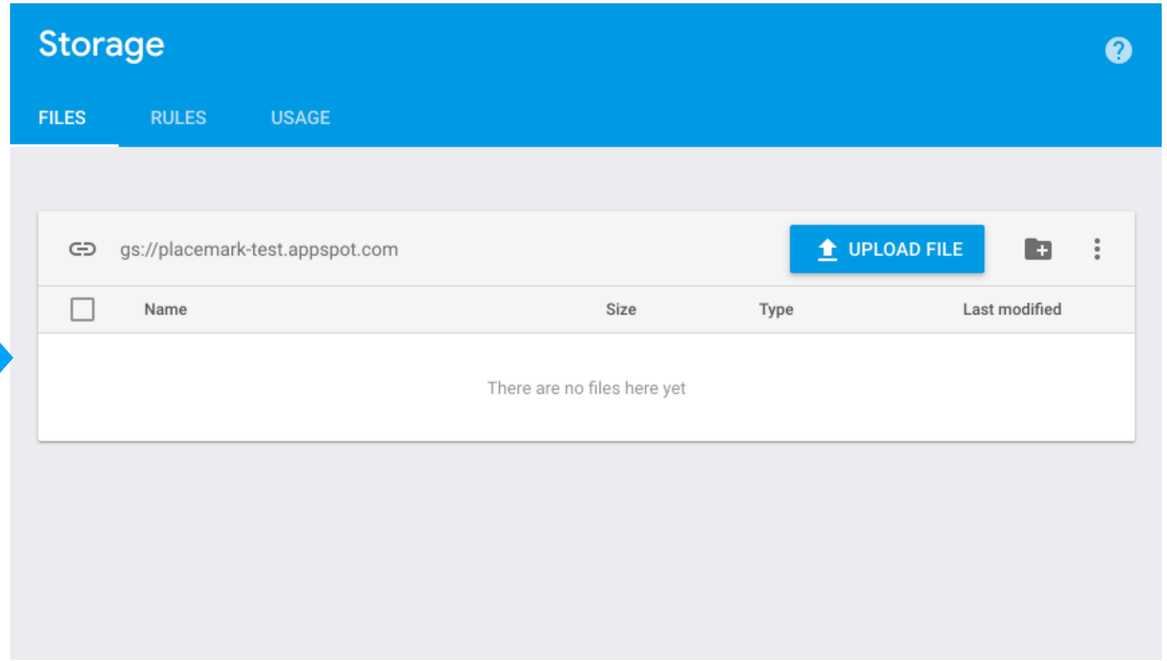
Firebase Console





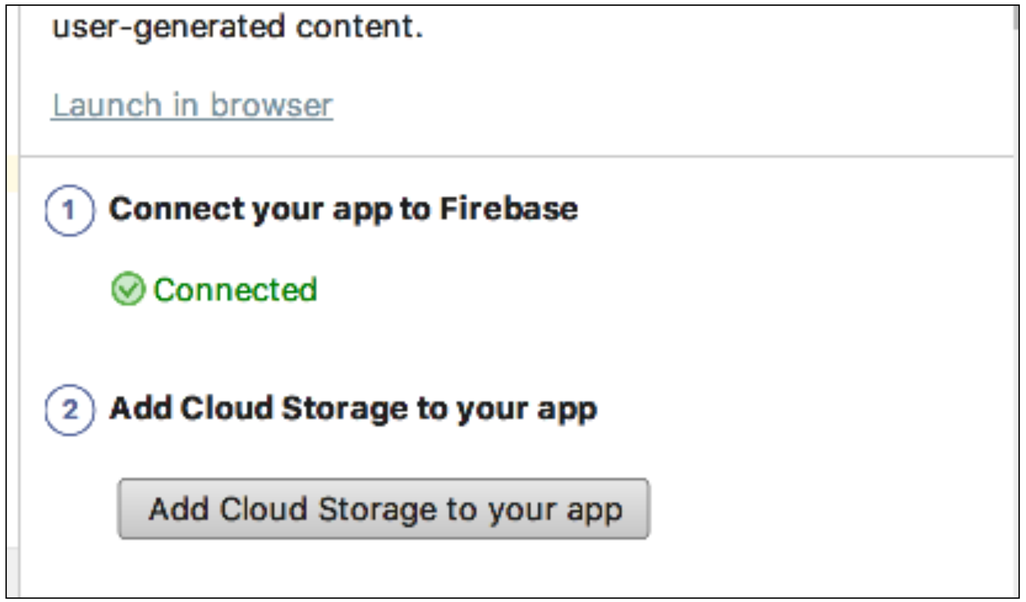
Firebase Assistant in Studio





build.gradle

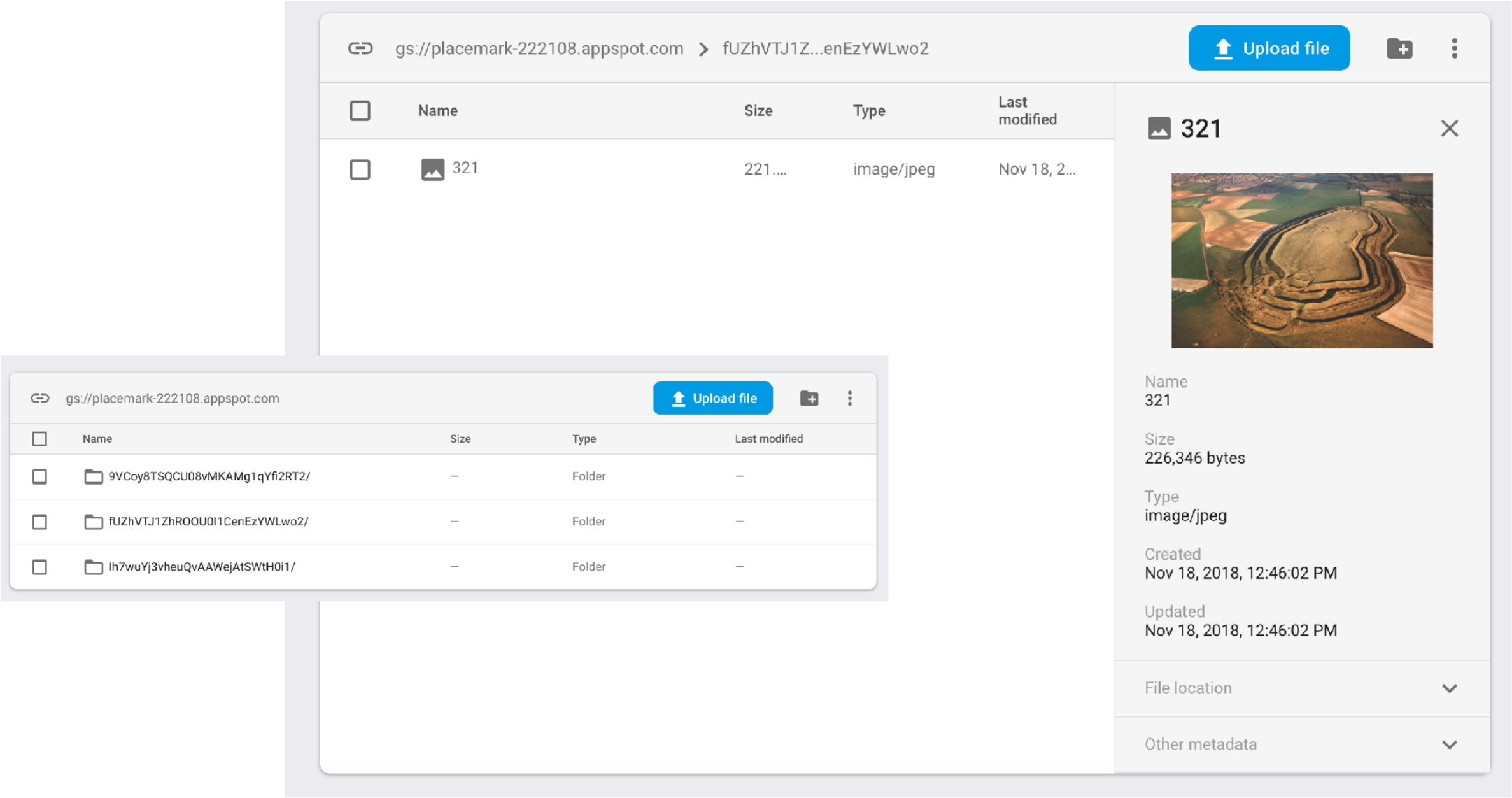
```
implementation "com.google.firebase:firebase-storage:$firebase_version"
```

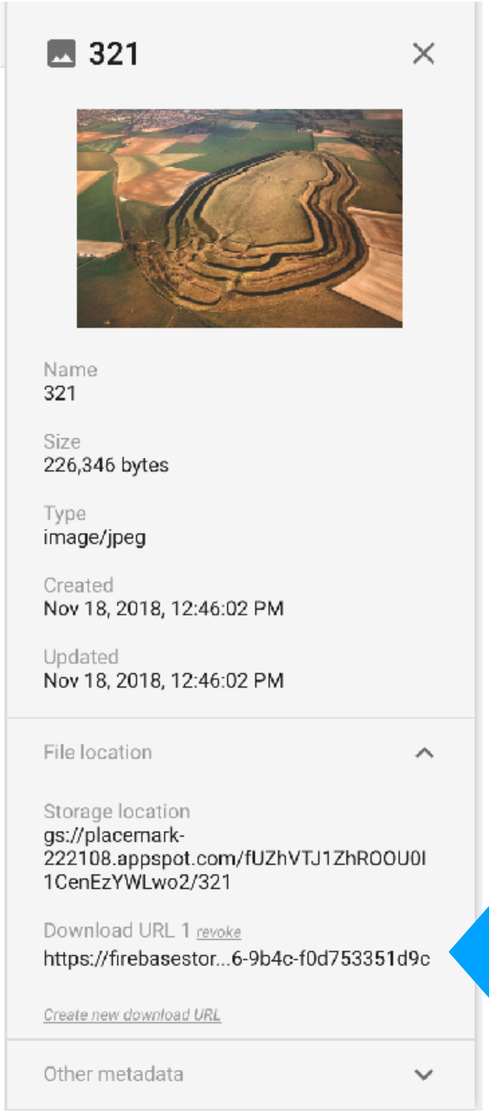


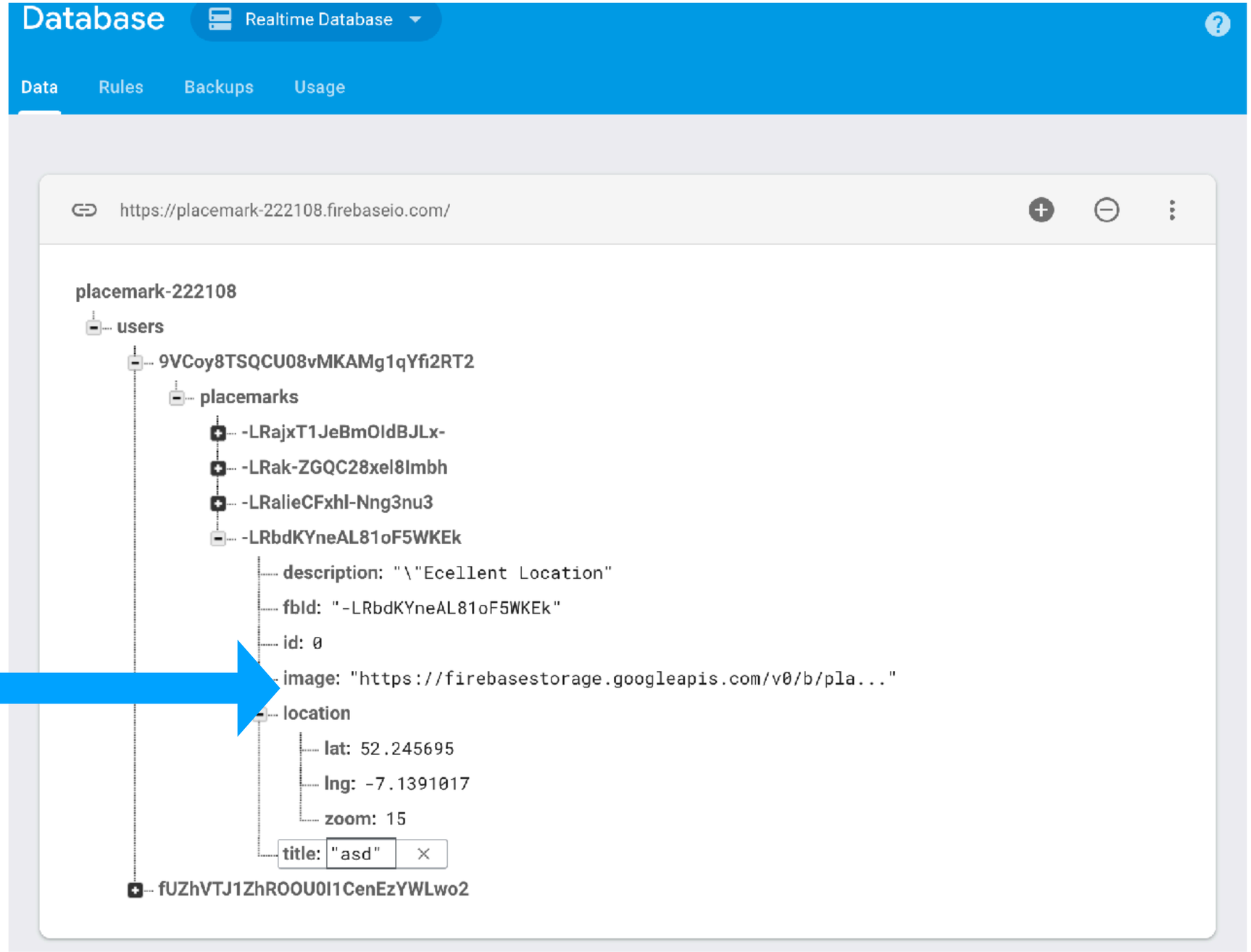

```
{
  "project_info": {
    "project_number": "1062442537261",
    "firebase_url": "https://placemark-222108.firebaseio.com",
    "project_id": "placemark-222108",
    "storage_bucket": "placemark-222108.appspot.com"
  },
  "client": [
    {
      "client_info": {
        "mobilesdk_app_id": "1:1062442537261:android:634c4d908a4ce143",
        "android_client_info": {
          "package_name": "org.wit.placemark"
        }
      },
      "oauth_client": [
        {
          "client_id": "10624425372XXXXXXXXXXXXXq320l17eu0pdv.apps.googleusercontent.com",
          "client_type": 1,
          "android_info": {
            "package_name": "org.wit.placemark",
            "certificate_hash": "368ead570ae3aa95a69bd78936dc4f2123a7ed96"
          }
        },
        {
          "client_id": "1062442537261-uXXXXXXXXXXXXX0avhhp4l5eqc4.apps.googleusercontent.com",
          "client_type": 3
        }
      ],
      "api_key": [
        {
          "current_key": "AIzaSyBXXXXXXXXXXXXXXXX52I95o"
        }
      ],
      "services": {
        "analytics_service": {
          "status": 1
        },
        "appinvite_service": {
          "status": 2,
          "other_platform_oauth_client": [
            {
              "client_id": "106244253XXXXXXXXXXXXXXXhp4l5eqc4.apps.googleusercontent.com",
              "client_type": 3
            }
          ]
        },
        "ads_service": {
          "status": 2
        }
      }
    }
  ],
  "configuration_version": "1"
}
```


google-services.json

Uploading Image to Storage







Store image url in Database

```
fun updateImage(placemark: PlacemarkModel) {
  if (placemark.image != "") {

    // get the full image file name



    // create storage object to be uploaded to the cloudstore (node name is id of user)

    // read the image into a bitmap object


      // compress the image into a byte array



      // put the bytes unto the object and start upload (asynchronous call)

        // failure

        // success, get full path of uploaded image (asynchronous call)

          // recover full path

          // store full path in database



  }
}
```

```
fun updateImage(placemark: PlacemarkModel) {
  if (placemark.image != "") {

    // get the full image file name
    val fileName = File(placemark.image)
    val imageName = fileName.getName()

    // create storage object to be uploaded to the cloudstore (node name is id of user)


    // read the image into a bitmap object



      // compress the image into a byte array

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    // get the full image file name
    val fileName = File(placemark.image)
    val imageName = fileName.getName()

    // create storage object to be uploaded to the cloudstore (node name is id of user)
    var imageRef = st.child(userId + '/' + imageName)

    // read the image into a bitmap object



      // compress the image into a byte array




      // put the bytes unto the object and start upload (asynchronous call)


        // failure


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    var imageRef = st.child(userId + '/' + imageName)

    // read the image into a bitmap object
    val bitmap = readImageFromPath(context, placemark.image)

    bitmap?.let {
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    // read the image into a bitmap object
    val bitmap = readImageFromPath(context, placemark.image)

    bitmap?.let {
      // compress the image into a byte array
      val baos = ByteArrayOutputStream()
      bitmap.compress(Bitmap.CompressFormat.JPEG, 100, baos)
      val data = baos.toByteArray()

      // put the bytes unto the object and start upload (asynchronous call)


        // failure


        // success, get full path of uploaded image (asynchronous call)

          // recover full path

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      val data = baos.toByteArray()

      // put the bytes unto the object and start upload (asynchronous call)
      val uploadTask = imageRef.putBytes(data)
      uploadTask.addOnFailureListener {
        // failure


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      // put the bytes unto the object and start upload (asynchronous call)
      val uploadTask = imageRef.putBytes(data)
      uploadTask.addOnFailureListener {
        // failure
        println(it.message)
      }.addOnSuccessListener { taskSnapshot ->
        // success, get full path of uploaded image (asynchronous call)

          // recover full path

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        // failure
        println(it.message)
      }.addOnSuccessListener { taskSnapshot ->
        // success, get full path of uploaded image (asynchronous call)
        taskSnapshot.metadata!!.reference!!.downloadUrl.addOnSuccessListener {
          // recover full path

          // store full path in database




  }
}
```

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          placemark.image = it.toString()
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        println(it.message)
      }.addOnSuccessListener { taskSnapshot ->
        // success, get full path of uploaded image (asynchronous call)
        taskSnapshot.metadata!!.reference!!.downloadUrl.addOnSuccessListener {
          // recover full path
          placemark.image = it.toString()
          // store full path in database
          db.child("users").child(userId).child("placemarks").child(placemark.fbId).setValue(placemark)
        }
      }
    }
  }
}
```

update()

```
override fun update(placemark: PlacemarkModel) {
  var foundPlacemark: PlacemarkModel? = placemarks.find { p -> p.fbId == placemark.fbId }
  if (foundPlacemark != null) {
    foundPlacemark.title = placemark.title
    foundPlacemark.description = placemark.description
    foundPlacemark.image = placemark.image
    foundPlacemark.location = placemark.location
  }

  db.child("users").child(userId).child("placemarks").child(placemark.fbId).setValue(placemark)
  if ((placemark.image.length) > 0 && (placemark.image[0] != 'h')) {
    updateImage(placemark)
  }
}
```

Upload Image whenever update requested