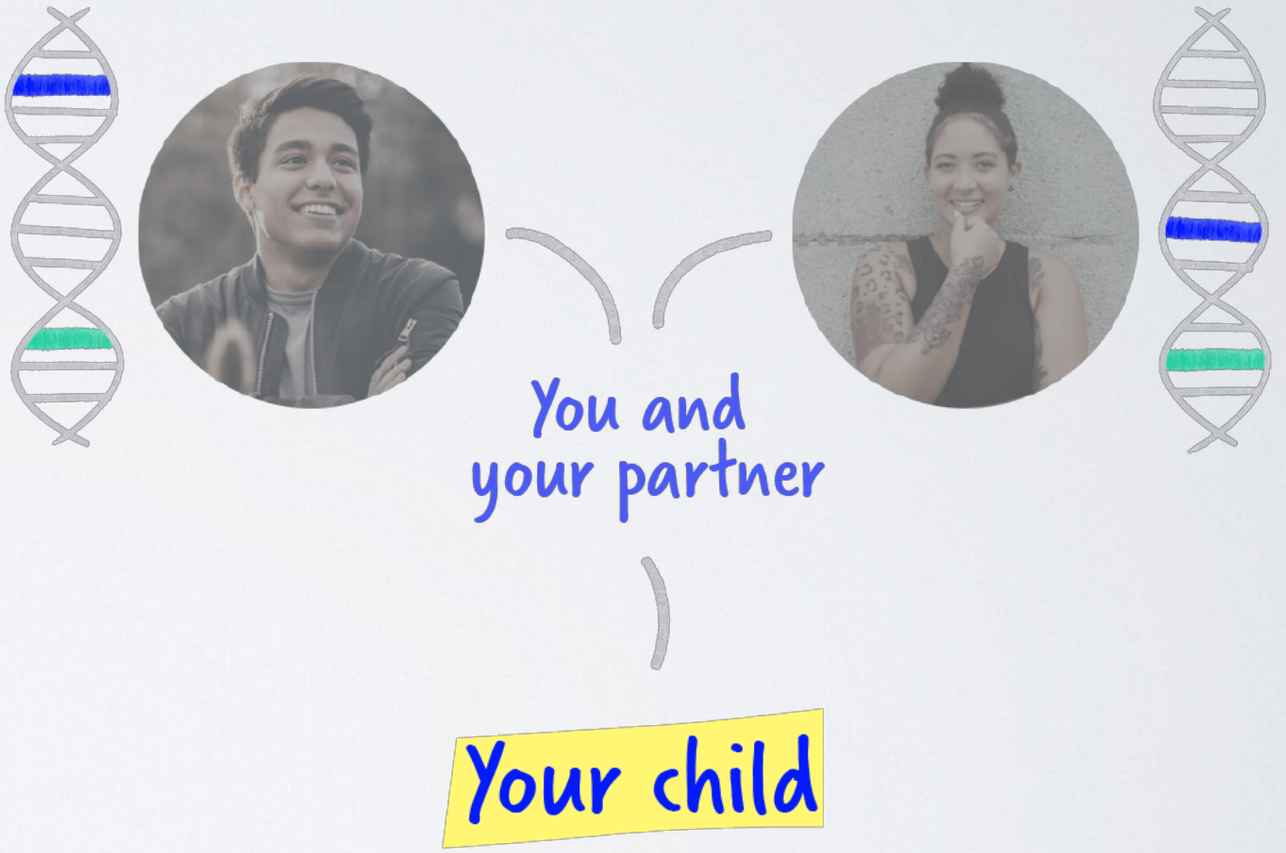
Unify your data with

AWS APPSYNC

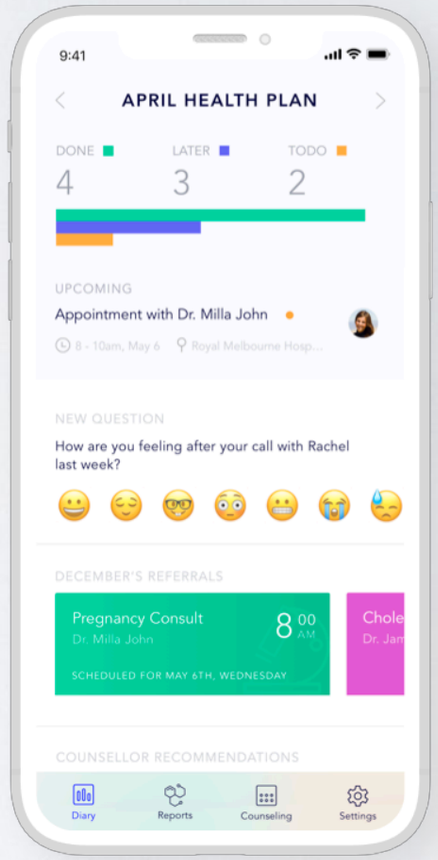
DID YOU KNOW?

- 1 in 100 babies have an inherited genetic disorder
- Most carriers never have symptoms



MEET EUGENE

- At home genetic tests
- Information to empower smarter health decisions
- Diagnostic grade
- Compassionate and caring health team



Genuine human goodness

WHAT IS EUGENE?

(technically speaking)

- iOS, Android & web apps
- Patient management system
- Content management system
- Secure video calling service
- Survey platform
- Shopping cart
- Logistics platform
- Notifications and alerts

CONSIDERATIONS

- Security
- Reduce requests
- Reduce data transmitted
- Offline support
- Less code = less bugs

SOME OPTIONS

A) Third party SDKs and frameworks

B) Client specific REST API

C) GraphQL

…AND FOR OFFLINE DATA

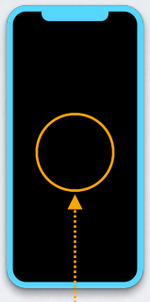
A) Embedded database (Realm, Couchbase)

B) AppSync

C) …Computer says no

EUGENE AND APPSYNC

Local datastore



Graphql endpoint

Services

Auth

Survey

Cart

Video calling

CMS

Payment

Results

PMS

SMS & push

APPSYNC: MANAGED GRAPHQL + AWS

Create and Upload Schema

Developers use the console editor to define and deploy a GraphQL API so the application can query and change data and update in real time

Connect Data Sources

AWS AppSync automatically provisions data sources and compute resources, or uses existing resources, and connects them to your GraphQL API

AppSync updates data in real time and manages data when offline

Client applications make GraphQL API calls to fetch data, make changes, or subscribe to changes in real time from all users and devices. Offline users can continue to access and change app data and get updates when they reconnect

WHAT IS GRAPHQL?

Describe your data

```
type Project {
  name: String
  tagline: String
  contributors: [User]
}
```

Ask for what you want

```
{
  project(name: "GraphQL") {
    tagline
  }
}
```

Get predictable results

```
{
  "project": {
    "tagline": "A query language for APIs"
  }
}
```

Get Started Learn More

Who’s using GraphQL?

Facebook's mobile apps have been powered by GraphQL since 2012.
A GraphQL spec was open sourced in 2015 and is now available in
many environments and used by teams of all sizes.

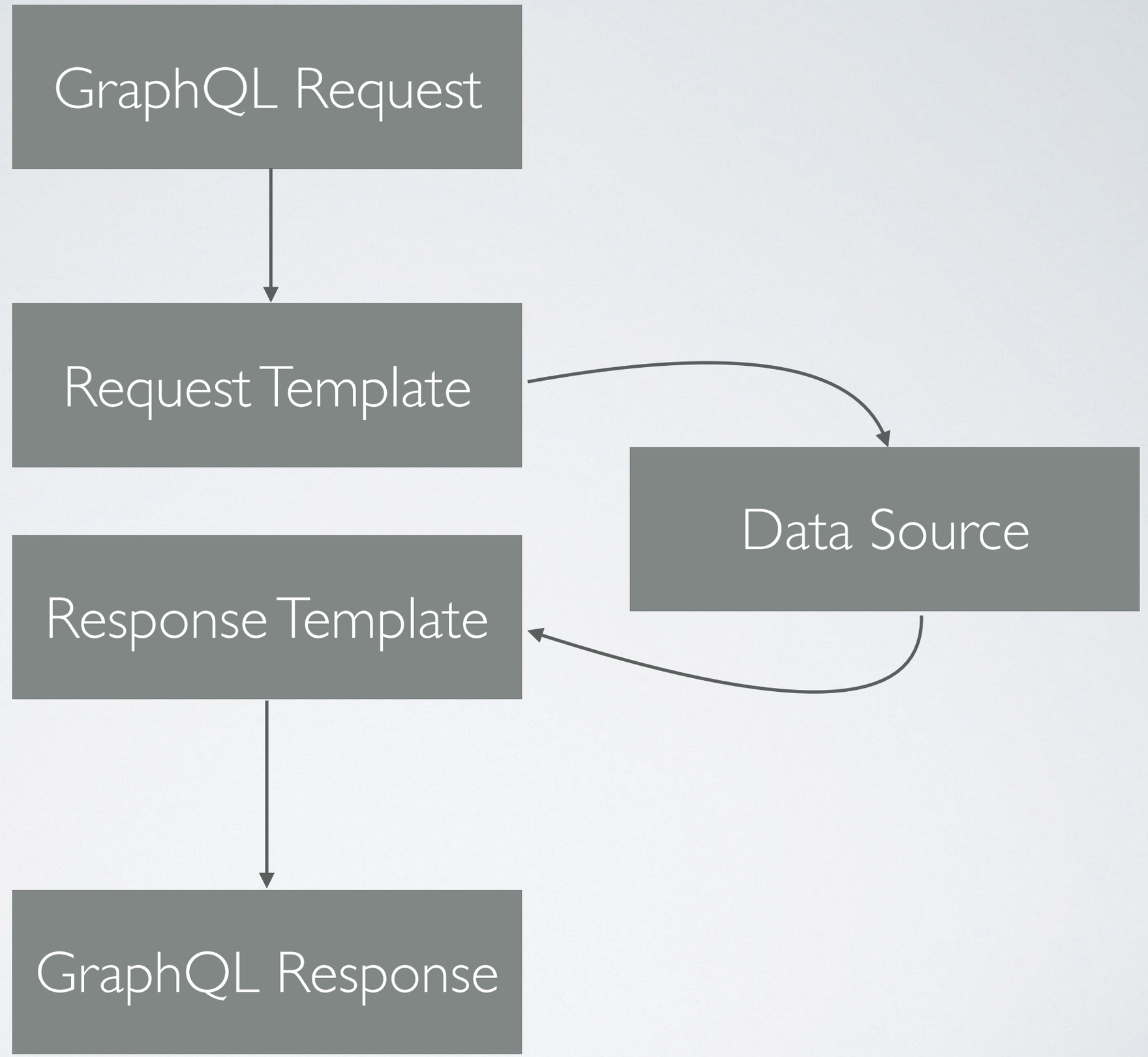
DEMO

https://graphiql.graphcms.com/simple/v1/swapi

RESOLVERS

- HTTP endpoint
- Pipeline
- AWS Services - Lambda, DynamoDB, RDS, Elasticsearch,
- Static Data

this bit


GraphQL Request
Request Template
Data Source
Response Template
GraphQL Response

VTL MAPPING TEMPLATE

```
{
    "version": "2017-02-28",
    "operation": "Invoke",
    "payload": {
        "field": "getPost",
        "arguments": $utils.toJson($context.arguments)
    }
}
```

REALTIME DATA

- For frequently updating data updated via API calls

this bit

- GraphQL subscriptions
- Linked to mutation queries
- Implemented over web sockets

OFFLINE

- Optimistic UI
- Apollo cache
- Auto sync on reconnection
- Basic & customisable conflict resolution*

BONUS FEATURES

- Code generation

- IDE tools

DEPLOYMENT OPTIONS

- Amplify
- AppSync console
- Cloudformation

OPINION ALERT

- New projects 👍

- Existing projects - soon

A COUPLE MORE THINGS…

Let's be friends @katalisha

Work for eugene: hello@eugenelabs.com

Find out your reproductive risk and options @ eugenelabs.com

References:

- https://graphql.org
- https://www.apollographql.com
- https://aws.amazon.com/appsync/