

CS-470 Full Stack Development II – Docker Compose

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## Docker Compose

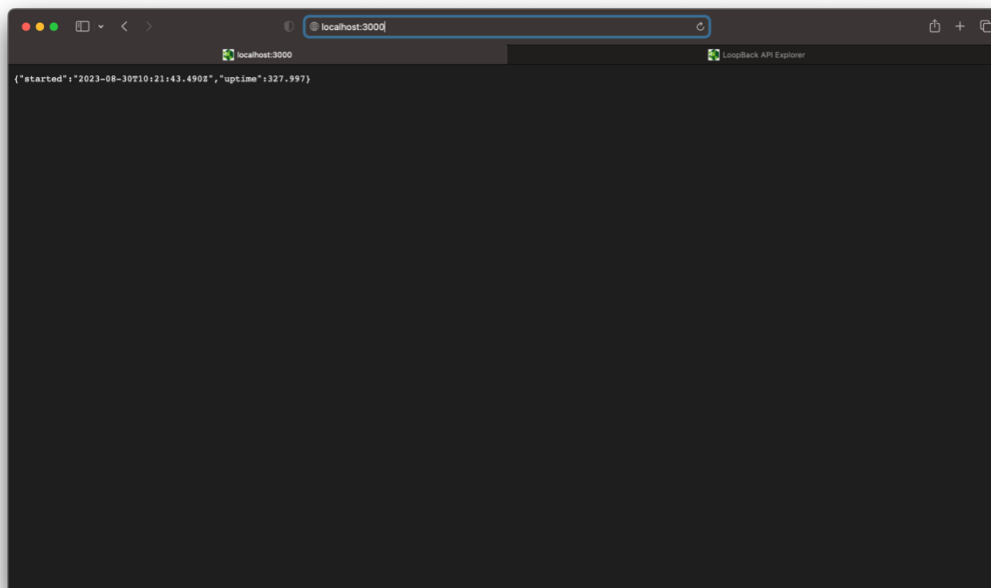
## Docker-Compose Up lafs-api

```
eric@eric-lutze-macbook-pro:~/Code/SNHU-Code/CS-470/Module 2 Assignment 1/lafs-api$ docker-compose up
[+] Running 2/0
  Container lafs-db Created
  Container lafs-api Created
Attaching to lafs-api, lafs-db
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.205+00:00"},"s":"I", "c":"CONTROL", "id":23285, "ctx":"main","msg":"Automatica
lly disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.207+00:00"},"s":"I", "c":"NETWORK", "id":4648601, "ctx":"main","msg":"Implicit TC
P FastOpen unavailable. If TCP FastOpen is required, set tcpFastOpenServer, tcpFastOpenClient, and tcpFastOpenQueueSize."}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.207+00:00"},"s":"I", "c":"STORAGE", "id":4615611, "ctx":"initandlisten","msg":"Mo
ngoDB starting", "attr":{"pid":1,"port":27017,"dbPath":"/data/db","architecture":"64-bit","host":"8d92e0d1791b"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.207+00:00"},"s":"I", "c":"CONTROL", "id":23403, "ctx":"initandlisten","msg":"Bu
ild Info", "attr":{"buildInfo":{"version":"4.4.24","gitVersion":"0b86b9b7b42ad9978c5f818c527dd86c0634243a","opensslVersion":"OpenSSL
 1.1.1.f","31 Mar 2020","modules":[],"allocator":"tcmalloc","environment":{"distmod":"ubuntu2004","distarch":"aarch64","target_arch
":"aarch64"}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.207+00:00"},"s":"I", "c":"CONTROL", "id":51765, "ctx":"initandlisten","msg":"Op
erating System", "attr":{"os":{"name":"Ubuntu","version":"20.04"}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.207+00:00"},"s":"I", "c":"CONTROL", "id":21951, "ctx":"initandlisten","msg":"Op
tions set by command line", "attr":{"options":{"net":{"bindIp":"*"}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.208+00:00"},"s":"I", "c":"STORAGE", "id":22297, "ctx":"initandlisten","msg":"Us
ing the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-fi
lesystem","tags":["startupWarnings"]}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.208+00:00"},"s":"I", "c":"STORAGE", "id":22315, "ctx":"initandlisten","msg":"Op
ening WiredTiger", "attr":{"config":{"create_cache_size=3413M,session_max=33000,eviction=(threads_min=4,threads_max=4),config_basef
alse,statistics=(fast),log=(enabled=true,archive=true,path=journal,compressor=snappy),file_manager=(close_idle_time=100000,close_s
can_interval=10,close_handle_minimum=250),statistics_log=(wait=0),verbose=[recovery_progress,checkpoint_progress,compact_progress]
"}}}
lafs-api | > learn-angular-from-scratch-step-by-step-api@1.0.0 start /usr/src/lafs
lafs-api | > node .
lafs-api |
lafs-api |
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.888+00:00"},"s":"I", "c":"STORAGE", "id":22430, "ctx":"initandlisten","msg":"Wi
redTiger message", "attr":{"message":{"[693390902:888354][1:0xfffffa543980], txn-recover: [WT_VERB_RECOVERY | WT_VERB_RECOVERY_PROG
RESS] Set global recovery timestamp: (0, 0)}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.888+00:00"},"s":"I", "c":"STORAGE", "id":22430, "ctx":"initandlisten","msg":"Wi
redTiger message", "attr":{"message":{"[693390902:888398][1:0xfffffa543980], txn-recover: [WT_VERB_RECOVERY | WT_VERB_RECOVERY_PROG
RESS] Set global oldest timestamp: (0, 0)}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.891+00:00"},"s":"I", "c":"STORAGE", "id":4795906, "ctx":"initandlisten","msg":"Wi
redTiger opened", "attr":{"durationMillis":683}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.891+00:00"},"s":"I", "c":"RECOVERY", "id":23987, "ctx":"initandlisten","msg":"Wi
redTiger recoveryTimestamp", "attr":{"recoveryTimestamp":{"$timestamp":{"t":0,"i":0}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.897+00:00"},"s":"I", "c":"STORAGE", "id":22262, "ctx":"initandlisten","msg":"Ti
mestamp monitor starting"}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.899+00:00"},"s":"W", "c":"CONTROL", "id":22120, "ctx":"initandlisten","msg":"Ac
cess control is not enabled for the database. Read and write access to data and configuration is unrestricted","tags":["startupWar
nings"]}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.899+00:00"},"s":"I", "c":"STORAGE", "id":20320, "ctx":"initandlisten","msg":"cr
eateCollection", "attr":{"namespace":"admin.system.version","uuidDisposition":"provided","uuid":{"uuid":{"$uuid":"889a716b-a63e-468
8-96a9-bd124e6fa6c4"}}},"options":{"uuid":{"$uuid":"889a716b-a63e-4688-96a9-bd124e6fa6c4"}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.903+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"initandlisten","msg":"In
dex build: done building", "attr":{"buildUUID":null,"namespace":"admin.system.version","index":{"_id","commitTimestamp":{"$time
stamp":{"t":0,"i":0}}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.903+00:00"},"s":"I", "c":"COMMAND", "id":20459, "ctx":"initandlisten","msg":"Se
tting featureCompatibilityVersion", "attr":{"newVersion":"4.4"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.904+00:00"},"s":"I", "c":"STORAGE", "id":20536, "ctx":"initandlisten","msg":"Fl
ow Control is enabled on this deployment"}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.904+00:00"},"s":"I", "c":"STORAGE", "id":20320, "ctx":"initandlisten","msg":"cr
eateCollection", "attr":{"namespace":"local.startup_log","uuidDisposition":"generated","uuid":{"uuid":{"$uuid":"1da673da-2d40-4585-
afea-e63b82f7c4b0"}}},"options":{"capped":true,"size":10485760}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.908+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"initandlisten","msg":"In
dex build: done building", "attr":{"buildUUID":null,"namespace":"local.startup_log","index":{"_id","commitTimestamp":{"$time
stamp":{"t":0,"i":0}}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.908+00:00"},"s":"I", "c":"FTDC", "id":20625, "ctx":"initandlisten","msg":"In
itializing full-time diagnostic data capture", "attr":{"dataDirectory":"/data/db/diagnostic.data"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.908+00:00"},"s":"I", "c":"REPL", "id":6015317, "ctx":"initandlisten","msg":"Se
tting new configuration state", "attr":{"newState":"ConfigReplicationDisabled","oldState":"ConfigPreStart"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.909+00:00"},"s":"I", "c":"NETWORK", "id":23015, "ctx":"listener","msg":"Listeni
ng on", "attr":{"address":"/tmp/mongodb-27017.sock"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.909+00:00"},"s":"I", "c":"NETWORK", "id":23015, "ctx":"listener","msg":"Listeni
ng on", "attr":{"address":"0.0.0.0"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.909+00:00"},"s":"I", "c":"NETWORK", "id":23016, "ctx":"listener","msg":"Waiting
for connections", "attr":{"port":27017,"ssl":"off"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.910+00:00"},"s":"I", "c":"CONTROL", "id":20712, "ctx":"LogicalSessionCacheReap
","msg":"Sessions collection is not set up; waiting until next sessions reap interval","attr":{"error":"NamespaceNotFound: config.s
ystem.sessions does not exist"}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.910+00:00"},"s":"I", "c":"STORAGE", "id":20320, "ctx":"LogicalSessionCacheRefre
sh","msg":"createCollection", "attr":{"namespace":"config.system.sessions","uuidDisposition":"generated","uuid":{"uuid":{"$uuid":"1
6c3043f-13e6-481c-b099-0ddc75ee508e"}}},"options":{}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.916+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"LogicalSessionCacheRefre
sh","msg":"Index build: done building", "attr":{"buildUUID":null,"namespace":"config.system.sessions","index":{"_id","commitTime
stamp":{"$timestamp":{"t":0,"i":0}}}}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:42.916+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"LogicalSessionCacheRefre
sh","msg":"Index build: done building", "attr":{"buildUUID":null,"namespace":"config.system.sessions","index":{"_id","commitTime
stamp":{"$timestamp":{"t":0,"i":0}}}}}
lafs-api | Web server listening at: http://localhost:3000
lafs-api | Browse your REST API at http://localhost:3000/explorer
lafs-db | {"t":{"$date":"2023-08-30T10:21:43.493+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connect
ion accepted", "attr":{"remote":"172.18.0.3:55710","connectionId":1,"connectionCount":1}}
lafs-db | {"t":{"$date":"2023-08-30T10:21:43.496+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn1","msg":"client met
adata", "attr":{"remote":"172.18.0.3:55710","client":"conn1","doc":{"driver":{"name":"nodejs","version":"3.2.3"},"os":{"type":"Linu
x","name":"linux","architecture":"arm64","version":"5.15.49-linuxkit-pr"},"platform":"Node.js v10.24.1, LE, mongodb-core: 3.2.3"}
}}
```

## Docker-Compose Up lafs-web

```
ericslutz@Eric-MacBook-Pro lafs-web(main) > docker-compose up
[+] Building 0.9s (12/12) FINISHED                                docker:desktop-linux
=> [app internal] load build definition from Dockerfile           0.0s
=> => transferring dockerfile: 554B                               0.0s
=> [app internal] load .dockerignore                             0.0s
=> => transferring context: 89B                                     0.0s
=> [app internal] load metadata for docker.io/library/node:18    0.0s
=> [app auth] library/node:pull token for registry-1.docker.io   0.0s
=> [app 1/6] FROM docker.io/library/node:18@sha256:59531d2835edd5161c8f9512f9e095b1836f7a1fcb0ab73e05ec46047384911 0.0s
=> [app internal] load build context                             0.0s
=> => transferring context: 13.83kB                                0.0s
=> CACHED [app 2/6] WORKDIR /usr/src/lafs                        0.0s
=> CACHED [app 3/6] COPY package*.json ./                        0.0s
=> CACHED [app 4/6] RUN npm install -g @angular/cli@v6-lts       0.0s
=> CACHED [app 5/6] RUN npm install                             0.0s
=> [app 6/6] COPY .                                               0.0s
=> [app] exporting to image                                       0.0s
=> => exporting layers                                             0.0s
=> => writing image sha256:a98cf570234c15e1b38e93bb17387b3711a9b5c71af1d023589b78c987eba941 0.0s
=> => naming to docker.io/library/lafs-web-app                   0.0s
[+] Running 1/0
✓ Container lafs-web Created                                     0.0s
Attaching to lafs-web
lafs-web | npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.8 (node_modules/fsevents):
lafs-web | npm
lafs-web | WARN notsup
lafs-web | SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.8: wanted {"os":"darwin","arch":"any"} (current:
lafs-web | {"os":"linux","arch":"arm64"})
lafs-web |
lafs-web | audited 1164 packages in 2.452s
lafs-web | found 369 vulnerabilities (3 low, 114 moderate, 179 high, 73 critical)
lafs-web | run 'npm audit fix' to fix them, or 'npm audit' for details
lafs-web | WARNING: This is a simple server for use in testing or debugging Angular applications
lafs-web | locally. It hasn't been reviewed for security issues.
lafs-web |
lafs-web | Binding this server to an open connection can result in compromising your application or
lafs-web | computer. Using a different host than the one passed to the "--host" flag might result in
lafs-web | websocket connection issues. You might need to use "--disableHostCheck" if that's the
lafs-web | case.
lafs-web |
lafs-web | ** Angular Live Development Server is listening on 0.0.0.0:4200, open your browser on http://localhost:4200/ **
lafs-web | Browserslist: caniuse-lite is outdated. Please run next command 'npm update'
lafs-web |
lafs-web | Date: 2023-08-30T10:37:14.627Z
lafs-web | Hash: 7e52a9ed874dbf7ec8ec
lafs-web | Time: 8496ms
lafs-web | chunk (es2015-polyfills) es2015-polyfills.js, es2015-polyfills.js.map (es2015-polyfills) 284 kB [initial] [rendered]
lafs-web | chunk (main) main.js, main.js.map (main) 225 kB [initial] [rendered]
lafs-web | chunk (polyfills) polyfills.js, polyfills.js.map (polyfills) 236 kB [initial] [rendered]
lafs-web | chunk (runtime) runtime.js, runtime.js.map (runtime) 6.08 kB [entry] [rendered]
lafs-web | chunk (styles) styles.js, styles.js.map (styles) 1020 kB [initial] [rendered]
lafs-web | chunk (vendor) vendor.js, vendor.js.map (vendor) 7.2 MB [initial] [rendered]
lafs-web |
lafs-web | [wdm]: Compiled successfully.
```

## lafs-api Screenshot



## lafs-api Explorer Screenshot

The screenshot displays the LoopBack API Explorer interface in a web browser. The main header shows 'LoopBack API Explorer' with a 'Token Not Set' status and an 'accessToken' input field. The selected endpoint is 'POST /questions', with a description: 'Create a new instance of the model and persist it into the data source.'

**Response Class (Status 200)**  
Request was successful

**Model Example Value**

```
{
  "categorySlug": "string",
  "questionSlug": "string",
  "question": "string",
  "negativeVotes": 0,
  "positiveVotes": 0,
  "id": "string"
}
```

**Response Content Type** application/json

**Parameters**

Parameter	Value	Description	Parameter Type	Data Type				
data	<pre>{   "categorySlug": "angular",   "questionSlug": "what-is-the-meaning-of-life",   "question": "What is the meaning of life?",   "negativeVotes": 0,   "positiveVotes": 0 }</pre>	Model instance data	body	<table border="1"><thead><tr><th>Model</th><th>Example Value</th></tr></thead><tbody><tr><td></td><td><pre>{   "categorySlug": "string",   "questionSlug": "string",   "question": "string",   "negativeVotes": 0,   "positiveVotes": 0,   "id": "string" }</pre></td></tr></tbody></table>	Model	Example Value		<pre>{   "categorySlug": "string",   "questionSlug": "string",   "question": "string",   "negativeVotes": 0,   "positiveVotes": 0,   "id": "string" }</pre>
Model	Example Value							
	<pre>{   "categorySlug": "string",   "questionSlug": "string",   "question": "string",   "negativeVotes": 0,   "positiveVotes": 0,   "id": "string" }</pre>							

Parameter content type: application/json

**Try it out!** [Hide Response](#)

**Curl**

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{
  "categorySlug": "angular",
  "questionSlug": "what-is-the-meaning-of-life",
  "question": "What is the meaning of life?",
  "negativeVotes": 0,
  "positiveVotes": 0
}' http://localhost:3000/api/questions
```

**Request URL**

```
http://localhost:3000/api/questions
```

**Response Body**

```
{
  "categorySlug": "angular",
  "questionSlug": "what-is-the-meaning-of-life",
  "question": "What is the meaning of life?",
  "negativeVotes": 0,
  "positiveVotes": 0,
  "id": "64ef1994cd8850014dba8a7"
}
```

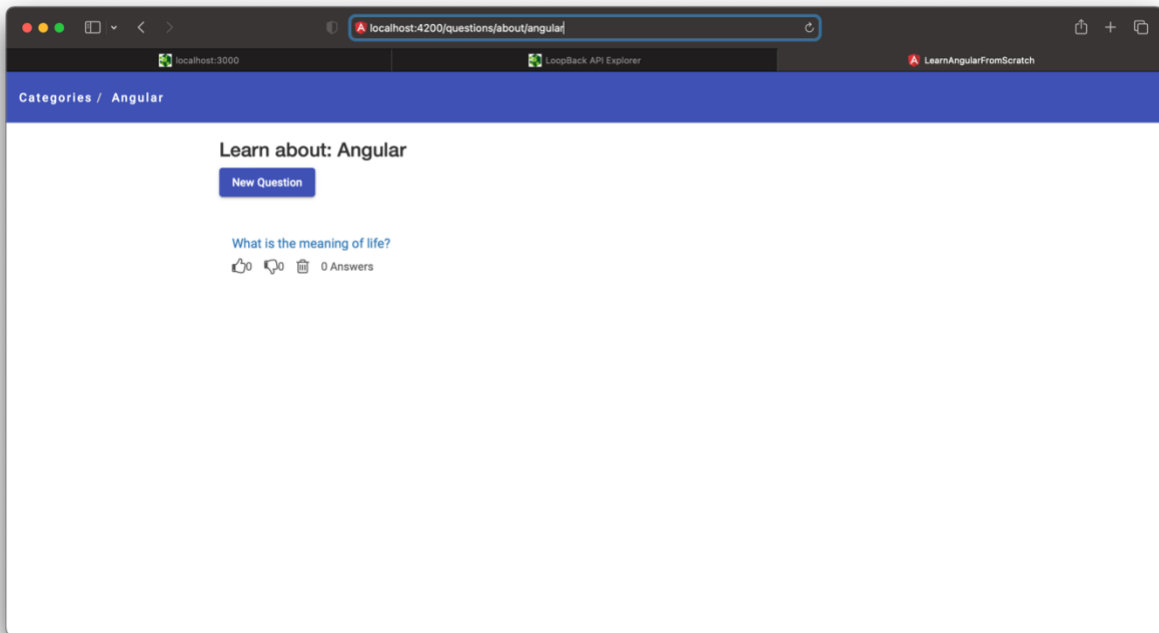
**Response Code**

```
200
```

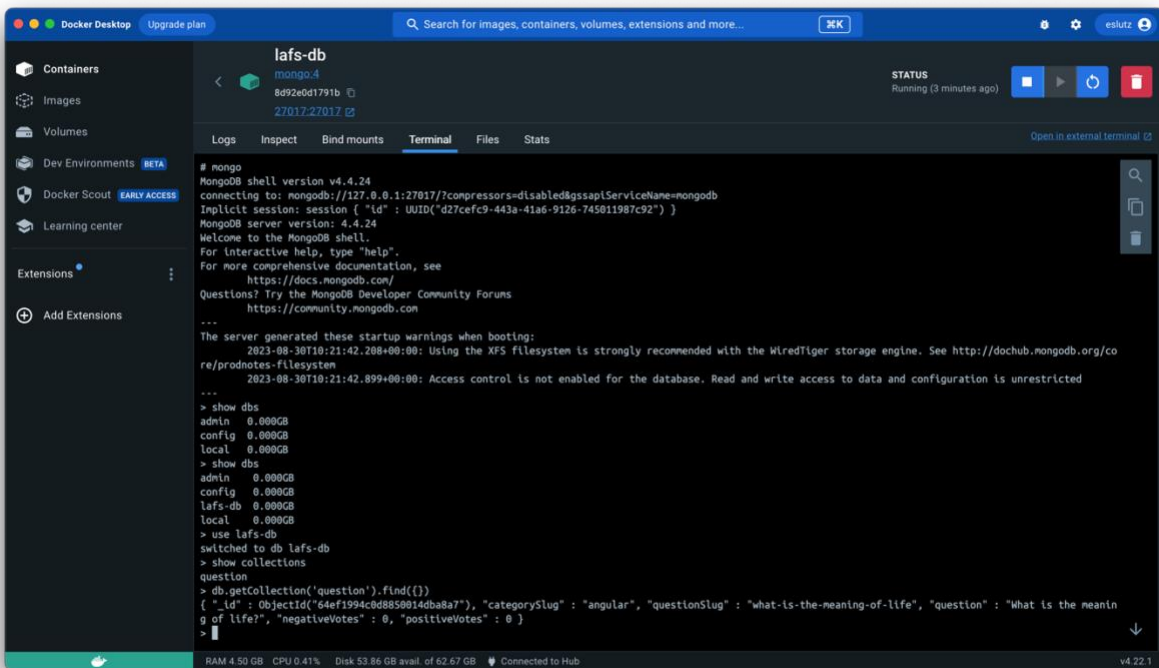
**Response Headers**

```
{
  "access-control-allow-credentials": "true",
  "access-control-allow-origin": "http://localhost:3000",
  "connection": "keep-alive",
  "content-length": "181",
  "content-type": "application/json; charset=utf-8",
  "date": "Wed, 30 Aug 2023 10:27:32 GMT",
  "etag": "W/\"b5-IdBHPt4xr/SjQpMOQu37Ew#p7k\"",
  "strict-transport-security": "max-age=0; includeSubDomains",
  "vary": "Origin, Accept-Encoding",
  "x-content-type-options": "nosniff",
  "x-download-options": "noopen",
  "x-frame-options": "SAMEORIGIN",
  "x-xss-protection": "1; mode=block"
}
```

## lafs-web Screenshot



## lafs-db Query





## Docker ps -a

```
ericslutz@Eric-MacBook-Pro lafs-web(main) > docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                               NAMES
803f1323fb66   lafs-web-app   "docker-entrypoint.s..." 3 minutes ago  Up 3 minutes  0.0.0.0:4200->4200/tcp             lafs-web
b87aa2be84b6   lafs-api-app   "docker-entrypoint.s..." 18 minutes ago  Up 18 minutes  0.0.0.0:3000->3000/tcp             lafs-api
8d92e0d1791b   mongo:4        "docker-entrypoint.s..." 18 minutes ago  Up 18 minutes  0.0.0.0:27017->27017/tcp           lafs-db
299e1fa9f42    node-lafs-api   "docker-entrypoint.s..." About an hour ago  Exited (1) 57 minutes ago  wizardly_wescoff
c9e40bda2153    node-lafs-web   "docker-entrypoint.s..." 2 hours ago    Exited (137) 3 minutes ago  quirky_gates
69bc8c37ecf6    mongo          "docker-entrypoint.s..." 2 days ago     Exited (0) 22 minutes ago  mongodb
```

## Docker Desktop Dashboard

