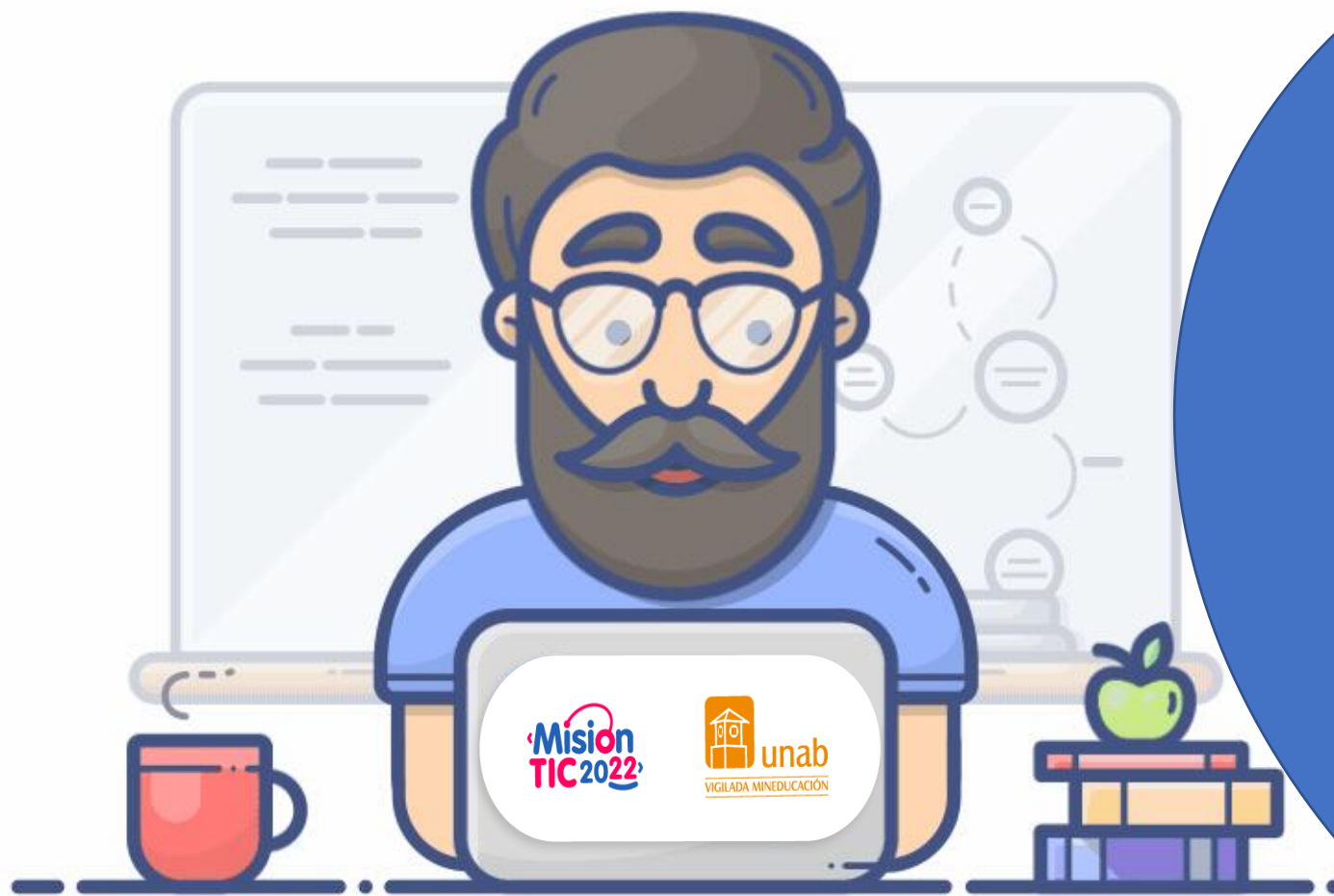




Recuerda marcar tu asistencia



Asistencia en LMS



Semana 6 Sesión 002

Despliegue

Ing Edwin Garcia



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Hechos

QUE

CONECTAN

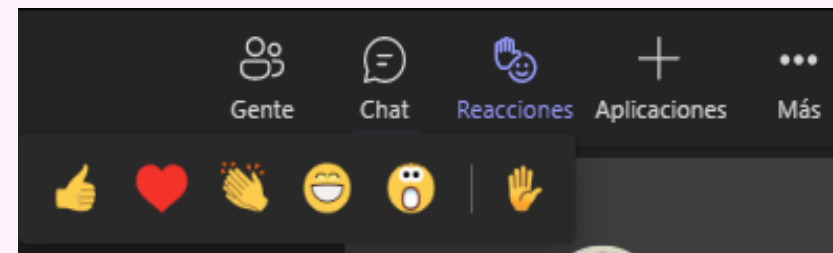
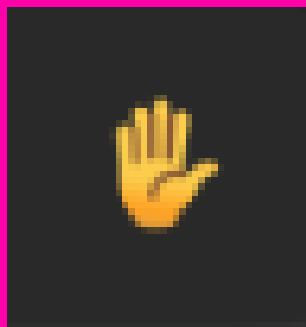
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Recuerden marcar su asistencia

Asistencia en LMS

**Pedir la
palabra para
realizar una
pregunta o
una
intervención**





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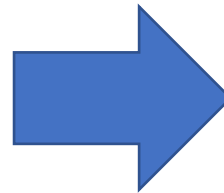
DESPLIEGUE

localhost

nodejs

mong
o

docker

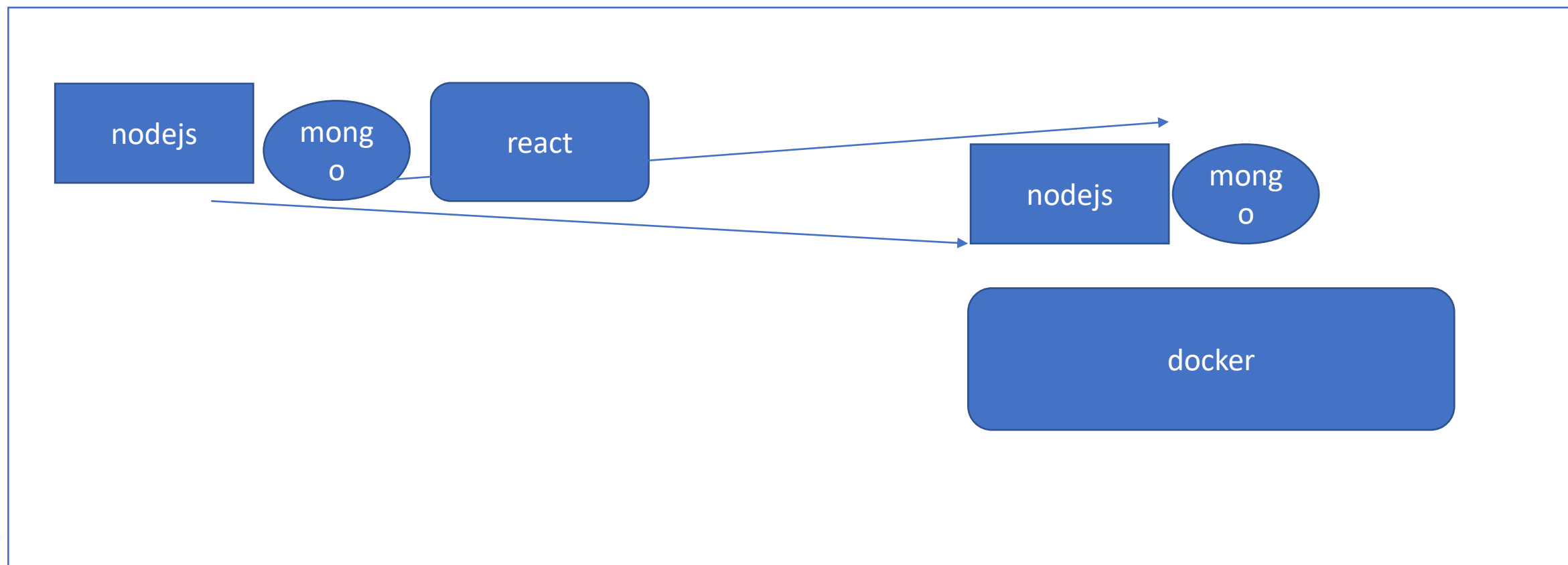


www....



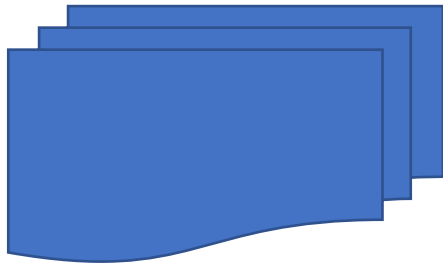
DESPLIEGUE

localhost





- docker

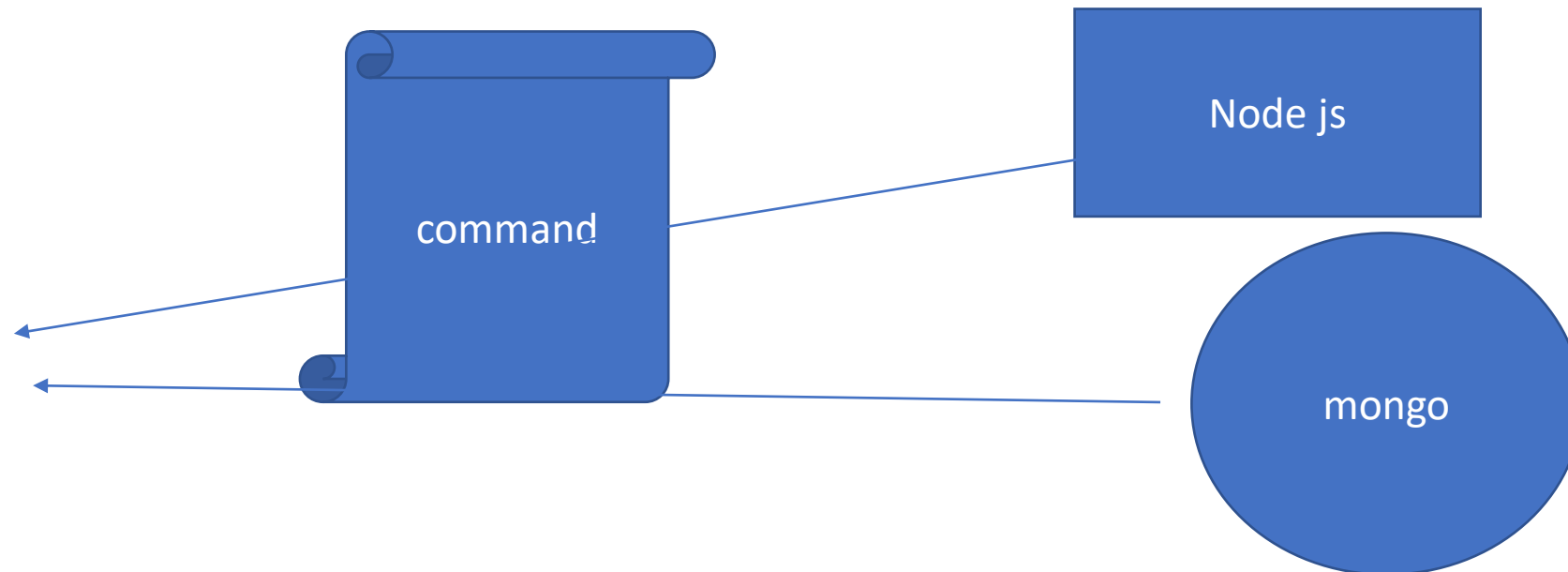
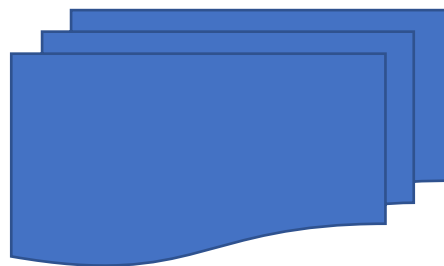


command

- Config ejecución servicios
- Puesta en marcha en marcha



- docker



- Config ejecución servicios
- Puesta en marcha en marcha



Crear directorio

```
ker> npm init -y
```

```
ker> npm install express mongoose --save  
mongoose: timing idealTree:node_modules/mongoose
```



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```
src  
  JS database.js  
  JS index.js  
  {} package-lock.json
```

```
JS index.js > ...  
const express = require("express")  
const app = express()  
  
const puerto = 3010  
app.listen(puerto)  
console.log("Servidor :" + puerto)
```

```
cker> node src/index.js
```



localhost:3010

Cannot GET /

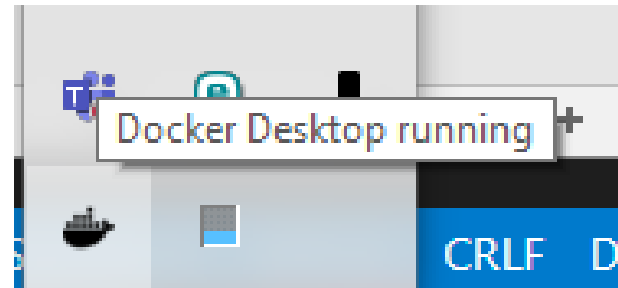
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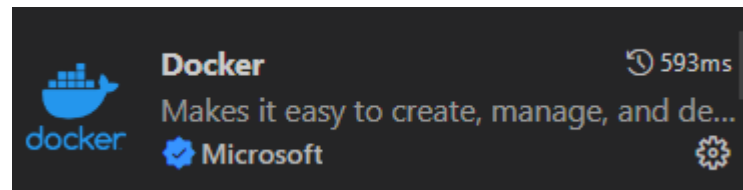
Hechos
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- Tener instalado Docker



- Instalar el plugin de docker en vscode





- Creamos el dockerfile

```
Go ... Dockerfile - docker - V...  
JS index.js Dockerfile JS  
Dockerfile > ...  
1 FROM node:16.17  
2  
3 RUN mkdir -p /usr/src/app  
4  
5 WORKDIR /usr/src/app  
6  
7 COPY package.json ./  
8 COPY package.lock.json ./  
9  
10 RUN npm install  
11  
12 COPY . .  
13  
14
```

```
.dockerignore
```

```
index.js Dockerfile  
.dockerignore  
1 node_modules
```



- Configura el arranque del servidor en
- Package.json

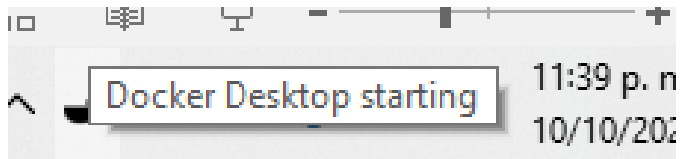
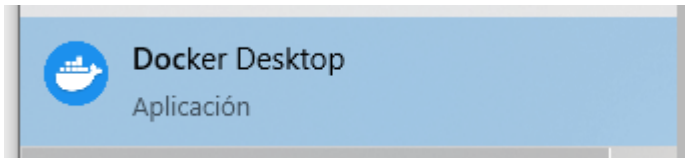
```
▶ Debug  
"scripts": {  
  "start" : "node src/index.js"  
},  
"keywords": [],
```

- Volviendo al Dockerfile

```
13  
14 EXPOSE 3010  
15  
16 CMD ["npm", "start"]
```




- Cargar docker





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```
image.lock.json not found: not found  
docker> docker build -t nodeserver .
```

```
er .:\Users\LENOVO\Desktop\node\docker>  
[+] Building 3.0s (2/3)  
=> [internal] load build definition from Dockerfile 0.1s  
=> => transferring dockerfile: 234B 0.0s  
=> [internal] load .dockerignore 0.1s  
=> => transferring context: 52B 0.0s  
=> [internal] load metadata for docker.io/library/node:1 2.9s
```

```
> [1/7] FROM docker.io/library/node:16.17@sha256:b35e76ba744a975b9a5428b6c3cde1a1cf0be53b246e1e9a4874f8  
> => resolve docker.io/library/node:16.17@sha256:b35e76ba744a975b9a5428b6c3cde1a1cf0be53b246e1e9a4874f8  
> => sha256:b35e76ba744a975b9a5428b6c3cde1a1cf0be53b246e1e9a4874f87034222b5a 776B / 776B  
> => sha256:b6d6a76ebdbe1e858fec4564af6c6c3fe9e9bf1c502c8c8a51afd0fcf3374d44 10.49MB / 50.44MB  
> => sha256:674750127bbf45f52660ada71ed1f1491d15e94c16583bff6df0df2489481049 2.21kB / 2.21kB  
> => sha256:946ee375d0e00784af782f370b84dd4fe41a2148a2bb152fd1392ddecdae4fd7 7.74kB / 7.74kB  
> => sha256:6a6315e893372434bf09990677f857fdd026ba0abdd98d435decc2ec5742cee4 5.24MB / 7.86MB  
> => sha256:4ad12dd0da3ea9c59f4c4fc53d6a204e11e2930b9dc4143376024ed8fa5c71bb 4.19MB / 10.00MB  
> [internal] load build context  
> => transferring context: 59.03kB
```



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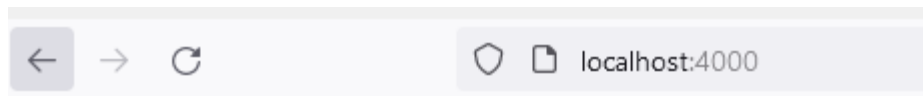
PS C:\Users\LENOVO\Desktop\node\docker> **docker** images

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
nodeserver	latest	ca6e1b2eea2a	23 seconds ago	932MB
getting-started	latest	8f2d9763cdff	5 weeks ago	404MB
docker101tutorial	latest	cb8844fa29bf	5 weeks ago	28.9MB
alpine/git	latest	692618a0d74d	5 weeks ago	43.4MB

PS C:\Users\LENOVO\Desktop\node\docker>



```
PS C:\Users\LENOVO\Desktop\node\docker> docker run -p 4000:3010 nodeserver  
  
> docker@1.0.0 start  
> node src/index.js
```



Cannot GET /

Localhost:3010

nodeserverg83

localhost.:3010



- Configurar la conexión con la Base de datos

```
JS database.js
```

```
> JS database.js > <unknown> > exports > [e] conn
1  const mongoose = require("mongoose")
2  const DB_URI = 'mongodb://localhost:27017/marcadores'
3
4  module.exports = () =>{
5    const conn = () => {
6      //console.log("conectando...")
7      mongoose.connect(
8        DB_URI,
9        {
10         keepAlive : true,
11         useNewUrlParser : true,
12         useUnifiedTopology : true
13       },
14       (err) =>{
15         if(err){
16           console.log("error DB:" + err )
17         }else{
18           console.log("Conexion Satisfactoria")
19         }
20       }
21     )
22   }
23   conn()
24 }
```

```
const DB_URI = 'mongodb://mongo/marcadores'
```



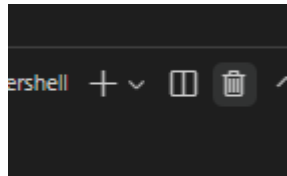
```
.dockerignore
docker-compose.yml
Dockerfile
index.js
docker-compose.yml
1  version : "3"
2
3  → services:
4  → backend:
5      container_name: api
6      restart: always
7      build: .
8      ports:
9          - "4000:3010"
10     links:
11         - database
12 → database:
13     container_name: mongodb
14     image: mongo
15     ports:
16         - "27019:27018"
17
18
```

node

mongodb

nodeserverg83

- Cargamos una nueva terminal



```
docker> docker-compose build
```

```
services.database.ports must be a list
PS C:\Users\LENOVO\Desktop\node\docker>
services.backend.ports must be a list
PS C:\Users\LENOVO\Desktop\node\docker>
```

```
restart: always
build: .
ports:
  - 4000:3010
links:
  - mongo
database:
  container_name: mongodb
  image: mongo
  ports:
    - "27018:27017"
```

```
=> [internal] load build context
=> => transferring context: 60.65kB
=> CACHED [2/7] RUN mkdir -p /usr/src/app
=> CACHED [3/7] WORKDIR /usr/src/app
=> CACHED [4/7] COPY package.json ./
=> CACHED [5/7] COPY package-lock.json ./
=> CACHED [6/7] RUN npm install
=> [7/7] COPY . .
=> exporting to image
=> => exporting layers
=> => writing image sha256:45ec4dc2ceb05a2b5476b3bf1a59a5f0a24c73357276e99c20f668bf555d62
=> => naming to docker.io/library/docker-backend
```



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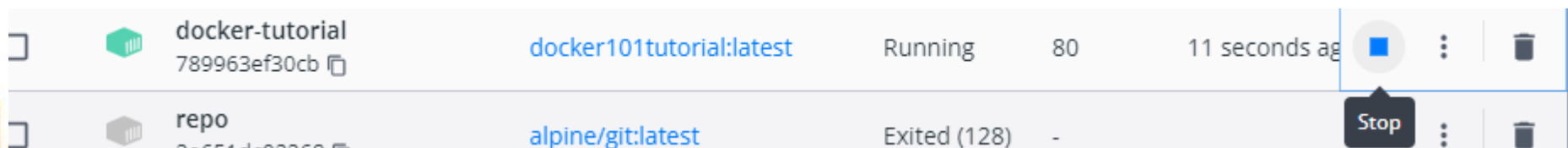
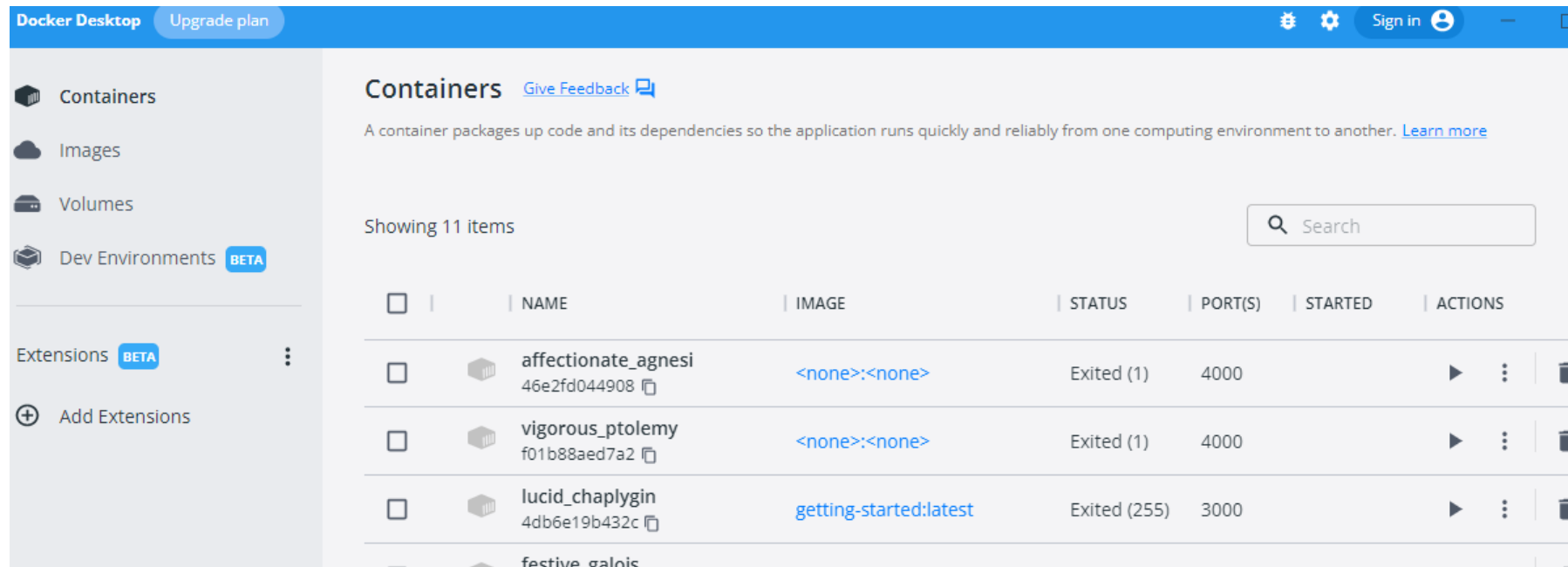
```
PS C:\Users\LENOVO\Desktop\node> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
docker-backend       latest             45ec4dc2ceb0       About a minute ago 932MB
nodeserver           latest             4bcff884a49b       28 minutes ago    932MB
<none>               <none>            a6249f9bf75a       32 minutes ago    932MB
<none>               <none>            ca6e1b2eea2a       36 minutes ago    932MB
getting-started       latest             8f2d9763cdfd       5 weeks ago       404MB
docker101tutorial    latest             cb8844fa29bf       5 weeks ago       28.9MB
```

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- Terminar el contenedor desde Docker Desktop





```
0740 5 weeks ago  
> docker compose up
```

```
PS C:\Users\LENOVO\Desktop\node\docker> docker compose up  
[+] Running 7/10  
- database Pulling  
  - fb0b3276a519 Pull complete  
  - c81bcd64a2d2 Pull complete  
  - 45ed91f63dfa Pull complete  
  - 06d1770a2c11 Pull complete  
  - a03d917eab2f Pull complete  
  - d0226311fde3 Pull complete  
  - cf22b9bccca1 Pull complete  
  - 5a4955b612fd Downloading [=====>] 22.14MB/193.6MB  
  - bc8341d9c8d5 Verifying Checksum
```

```
apig83 | > dockerg83@1.0.0 start  
apig83 | > node src/index.js  
apig83 |  
apig83 | Servidor: 3010
```



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localhost:4000

Cannot GET /

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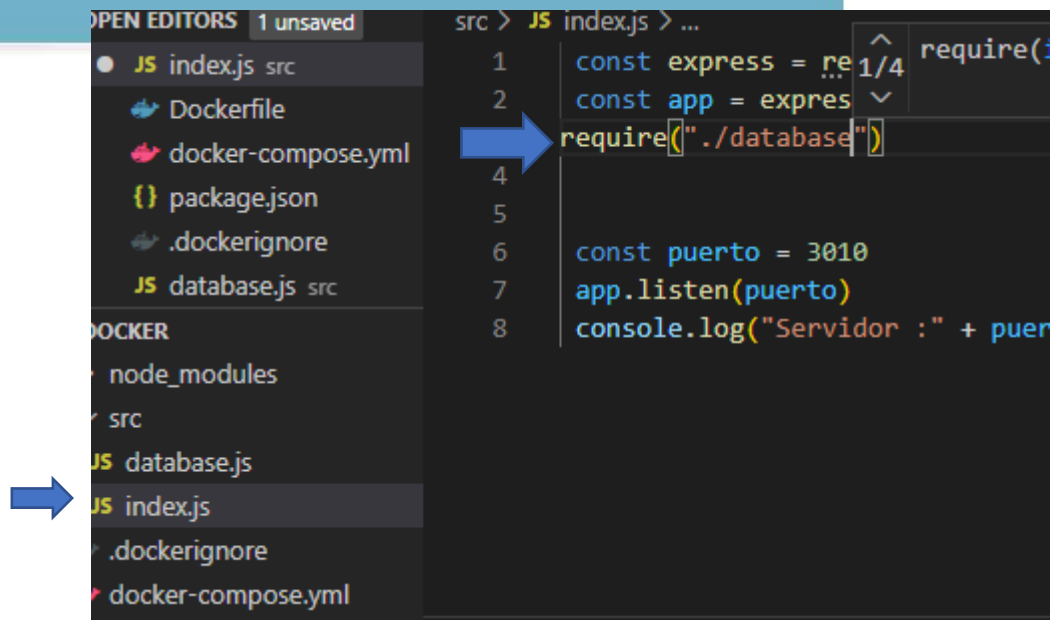


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- Con CTRL+C -> detengo el contenedor
- Nuevamente lo construyo

```
docker compose build
```

```
=> exporting to image
=> => exporting layers
=> => writing image sha256:45ec4dc2ceb05a2b5476b3bf1a59a5f0a24c73357276e6e99c20f668bf555d62
=> => naming to docker.io/library/docker-backend
```

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

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chicos

QUE















CONECTAN





```
> docker compose up
```

```
ture shutdown detected, found interim file, some me  
api  
api > docker@1.0.0 start  
api > node src/index.js  
api  
api Servidor :3010
```

<input type="checkbox"/>	<div><div><div>▼</div><div></div></div></div> <div>dockerg83 2 containers</div>	-	Running (2/2)	-				
<input type="checkbox"/>	<div><div></div></div> <div>mongodbg83 0189dc418f9c </div>	mongo:latest	Running	27019	32 seconds ag			
<input type="checkbox"/>	<div><div></div></div> <div>apig83 2bb55a13398f </div>	dockerg83-backend:latest	Running	3010	30 seconds ag			



- Actualización de archivos

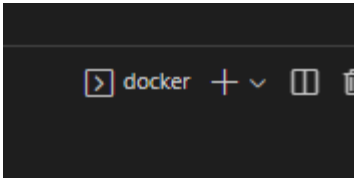
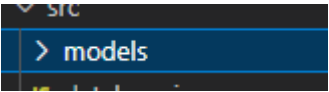


```
links:
  - database
volumes:
  - ../usr/src/app
database:
  container_name: mongodb
  image: mongo
  ports:
```

```
ker> docker compose build
```

```
against images to find vulnera
> docker compose up
```

- Creamos el directorio models en src



Prueba la nueva tecnología PowerShell multiplataforma

```
PS C:\Users\LENOVO\Desktop\node\docker>
```

```
er> docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
927f8949b940	docker-backend	"docker-entrypoint.s..."	3 minutes ago	Up 3 minutes	0.0.0.0:4000->3010/tcp	api
dcde09387f58	mongo	"docker-entrypoint.s..."	22 minutes ago	Up 3 minutes	27017/tcp, 0.0.0.0:27019->27018/tcp	mongodb

```
PS C:\Users\LENOVO\Desktop\node\docker>
```



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```
PS C:\Users\LENOVO\Desktop\node\docker> docker exec -it api bash
root@927f8949b940:/usr/src/app#
```

```
root@927f8949b940:/usr/src/app# ls
```

```
Dockerfile  docker-compose.yml  node_modules  package-lock.json  package.json  src
```

```
root@927f8949b940:/usr/src/app# cd src
```

```
root@927f8949b940:/usr/src/app/src# ls
```

```
database.js  index.js  models
root@927f8949b940:/usr/src/app/src# ^C
```

Ya toma los cambios en directorios y archivos que se vayan creando



- Agregando nodemon

Volvemos a la terminal y le cerramos el servidor

```
- Container api Stopped  
- Container mongodb Stopped  
canceled  
PS C:\Users\LENOVO\Desktop\node\docker>
```

```
cker> npm i nodemon --save
```

```
14 packages are looking for funding  
run `npm fund` for details  
  
found 0 vulnerabilities  
PS C:\Users\LENOVO\Desktop\node\docker>
```



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```
package.json 5  "main": "index.js",
.dockerignore
JS database.js src
DOCKER
  > node_modules
  > src
    > models
    JS database.js
    JS index.js
    .dockerignore
    docker-compose.yml
    Dockerfile
    {} package-lock.json
    {} package.json
5  "main": "index.js",
6  "scripts": {
7    "start": "node src/index.js",
8    "dev": "nodemon src/index.js"
9  },
10 "keywords": [],
11 "author": "",
12 "license": "ISC",
13 "dependencies": {
14   "express": "^4.18.2",
15   "mongoose": "^6.6.5",
16   "nodemon": "^2.0.20"
17 }
18 }
19 }
```




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cker> **docker** compose stop inTIC

```
models
JS database.js
JS index.js
.dockerignore
docker-compose.yml
Dockerfile
package-lock.json
package.json
```

```
12 COPY . .
13
14 EXPOSE 3010
15 CMD ["npm", "run", "dev"]
```

A parameter to the default e
Set the default executable a
container.

```
r> docker compose build
```

```
docker compose up
```

```
agnostic data capture shutdown detected, round
api
api > docker@1.0.0 start
api > node src/index.js
api
```



localhost:4000

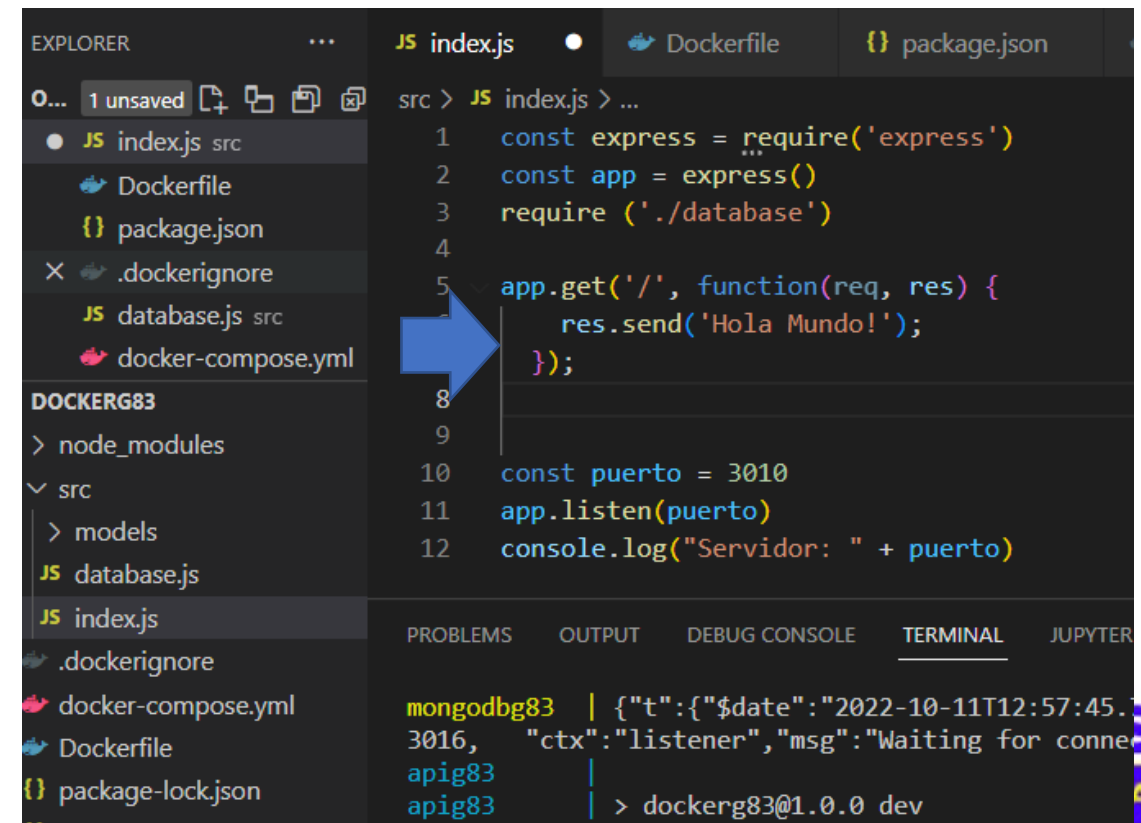
Hola Mundo!



- Copiamos nuestra ruta hola mundo de nuestro proyecto g83

```
12  
13  
14  
15 app.get('/', function(req, res) {  
16   res.send('Hola Mundo!');  
17 });  
18
```

- Y lo pegamos en nuestro index.js





- Detenemos el contenedor (CTRL C) y lo levantamos de nuevo

```
g83> docker compose up
```



```
C:\Users\LENOVO>netstat -ano | findstr :4000
TCP    0.0.0.0:4000          0.0.0.0:0           LISTENING        13296
TCP    127.0.0.1:4000       127.0.0.1:61197     TIME_WAIT        0
TCP    [::]:4000           [::]:0              LISTENING        13296
TCP    [::1]:4000          [::]:0              LISTENING        23736
```

```
C:\Users\LENOVO>taskkill /pid 13296 /f
Correcto: se terminó el proceso con PID 13296.
```

```
C:\Users\LENOVO>netstat -ano | findstr :4000
```

```
C:\Users\LENOVO>
```



Bibliografía



Practicar los temas tratados



Nos vemos en la siguiente sesión



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**Muchas
Gracias**



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