

Universidad de Manizales

Facultad de ciencias e ingeniería

DEVOPS-WEBAPPS

Actividad colaborativa. Etapa 1 creación de contenedor utilizando Docker

Presentado por:

Yeison Andres Valencia Vargas

```
Windows PowerShell
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> ls
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.

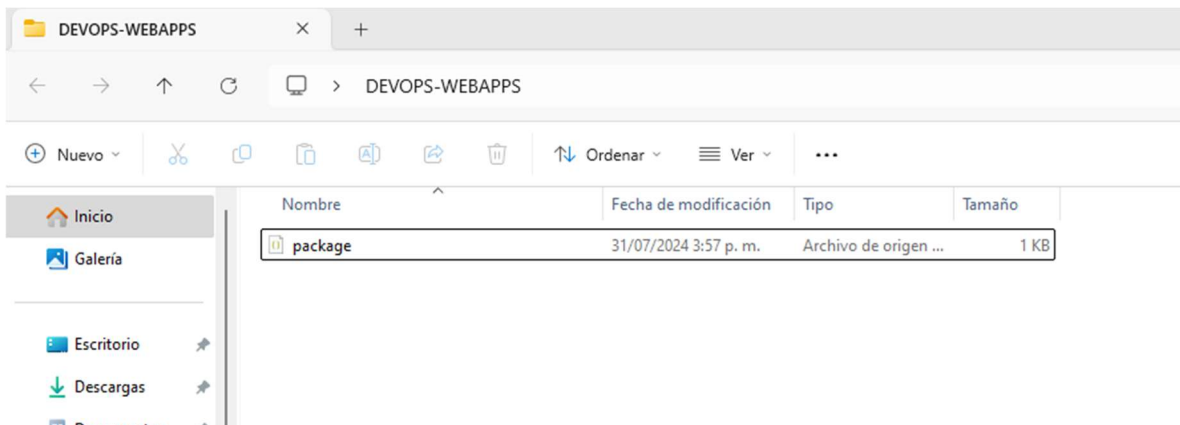
See 'npm help init' for definitive documentation on these fields
and exactly what they do.

Use 'npm install <pkg>' afterwards to install a package and
save it as a dependency in the package.json file.

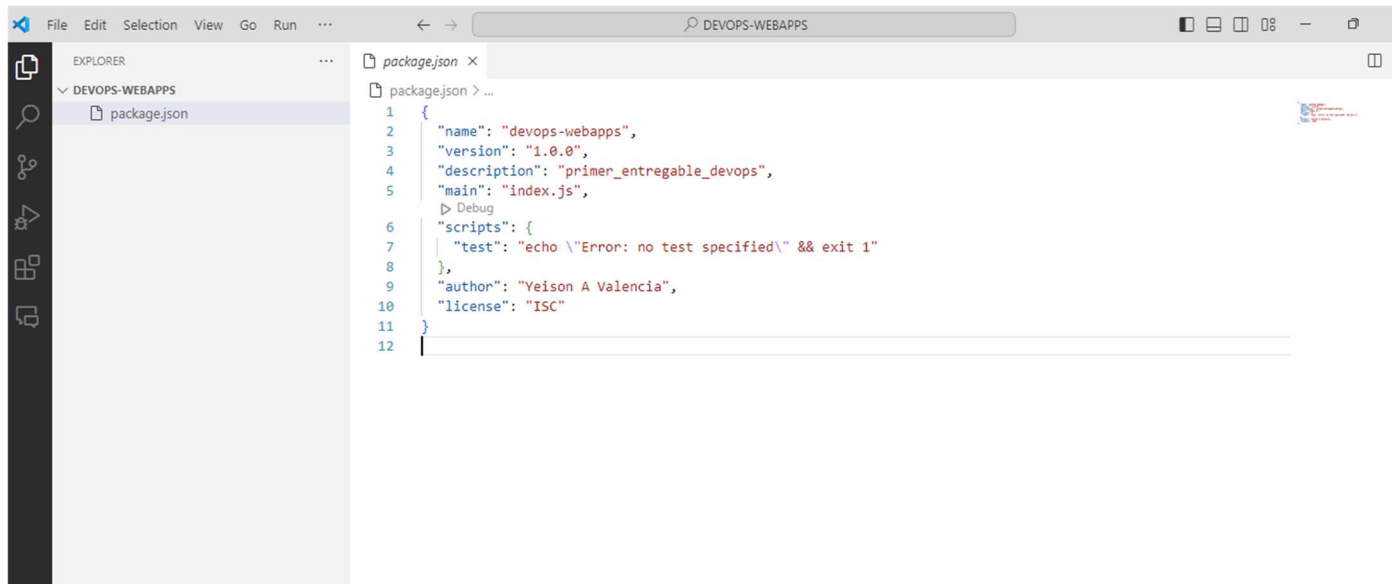
Press ^C at any time to quit.
package name: (devops-webapps)
version: (1.0.0)
description: primer_entregable_devops
entry point: (index.js)
test command:
git repository:
keywords:
author: Yeison A Valencia
license: (ISC)
About to write to C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS\package.json:

{
  "name": "devops-webapps",
  "version": "1.0.0",
  "description": "primer_entregable_devops",
  "main": "index.js",
  "scripts": {
    "test": "echo \"Error: no test specified\" && exit 1"
  },
  "author": "Yeison A Valencia",
  "license": "ISC"
}
```

Se inicia con la creación del proyecto, con 'npm init', después nos arroja unas preguntas que dependiendo de la situación respondemos o añadimos, por último, de crea un archivo.



Aquí se evidencia el paquete instalado.



Si visualizamos en el editor de código, para este ejemplo Visual Studio Code sale el archivo que creamos en la terminal con “npm init”.

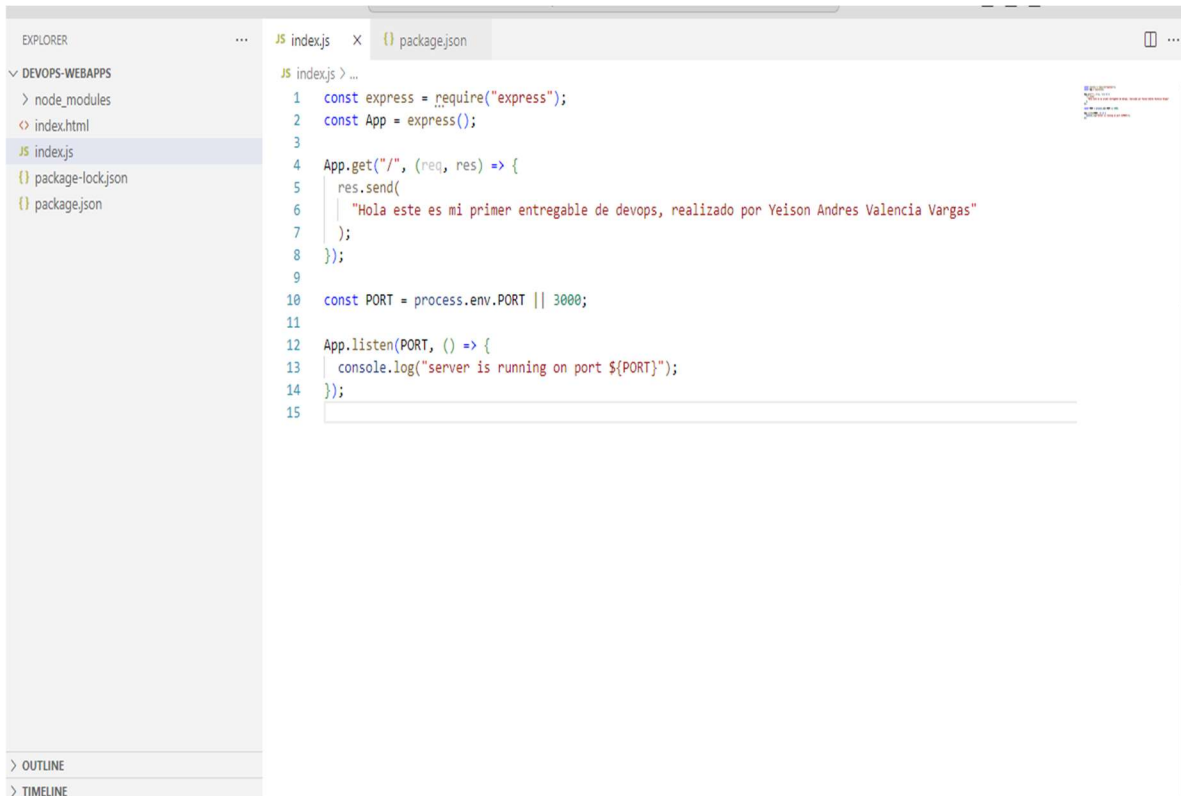
```
Windows PowerShell
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> npm install express

added 64 packages, and audited 65 packages in 10s

12 packages are looking for funding
  run 'npm fund' for details

found 0 vulnerabilities
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS>
```

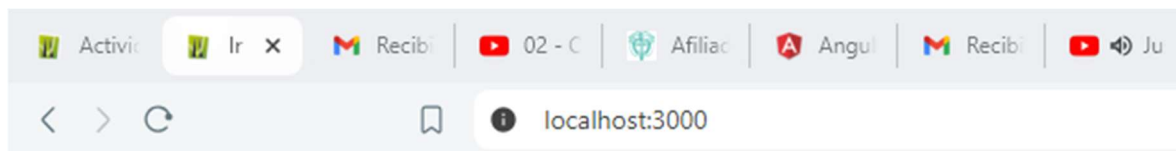
Se instala el express, y aquí se evidencia que quedó instalado.



The screenshot shows the Visual Studio Code editor interface. On the left, the Explorer sidebar displays the file structure of a project named 'DEVOPS-WEBAPPS', including 'node_modules', 'index.html', 'index.js', 'package-lock.json', and 'package.json'. The 'index.js' file is selected and its content is displayed in the main editor area. The code is a JavaScript Express.js application that listens on port 3000 and responds with a message.

```
JS index.js > ...
1  const express = require("express");
2  const App = express();
3
4  App.get("/", (req, res) => {
5    res.send(
6      "Hola este es mi primer entregable de devops, realizado por Yeison Andres Valencia Vargas"
7    );
8  });
9
10 const PORT = process.env.PORT || 3000;
11
12 App.listen(PORT, () => {
13   console.log("server is running on port ${PORT}");
14 });
15
```

Se hace la creación de la App, con el index.js.



Hola este es mi primer entregable de devops, realizado por Yeison Andres Valencia Vargas

Se corre el programa con el npm start y este es el resultado.

Creación de Dockerfile

```
Windows PowerShell
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> npm start

devops-webapps@1.0.0 start
node index.js

server is running on port ${PORT}
C:\C:\Desea terminar el trabajo por lotes (S/N)? s
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker build -t mi-imagen-yeisonv .
[+] Building 40.6s (4/9)
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 402B
=> [internal] load metadata for docker.io/library/node:14
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 2.21MB
=> [1/5] FROM docker.io/library/node:14@sha256:a158d3b9b4e3fa813fa6c8c590b8f0a860e015ad4e59bbce5744d2f6fd8461aa
=> => resolve docker.io/library/node:14@sha256:a158d3b9b4e3fa813fa6c8c590b8f0a860e015ad4e59bbce5744d2f6fd8461aa
=> => sha256:2cafa3fbb0b6529ee4726b4f599ec27ee557ea3dea7019182323b3779959927f 2.21kB / 2.21kB
=> => sha256:a158d3b9b4e3fa813fa6c8c590b8f0a860e015ad4e59bbce5744d2f6fd8461aa 776B / 776B
=> => sha256:1d12470fa662a2a5cb50378dcdc8ea228c1735747db410bbefb8e2d9144b5452 7.51kB / 7.51kB
=> => sha256:3d2201bd995ccccf12851a50820de03d34a17011dcbb9ac9fd3a50c952cbb131 10.00MB / 10.00MB
=> => sha256:2ff1d7c41c74a25258bfa6f0b8adb0a727f84518f55f65ca845ebc747976c408 50.45MB / 50.45MB
=> => sha256:b253aea7a0671bb60008df01de101a38a045ff7bc656e3b0fbfc7c05cca5 7.86MB / 7.86MB
=> => sha256:1de76e268b103d05fa8960e0f77951ff54b912b63429c34f5d6adfd09f5f9ee2 51.88MB / 51.88MB
=> => sha256:d9a8df5894511ce28a05e2925a75e8a4acbd0634c39ad734fd3a8e23d1b1569 64.34MB / 191.85MB
=> => sha256:6f51ee005deac0d99898e41b8ce60ebf250ebe1a31a0b03f613aec6bbc9b83d8 4.19kB / 4.19kB
=> => sha256:5f32ed3c3f278edda4fc571c880b5277355a29ae8f52b52cdf865f058378a590 14.36MB / 35.24MB
=> => extracting sha256:2ff1d7c41c74a25258bfa6f0b8adb0a727f84518f55f65ca845ebc747976c408
=> => sha256:0c8cc2f24a4dc64e602e086fc9446b0a541e8acd9ad72d2e90df3ba22f158b3 2.29MB / 2.29MB
=> => sha256:0d27a8e861329007574c6766fba946d48e20d2c8e964e873de352603f22c4ceb 450B / 450B
```

```
File Edit Selection View Go Run ...
DEVOPS-WEBAPPS
EXPLORER
  node_modules
  Dockerfile
  index.html
  JS index.js
  package-lock.json
  package.json
  Dockerfile
1
2 FROM node:14
3
4 # Establece el directorio de trabajo en /app
5 WORKDIR /app
6
7 # Copia el archivo package.json y package-lock.json
8 COPY package*.json ./
9
10 # Instala las dependencias de la aplicación
11 RUN npm install
12
13 # Copia el resto de los archivos de la aplicación
14 COPY . .
15
16 # Expone el puerto en el que la aplicación se ejecutará
17 EXPOSE 3000
18
19
20
```

Docker Desktop

Update to latest

Q

Search for images, containers, volumes, extensions and more...

Ctrl+K

Images [Give feedback](#)

Local

Hub

437.82 MB / 293.62 MB in use

10 images

Last refresh: 9 hours ago

Q

Search

	Name	Tag	Status	Created	Size	Actions
	mi-imagen-yeisonv	latest	Unused	3 seconds ago	918.56 MB	

Learning center

Walkthroughs

Quick hands-on guides to show you around

What is a container?

5 mins

```
1 FROM node
2 RUN mkdir -p
3 WORKDIR /app
4 COPY packa
```

How do I run a container?

6 mins

[View all](#)

```

PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker image ls
REPOSITORY          TAG                 IMAGE ID            CREATED
SIZE
mi-imagen-yeisonv   latest             0b93043d1013       5 minutes ago
919MB
docker/desktop-kubernetes   kubernetes-v1.29.1-cni-v1.4.0-critools-v1.29.0-cri-dockerd-v0.3.8-1-debian   ace10e261811     6 months ago
438MB
registry.k8s.io/kube-apiserver   v1.29.1           53b148a9d196       6 months ago
127MB
registry.k8s.io/kube-scheduler   v1.29.1           406945b51154       6 months ago
59.5MB
registry.k8s.io/kube-controller-manager   v1.29.1           79d451ca186a       6 months ago
122MB
registry.k8s.io/kube-proxy        v1.29.1           43c6c10396b8       6 months ago
82.3MB
portainer/portainer-docker-extension   2.19.4            1a0fb356ea35       7 months ago
294MB
registry.k8s.io/etcd              3.5.10-0          a0eed15eed44       9 months ago
148MB
registry.k8s.io/coredns/coredns    v1.11.1           cbb01a7bd410       11 months ago
59.8MB
registry.k8s.io/pause             3.9               e6f181688397       21 months ago
744kB
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker image ls mi-imagen-yeisonv
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
mi-imagen-yeisonv   latest             0b93043d1013       6 minutes ago      919MB
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS>

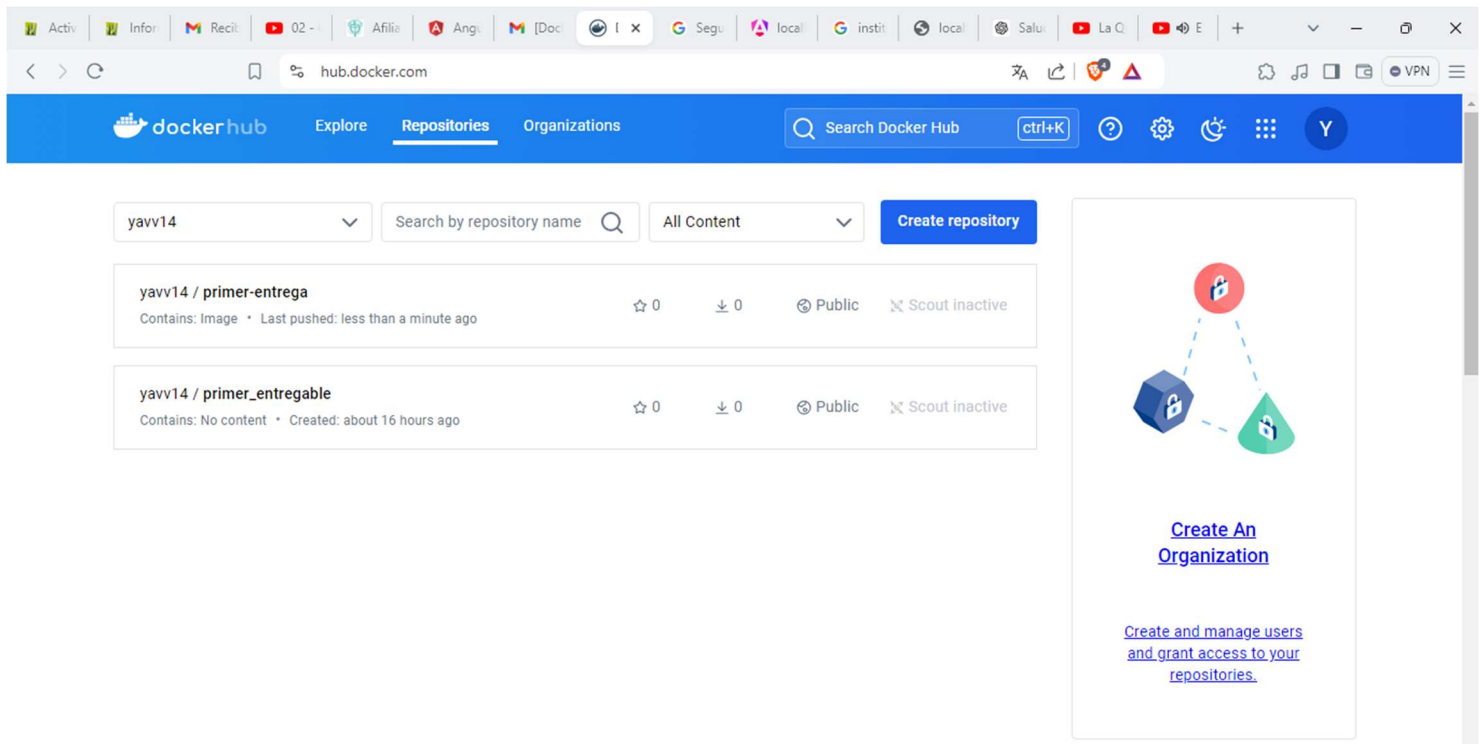
```

Creación de repositorio en DOCKERHUB.

```
Windows PowerShell
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Instale la versión más reciente de PowerShell para obtener nuevas características y mejoras. https://aka.ms/powershell

PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker login
Authenticating with existing credentials...
Login Succeeded
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker tag mi-imagen-yeisonv yavv14/primer-entrega
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> docker push yavv14/primer-entrega
Using default tag: latest
The push refers to repository [docker.io/yavv14/primer-entrega]
ff8ef3fe1dd3: Pushed
03a5cba929e9: Pushed
3532ebbaab7: Pushed
b366e9ff18e1: Pushed
0d5f5a015e5d: Mounted from library/node
3c777d951de2: Mounted from library/node
f8a91dd5fc84: Mounted from library/node
cb81227abde5: Mounted from library/node
e01a454893a9: Mounted from library/node
c45660adde37: Mounted from library/node
fe0fb3ab4a0f: Mounted from library/node
f1186e5061f2: Mounted from library/node
b2dba7477754: Mounted from library/node
latest: digest: sha256:943a9bc5c1ac7b289f5018ed3487c554b73a758a0cd3df3bd1cfc8bf45eac863 size: 3050
PS C:\Users\andre\OneDrive\Escritorio\DEVOPS-WEBAPPS> |
```



The screenshot shows the Docker Hub interface in a web browser. The user 'yavv14' is logged in, and the 'Repositories' tab is selected. The page displays two repositories: 'yavv14 / primer-entrega' and 'yavv14 / primer_entregable'. Both repositories are public and have no content yet. The interface includes a search bar, navigation links, and a sidebar with a 'Create repository' button and a 'Create An Organization' link.

Search by repository name: All Content

Repository	Stars	Downloads	Visibility	Scout
yavv14 / primer-entrega	0	0	Public	Scout inactive
yavv14 / primer_entregable	0	0	Public	Scout inactive

[Create An Organization](#)

[Create and manage users and grant access to your repositories.](#)