

LABORATORIO

NO. 1

Construcción de compiladores

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Entregables

Programa que asigne un valor a una variable

```

> whoami
mvrcentes
> ./script1.sh
Construyendo la imagen Docker...
[+] Building 1.4s (12/12) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile                0.0s
=> -- transferring dockerfile: 589B                                0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest    0.0s
=> [internal] load .dockerignore                                  0.0s
=> -- transferring context: 2B                                      0.0s
=> [1/7] FROM docker.io/library/ubuntu:latest@sha256:2e863c44b718727c860746568e1d54afd13b2fa71b160f5cd9058fc436217b30 0.0s
=> [internal] load build context                                  0.0s
=> -- transferring context: 29.39kB                                 0.0s
=> CACHED [2/7] WORKDIR /usr/src/app                               0.0s
=> CACHED [3/7] RUN apt-get update && apt-get install -y gcc flex bison && rm -rf /var/lib/apt/lists/* 0.0s
=> [4/7] COPY . .                                                  0.0s
=> [5/7] RUN flex simple.language.lex                             0.1s
=> [6/7] RUN bison -d simple.language.y -o y.tab.c                 0.1s
=> [7/7] RUN gcc lex.yy.c y.tab.c -o compiler                     0.2s
=> exporting to image                                              0.0s
=> -- exporting layers                                             0.0s
=> -- writing image sha256:9552bfbf79a3c5cd1c337e51331ff3db46854ebb25862008e45480ca196cd716 0.0s
=> -- naming to docker.io/library/compiler_env                    0.0s

What's next:
  View a summary of image vulnerabilities and recommendations → docker scout quickview
La imagen Docker ha sido construida con éxito.
Ejecutando el contenedor Docker...
a = 5
b = 10
c = 15
Ejecución completada.

~/Library/CloudStorage/OneDrive-UVG/Documentos/Semestre_8/Compiladores/Construction_de_compiladores/lab-1 Lab-1*
> █
[0] 0:zsh* *root@22729c532fd5: /u* 17:45 04-Jul-24

```

Crear un programa de operación

```

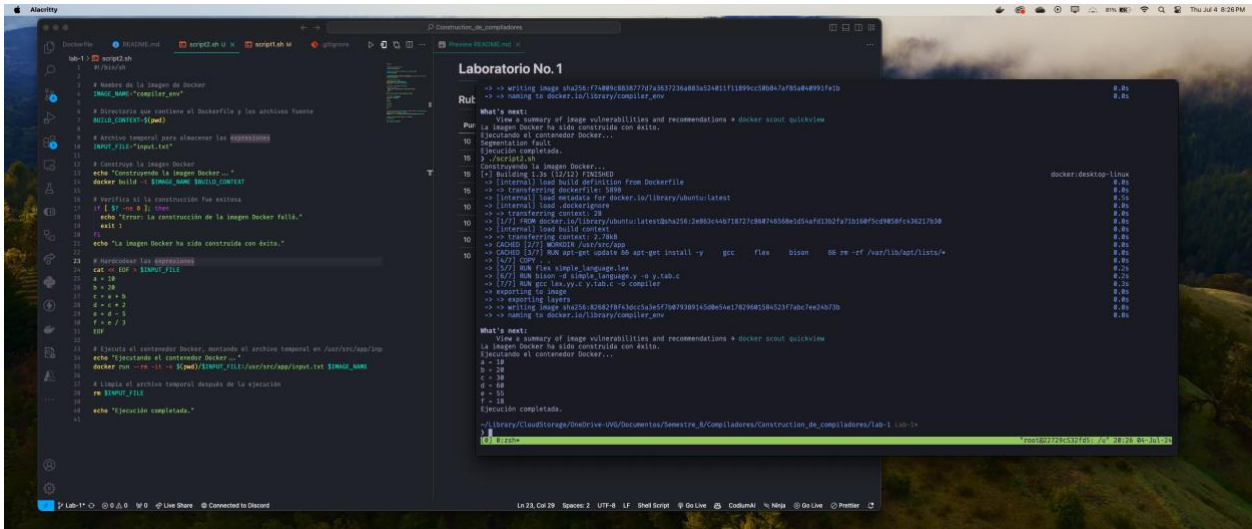
=> -- writing image sha256:f74009c8838777d7a3637236a883a524011f11899cc50b847af85a040991fe1b 0.0s
=> -- naming to docker.io/library/compiler_env 0.0s

What's next:
  View a summary of image vulnerabilities and recommendations → docker scout quickview
La imagen Docker ha sido construida con éxito.
Segmentation fault
Ejecución completada.
> ./script2.sh
Construyendo la imagen Docker...
[+] Building 1.3s (12/12) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile                0.0s
=> -- transferring dockerfile: 589B                                0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest    0.5s
=> [internal] load .dockerignore                                  0.0s
=> -- transferring context: 2B                                      0.0s
=> [1/7] FROM docker.io/library/ubuntu:latest@sha256:2e863c44b718727c860746568e1d54afd13b2fa71b160f5cd9058fc436217b30 0.0s
=> [internal] load build context                                  0.0s
=> -- transferring context: 2.78kB                                  0.0s
=> CACHED [2/7] WORKDIR /usr/src/app                               0.0s
=> CACHED [3/7] RUN apt-get update && apt-get install -y gcc flex bison && rm -rf /var/lib/apt/lists/* 0.0s
=> [4/7] COPY . .                                                  0.0s
=> [5/7] RUN flex simple.language.lex                             0.2s
=> [6/7] RUN bison -d simple.language.y -o y.tab.c                 0.2s
=> [7/7] RUN gcc lex.yy.c y.tab.c -o compiler                     0.3s
=> exporting to image                                              0.0s
=> -- exporting layers                                             0.0s
=> -- writing image sha256:82682f8f43dcd5a3e5f7b079389145d0e54e17829601584523f7abc7ee24b73b 0.0s
=> -- naming to docker.io/library/compiler_env                    0.0s

What's next:
  View a summary of image vulnerabilities and recommendations → docker scout quickview
La imagen Docker ha sido construida con éxito.
Ejecutando el contenedor Docker...
a = 10
b = 20
c = 30
d = 60
e = 55
f = 18
Ejecución completada.

~/Library/CloudStorage/OneDrive-UVG/Documentos/Semestre_8/Compiladores/Construction_de_compiladores/lab-1 Lab-1*
> █
[0] 0:zsh* *root@22729c532fd5: /u* 20:27 04-Jul-24

```



Agregar manejo de errores

```

> ./script3.sh
Construyendo la imagen Docker...
[+] Building 0.4s (12/12) FINISHED
-> [internal] load build definition from Dockerfile
-> ==> transferring dockerfile: 589B
-> [internal] load metadata for docker.io/library/ubuntu:latest
-> [internal] load .dockerignore
-> ==> transferring context: 2B
-> [1/7] FROM docker.io/library/ubuntu:latest@sha256:2e863c44b718727c860746568e1d54fd13b2fa71b160f5c09058f436217b30
-> [internal] load build context
-> ==> transferring context: 1.39kB
-> CACHED [2/7] WORKDIR /usr/src/app
-> CACHED [3/7] RUN apt-get update && apt-get install -y gcc flex bison && rm -rf /var/lib/apt/lists/*
-> CACHED [4/7] COPY . .
-> CACHED [5/7] RUN flex simple.language.lex
-> CACHED [6/7] RUN bison -d simple.language.y -o y.tab.c
-> CACHED [7/7] RUN gcc lex.yy.c y.tab.c -o compiler
-> exporting to image
-> ==> exporting layers
-> ==> writing image sha256:076b023e3cec2b00d31fd4d9448a36349bac9e3b8aebb753e31bf96c73e75b
-> ==> naming to docker.io/library/compiler_env

What's next:
View a summary of image vulnerabilities and recommendations -> docker scout quickview
La imagen Docker ha sido construida con éxito.
Ejecutando el contenedor Docker...
Caracter no reconocido: )
syntax error
Caracter no reconocido: $
syntax error
Ejecución completada.

~/Library/CloudStorage/OneDrive-UNG/Documentos/Semestre_8/Compiladores/Construction_de_compiladores/lab-1 Lab-1*
>
[0] 0: bash

```

Experimentar con la precedencia

- Valores probados:

```
• a = 5
• b = 10
• c = a + b / 2 // esperado: 10
• d = 1 + c * 2 // esperado: 21
• e = b / 2 + 5 * d - 3 // esperado: 107
```

```
> ./script3.sh
Construyendo la imagen Docker...
[*] Building 1.55 (12/12) FINISHED
[+] [internal] load build definition from Dockerfile
-> [internal] load metadata for docker.io/library/ubuntu:latest
-> [internal] load .dockerignore
-> [internal] load context: 2B
-> [1/7] FROM docker.io/library/ubuntu:latest@sha256:2e863c44b718727c860746568e1d54afd13b2fa71b160f5cd9058fc436217b30
-> [internal] load build context
-> [internal] load context: 2.95MB
-> CACHED [2/7] WORKDIR /usr/src/app
-> CACHED [3/7] RUN apt-get update && apt-get install -y gcc flex bison && rm -rf /var/lib/apt/lists/*
-> [4/7] COPY . .
-> [5/7] RUN flex simple_language.lex
-> [6/7] RUN bison -d simple_language.y -o y.tab.c
-> [7/7] RUN gcc lex.yy.c y.tab.c -o compiler
-> exporting to image
-> exporting layers
-> writing image sha256:c4243f2773af4832bb3527b43f8f05b683ef47fb00a4d1349deb950863444a1a
-> naming to docker.io/library/compiler_env
docker:desktop-linux 0.0s
0.0s
0.8s
0.0s
0.0s
0.0s
0.0s
0.0s
0.0s
0.0s
0.0s
0.1s
0.1s
0.1s
0.3s
0.0s
0.0s
0.0s
0.0s

What's next:
View a summary of image vulnerabilities and recommendations → docker scout quickview
La imagen Docker ha sido construida con éxito.
Ejecutando el contenedor Docker...
a = 5
b = 10
c = 10
d = 21
e = 107
Ejecución completada.

~/Library/CloudStorage/OneDrive-UVG/Documentos/Semestre_8/Compiladores/Construction_de_compiladores/lab-1 Lab-1*
> []

[0] 0:zsh* "root@2729c532fd5: /u" 21:14 04-Jul-24
```

Referencias

Devpool. (18 de 1 de 2019). *stackoverflow*. Obtenido de Running a script inside a docker container using shell script: <https://stackoverflow.com/questions/31578446/running-a-script-inside-a-docker-container-using-shell-script>

Docker. (n/a). *Docker Community Forums* . Obtenido de Executing the Shell Script through Dockerfile: <https://forums.docker.com/t/executing-the-shell-script-through-dockerfile/134152/1>