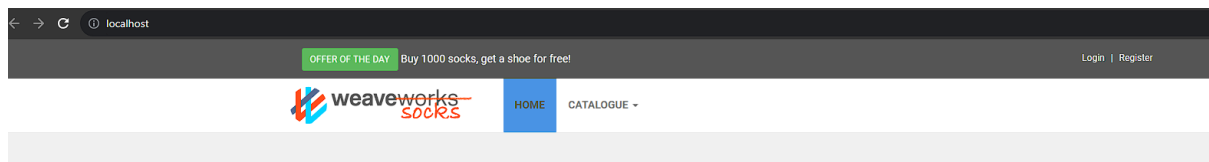


# Ingeniera de Software 3

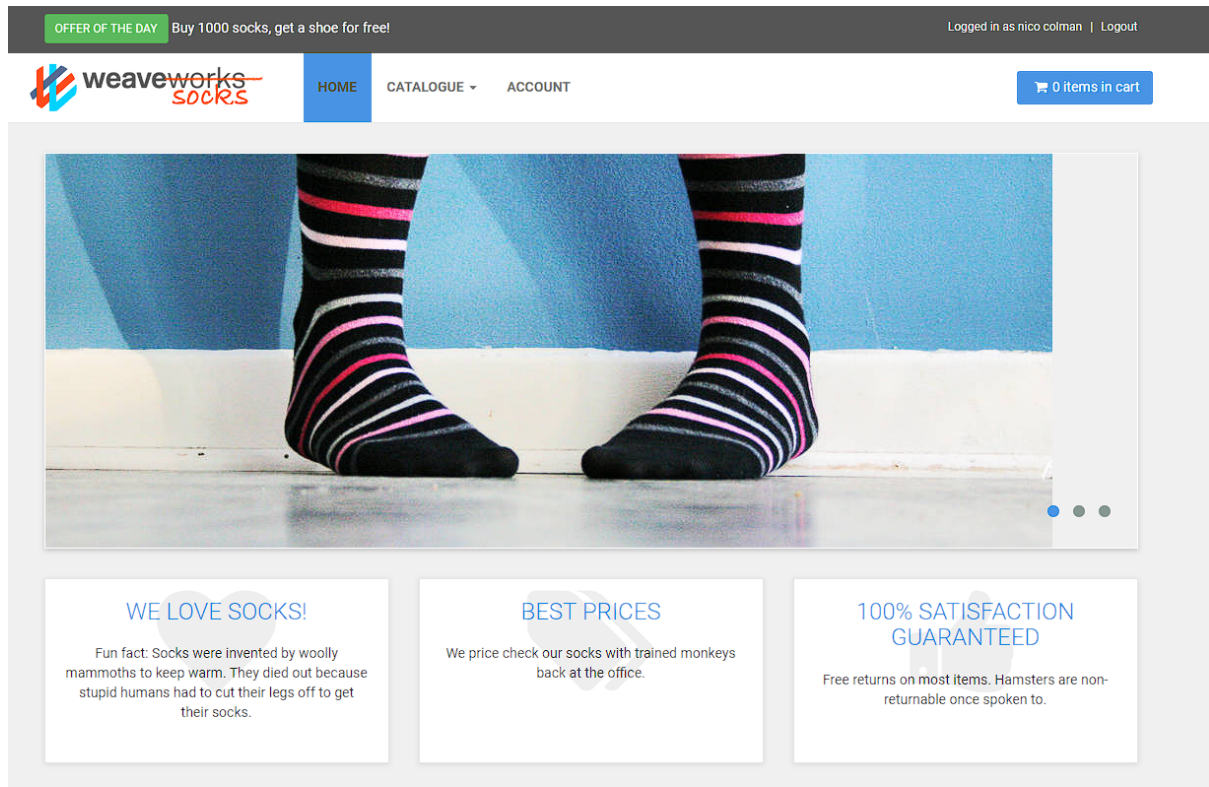
## TP 4: Microservicios.

### 4.1 Instanciacion del sistema.

Clonamos el repositorio y ejecutamos un docker-compose.

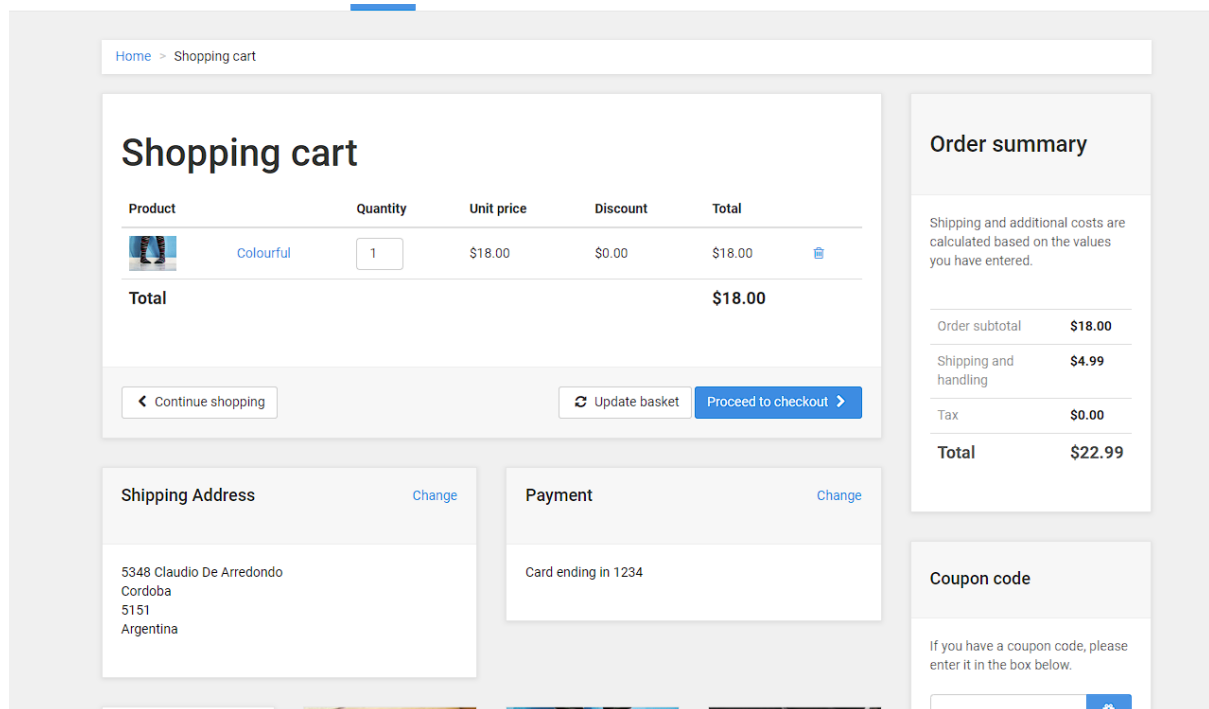


Creamos un usuario.



HOT THIS WEEK

Y realizamos una compra



4.2:

1- Se crearon los siguientes contenedores.

```
Network docker-compose_default Created
Container docker-compose-edge-router-1 Creating
Container docker-compose-catalogue-1 Creating
Container docker-compose-shipping-1 Creating
Container docker-compose-user-1 Creating
Container docker-compose-catalogue-db-1 Creating
Container docker-compose-orders-1 Creating
Container docker-compose-orders-db-1 Creating
Container docker-compose-carts-db-1 Creating
Container docker-compose-queue-master-1 Creating
Container docker-compose-user-db-1 Creating
Container docker-compose-front-end-1 Creating
Container docker-compose-user-sim-1 Creating
Container docker-compose-payment-1 Creating
Container docker-compose-rabbitmq-1 Creating
Container docker-compose-carts-1 Creating
Container docker-compose-user-1 Created
Container docker-compose-front-end-1 Created
Container docker-compose-orders-1 Created
Container docker-compose-user-sim-1 Created
Container docker-compose-queue-master-1 Created
Container docker-compose-edge-router-1 Created
Container docker-compose-carts-1 Created
Container docker-compose-catalogue-1 Created
Container docker-compose-payment-1 Created
Container docker-compose-shipping-1 Created
Container docker-compose-catalogue-db-1 Created
Container docker-compose-rabbitmq-1 Created
Container docker-compose-orders-db-1 Created
Container docker-compose-carts-db-1 Created
Container docker-compose-user-db-1 Created
```

2-

```

Nico@DESKTOP-MDI8QUJ MINGW64 ~/Documents/socks-demo (main)
$ cd socks-demo
git clone https://github.com/microservices-demo/front-end.git
git clone https://github.com/microservices-demo/user.git
git clone https://github.com/microservices-demo/edge-router.git
.
.
bash: cd: socks-demo: No such file or directory
Cloning into 'front-end'...
remote: Enumerating objects: 1236, done.
remote: Total 1236 (delta 0), reused 0 (delta 0), pack-reused 1236
Receiving objects: 100% (1236/1236), 47.90 MiB | 10.89 MiB/s, done.
Resolving deltas: 100% (687/687), done.
Cloning into 'user'...
remote: Enumerating objects: 1063, done.
remote: Total 1063 (delta 0), reused 0 (delta 0), pack-reused 1063
Receiving objects: 100% (1063/1063), 172.83 KiB | 1.34 MiB/s, done.
Resolving deltas: 100% (601/601), done.
Cloning into 'edge-router'...
remote: Enumerating objects: 50, done.
remote: Total 50 (delta 0), reused 0 (delta 0), pack-reused 50
Receiving objects: 100% (50/50), 14.51 KiB | 495.00 KiB/s, done.
Resolving deltas: 100% (12/12), done.
bash: .: filename argument required
.: usage: . filename [arguments]
bash: .: filename argument required
.: usage: . filename [arguments]

```

3- Se utilizan repositorios separados para poder separar el código en partes y esto hace que sea más fácil su mantenimiento, identificación de problemas y visualización del código.

La parte negativa es que se hace más complejo.

4- El contenedor que hace las veces de API Gateway es “edge-router”

5-

```
Nico@DESKTOP-MDI8QUJ MINGW64 ~/Documents/socks-demo/microservices-demo (master)
$ curl http://localhost/customers
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total     Spent    Left     Speed
100 1585 100 1585    0     0  22478      0 --:--:-- --:--:-- --:--:-- 22642{"
_embedded":{"customer":[{"firstName":"Eve","lastName":"Berger","username":"Eve_B
erger","id":"57a98d98e4b00679b4a830af","_links":{"addresses":{"href":"http://use
r/customers/57a98d98e4b00679b4a830af/addresses"},"cards":{"href":"http://user/cu
stomers/57a98d98e4b00679b4a830af/cards"},"customer":{"href":"http://user/custome
rs/57a98d98e4b00679b4a830af"},"self":{"href":"http://user/customers/57a98d98e4b0
0679b4a830af"}}}],{"firstName":"User","lastName":"Name","username":"user","id":"5
7a98d98e4b00679b4a830b2","_links":{"addresses":{"href":"http://user/customers/57
a98d98e4b00679b4a830b2/addresses"},"cards":{"href":"http://user/customers/57a98d
98e4b00679b4a830b2/cards"},"customer":{"href":"http://user/customers/57a98d98e4b
00679b4a830b2"},"self":{"href":"http://user/customers/57a98d98e4b00679b4a830b2"}
}},{"firstName":"User1","lastName":"Name1","username":"user1","id":"57a98d98e4b0
0679b4a830b5","_links":{"addresses":{"href":"http://user/customers/57a98d98e4b00
679b4a830b5/addresses"},"cards":{"href":"http://user/customers/57a98d98e4b00679b
4a830b5/cards"},"customer":{"href":"http://user/customers/57a98d98e4b00679b4a830
b5"},"self":{"href":"http://user/customers/57a98d98e4b00679b4a830b5"}}}],{"firstN
ame":"nico","lastName":"colman","username":"nico","id":"652d7508ee11cb0001b0d5f0
","_links":{"addresses":{"href":"http://user/customers/652d7508ee11cb0001b0d5f0/
addresses"},"cards":{"href":"http://user/customers/652d7508ee11cb0001b0d5f0/card
s"},"customer":{"href":"http://user/customers/652d7508ee11cb0001b0d5f0"},"self":
{"href":"http://user/customers/652d7508ee11cb0001b0d5f0"}}}]}}
```

6- El servicio que esta procesando la operación es “user”.

7-

```
$ curl http://localhost/catalogue
curl http://localhost/tags
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 2795    0 2795    0    0 151k      0 --:--:-- --:--:-- --:--:-- 160k[{
  "id":"03fef6ac-1896-4ce8-bd69-b798f85c6e0b","name":"Holy","description":"Socks f
it for a Messiah. You too can experience walking in water with these special edi
tion beauties. Each hole is lovingly progged to leave smooth edges. The only so
ck approved by a higher power.", "imageUrl":["/catalogue/images/holy_1.jpeg","/ca
talogue/images/holy_2.jpeg"],"price":99.99,"count":1,"tag":["action","magic"]},{
  "id":"3395a43e-2d88-40de-b95f-e00e1502085b","name":"Colourful","description":"pr
oident occaecat irure et excepteur labore minim nisi amet irure","imageUrl":["/c
atalogue/images/colourful_socks.jpg","/catalogue/images/colourful_socks.jpg"],"p
rice":18,"count":438,"tag":["brown","blue"]},{ "id":"510a0d7e-8e83-4193-b483-e27e
09ddc34d","name":"SuperSport XL","description":"Ready for action. Engineers: be
ready to smash that next bug! Be ready, with these super-action-sport-masterpiec
es. This particular engineer was chased away from the office with a stick.", "ima
geUrl":["/catalogue/images/puma_1.jpeg","/catalogue/images/puma_2.jpeg"],"price"
:15,"count":820,"tag":["sport","formal","black"]},{ "id":"808a2de1-laaa-4c25-a9b9
-6612e8f29a38","name":"Crossed","description":"A mature sock, crossed, with an a
ir of nonchalance.", "imageUrl":["/catalogue/images/cross_1.jpeg","/catalogue/ima
ges/cross_2.jpeg"],"price":17.32,"count":738,"tag":["blue","action","red","forma
l"]},{ "id":"819e1fbf-8b7e-4f6d-811f-693534916a8b","name":"Figueroa","description
":"enim officia aliqua excepteur esse deserunt quis aliquip nostrud anim","image
Url":["/catalogue/images/WAT.jpg","/catalogue/images/WAT2.jpg"],"price":14,"coun
t":808,"tag":["green","formal","blue"]},{ "id":"837ab141-399e-4c1f-9abc-bace40296
bac","name":"Cat socks","description":"consequat amet cupidatat minim laborum te
mpor elit ex consequat in","imageUrl":["/catalogue/images/catsocks.jpg","/catalo
gue/images/catsocks2.jpg"],"price":15,"count":175,"tag":["brown","formal","green
"]},{ "id":"a0a4f044-b040-410d-8ead-4de0446aec7e","name":"Nerd leg","description"
:"For all those leg lovers out there. A perfect example of a swivel chair traine
d calf. Meticulously trained on a diet of sitting and Pina Coladas. Phwarr...", "
imageUrl":["/catalogue/images/bit_of_leg_1.jpeg","/catalogue/images/bit_of_leg_2
.jpeg"],"price":7.99,"count":115,"tag":["blue","skin"]},{ "id":"d3588630-ad8e-49d
f-bbd7-3167f7efb246","name":"YouTube.sock","description":"We were not paid to se
ll this sock. It's just a bit geeky.", "imageUrl":["/catalogue/images/youtube_1.j
peg","/catalogue/images/youtube_2.jpeg"],"price":10.99,"count":801,"tag":["forma
l","geek"]},{ "id":"zzz4f044-b040-410d-8ead-4de0446aec7e","name":"Classic","desc
ription":"Keep it simple.", "imageUrl":["/catalogue/images/classic.jpg","/catalogu
e/images/classic2.jpg"],"price":12,"count":127,"tag":["brown","green"]}]

  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 107 100 107    0    0 18621      0 --:--:-- --:--:-- --:--:-- 21400{"
tags":["brown","geek","formal","blue","skin","red","action","sport","black","mag
ic","green"],"err":null}
```

Para catalogue se utiliza catalogue y para tags front-end.

8- Los datos de los servicios persisten en base de datos

```
Container docker-compose-carts-db-1 Starting
Container docker-compose-catalogue-db-1 Starting
Container docker-compose-user-db-1 Starting
```

9- El componente encargado del procesamiento de la cola de mensajes es rabbitmq.

```
Container docker-compose-rabbitmq-1 Created
```

10- Los microservicios para comunicarse utilizan solicitudes HTTP