

URL

Taller

Headless

Testing:

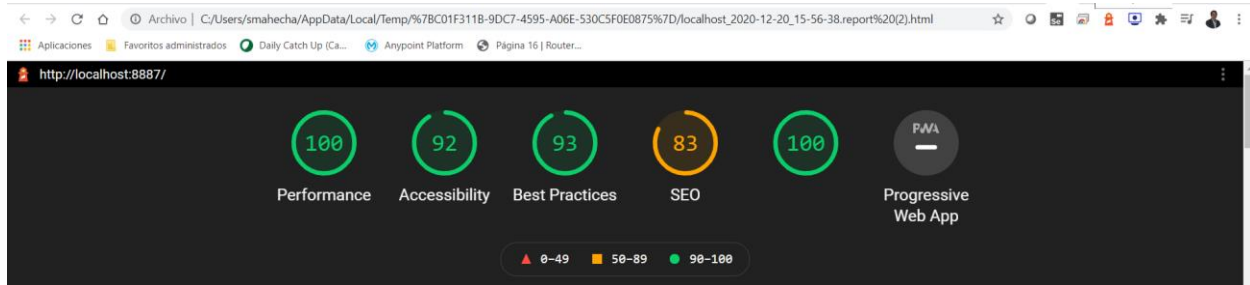
<https://github.com/uniandesSAM/Headless-Testing.git>

En el archivo card-audit.js se ajusta MAX_CARD_TIME, así:

C:\Personal\UniAndes\Materias\Pruebas\ratp-pwa\LH\card-audit.js - Notepad++

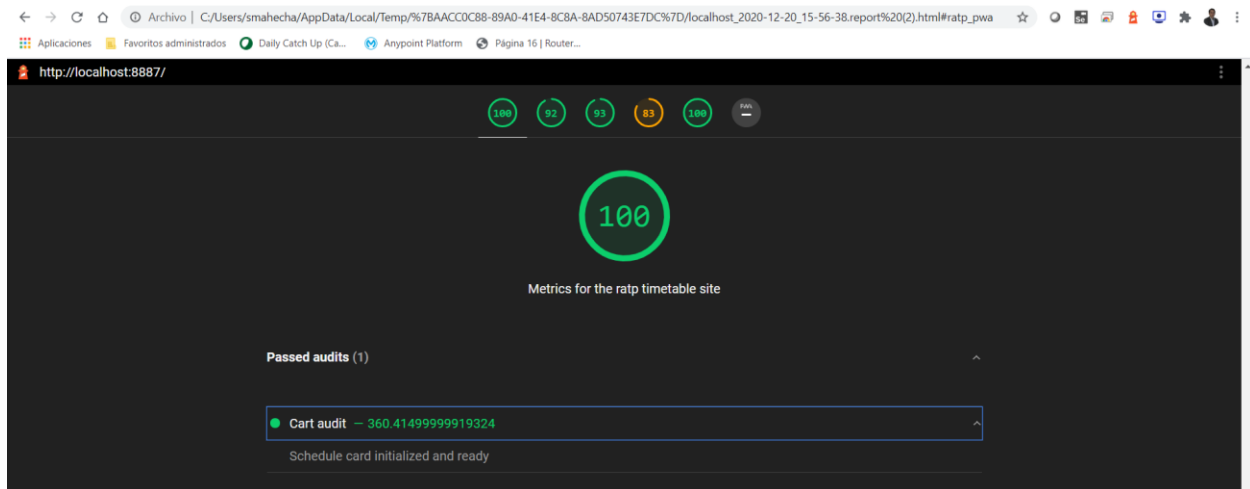
```
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?
new 2 x Claves.txt x new 4 x new 5 x new 10 x new 13 x new 15 x new
1 'use strict';
2
3 const Audit = require('lighthouse').Audit;
4
5 const MAX_CARD_TIME = 3000;
```

Resultado:



Donde

muestra:



Modo Headfull para Cypress

Un software de prueba automatizado está controlando Chrome.

Tests: 1 passed, 0 failed, 36.79s

Test: Login Tests

- 1 VISIT https://habitica.com/login
- 2 GET #usernameInput
- 3 - TYPE a.mahecha@gmail.com
- 4 GET #passwordInput
- 5 - TYPE r4e3w2q1
- 6 GET .btn-info[type="submit"]
- 7 - CLICK

Application: habitica.com

User: Sergio A. Mahecha M. (@hb-449ueqnf8etog99) Nivel 1 Guerrero

Combate a monstruos con tus amigos

Completado: 0 / 25

Buscar Etiquetas

Hábitos: Todo Débil Fuerte

Activas: Programado Completado Todo Personalizado Lista de Deseos

Agrega una Hábito

Tomar un breve descanso

Estudiar a un maestro del arte >> + Practicar una nueva

Agrega una Diaria

5 minutos de respiración silenciosa

Trabaja en un proyecto creativo

Agrega una Pendiente

Involucrarse en una actividad divertida

Terminar proyecto creativo

Agrega una Recompensa

Recompénsate

Mira la televisión, juega a un juego, cómete un premio, ¡o elige!

10

36.79 s

Recursos

Monitor de recursos

Archivo Monitor Ayuda

Información general CPU Memoria Disco Red

CPU: Uso de CPU: 4% 82% de frecuencia máxima

Proceso	PID	Descripción	Estado	Subprocesos	CPU	Uso medio de ...
Memory Compression	2068		En ejecución	38	0	1.33
WINWORD.EXE	11072	Microsoft Word	En ejecución	23	0	0.49
SearchUI.exe	5860	Search and Co...	Suspendido	54	0	0.35
dwm.exe	7028	Administrador ...	En ejecución	13	0	0.34
System	4	NT Kernel & Sy...	En ejecución	141	0	0.19
svchost.exe (BcastDVRUserS...	12132	Proceso host p...	Terminado	13	0	0.17
explorer.exe	11792	Explorador de p...	En ejecución	86	0	0.16
svchost.exe (DcomLaunch -p)	788	Proceso host p...	En ejecución	18	0	0.11
svchost.exe (NetworkService...	2428	Proceso host p...	En ejecución	13	0	0.09

Disco: E/S de disco: 32 KB/s 1% de tiempo activo más alto

Red: E/S de red: 28 Kbps 0% de uso de red

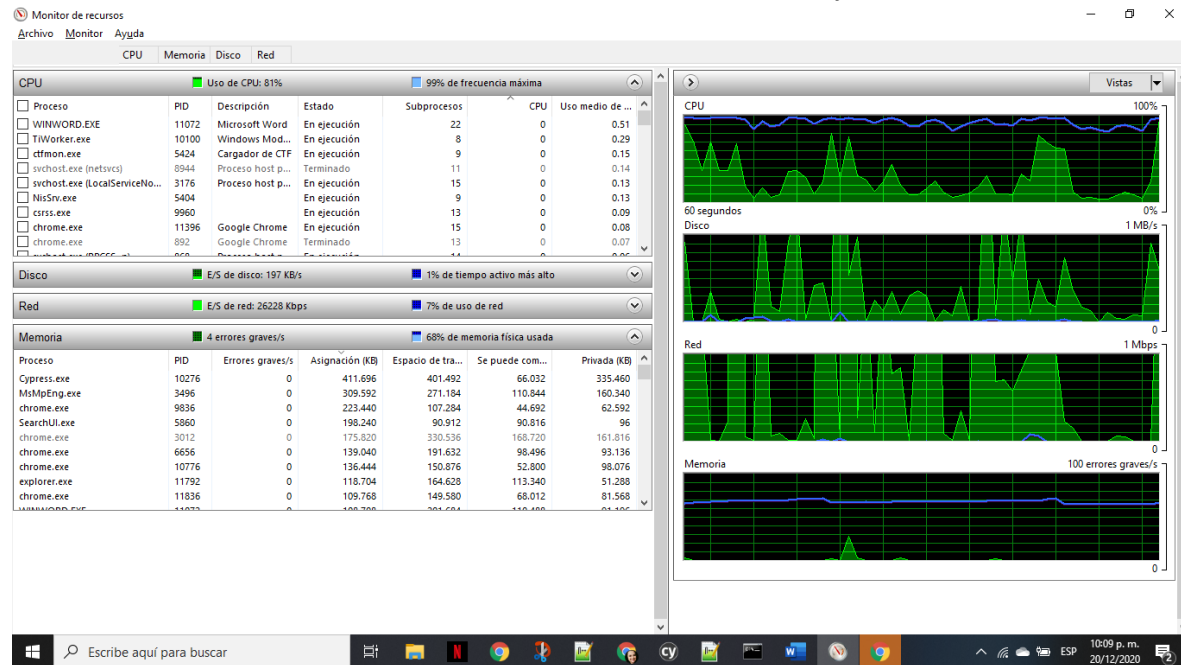
Memoria: 0 errores graves/s 66% de memoria física usada

Proceso	PID	Errores graves/s	Asignación (KB)	Espacio de tra...	Se puede com...	Privada (KB)
Cypress.exe	10276	0	386.790	375.952	66.012	309.940
MsMpEng.exe	3496	0	307.828	268.836	110.832	158.004
chrome.exe	9836	0	223.440	107.340	44.692	62.648
SearchUI.exe	5860	0	198.240	90.924	98.816	108
chrome.exe	6656	0	139.084	192.036	98.496	93.540
chrome.exe	10776	0	129.824	147.788	52.800	94.988
explorer.exe	11792	0	118.396	164.624	113.648	50.976
WINWORD.EXE	11072	1	116.528	199.968	112.200	87.768
chrome.exe	11836	0	108.372	147.872	68.012	79.860

10:06 p. m. 20/12/2020

antes:

Recursos en la ejecución Headfull:



Modo Headless para Cypress:

```
Administrador: Símbolo del sistema
D:\UniAndes\Pruebas automatizadas\cypress\CyProy>cypress run .
```

```
Administrador: Símbolo del sistema

Running: simple.spec.js (5 of 5)

Login Tests
  ✓ makes a happy login attemp (5952ms)

1 passing (8s)

(Results)

Tests:      1
Passing:    1
Failing:    0
Pending:    0
Skipped:    0
Screenshots: 0
Video:      true
Duration:   8 seconds
Spec Ran:   simple.spec.js

(Video)
- Started processing: Compressing to 32 CRF
- Finished processing: D:\UniAndes\Pruebas automatizadas\cypress\CyProy\cypress\vi
deos\simple.spec.js.mp4 (3 seconds)
```

```
Administrador: Símbolo del sistema

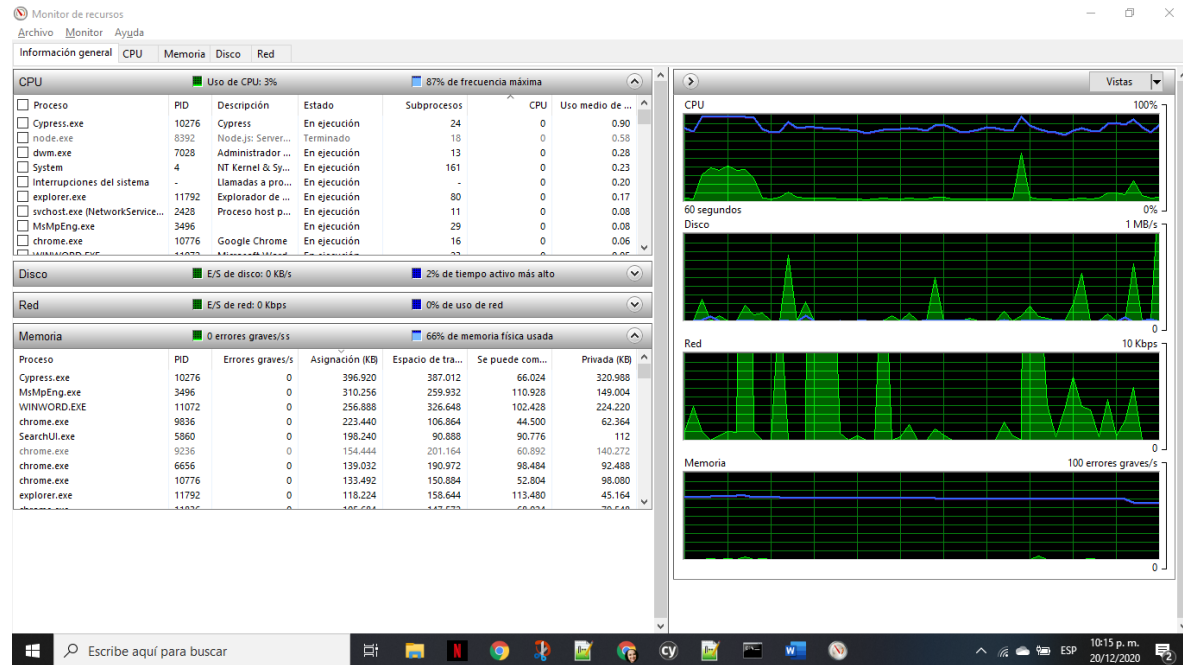
(Run Finished)

Spec                                Tests  Passing  Failing  Pending  Skipped
✓ cypress.json                      2ms    -        -        -        -
✓ cypress\plugins\index.js          4ms    -        -        -        -
✓ cypress\support\commands.js       3ms    -        -        -        -
✓ cypress\support\index.js          4ms    -        -        -        -
✓ simple.spec.js                    00:08  1        1        -        -
✓ All specs passed!                 00:08  1        1        -        -

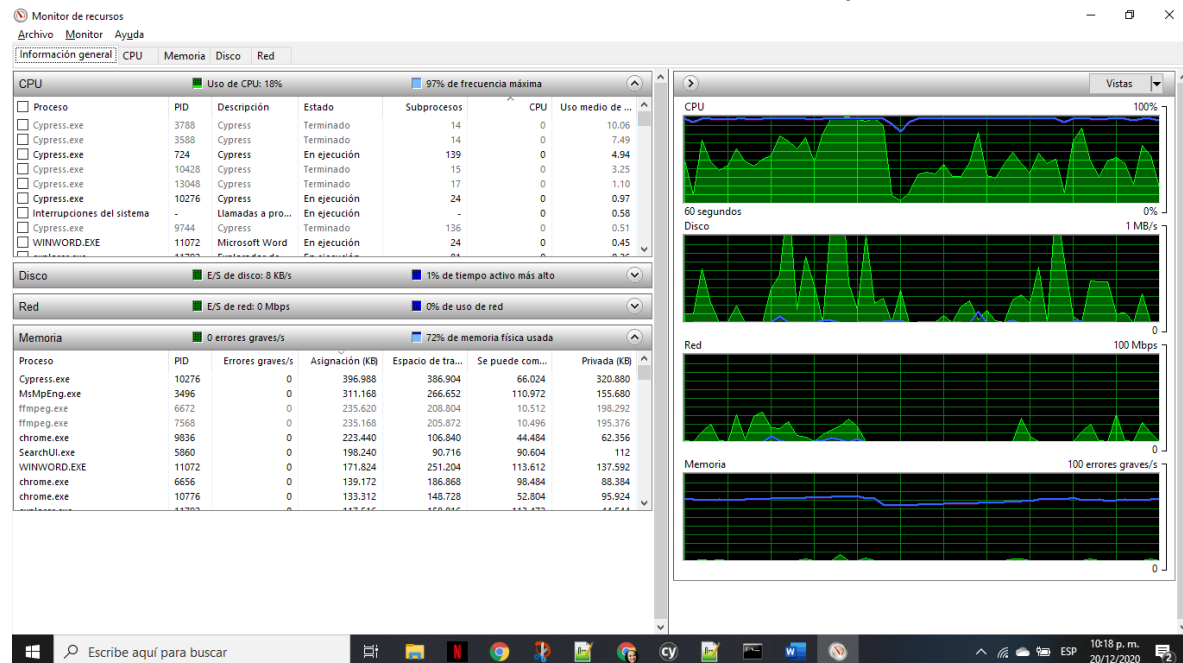
D:\UniAndes\Pruebas automatizadas\cypress\CyProy>
```

8 s

Recursos



Recursos



Protractor

```
Administrator: C:\Windows\system32\cmd.exe
C:\Personal\Unidos\Waterias\Pruebas\tour-of-heroes-cli-master> ng serve
Would you like to share anonymous usage data about this project with the Angular team at
Google under Google's Privacy Policy at https://policies.google.com/privacy? for more
details and how to change this setting, see http://angular.io/analytics. Yes
Thank you for sharing anonymous usage data. Would you change your mind, the following
command will disable this feature entirely.
ng analytics project off
[22:50:41] [config:source] - curl -oC:\Personal\Unidos\Waterias\Pruebas\tour-of-heroes-cli-master\node_modules\protractor\node_modules\webdriver-manager\selenium\chrome-response.xml https://chromedriver.storage
googleapis.com/
[22:50:48] [update] - chromedriver: file exists C:\Personal\Unidos\Waterias\Pruebas\tour-of-heroes-cli-master\node_modules\protractor\node_modules\webdriver-manager\selenium\chromedriver_87.0.4280.88.zip
[22:50:48] [update] - chromedriver: unzipping chromedriver_87.0.4280.88.zip
[22:50:48] [update] - chromedriver: chromedriver_87.0.4280.88.exe up to date
Compiling Angular/core : es2015 as es2015
Compiling Angular/common : es2015 as es2015
Compiling Angular/platform-browser : es2015 as es2015
Compiling Angular/platform-browser-dynamic : es2015 as es2015
Compiling Angular/forms : es2015 as es2015
Compiling Angular/router : es2015 as es2015
Compiling angular-in-memory-web-api : module as es2015
Browser application bundle generation complete.

Initial Chunk Files | Names | Size
+-----+-----+-----+
vendor.js | vendor | 2.77 MB
polyfills.js | polyfills | 141.41 KB
main.js | main | 49.47 KB
runtime.js | runtime | 6.35 KB
styles.css | styles | 3.45 KB
+-----+-----+-----+
| Initial Total | 2.99 MB
+-----+-----+-----+

Build at: 2020-12-21T04:00:42.879Z - Hash: c47ad6a090bb626add - Time: 12279ms
** Angular Live Development Server is listening on localhost:4200, open your browser on http://localhost:4200/ **

[22:50:48] [Compiled successfully]
[22:50:48] [I/launcher] - Running 1 instances of WebDriver
[22:50:48] [I/direct] - Using WebDriver directly...
devtools listening on ws://127.0.0.1:57901/devtools/browser/bcd2f8-cfef-4095-a801-2f19f5d5fde
4000 jasmine-spec-reporter displayStackTrace option supports value 'none', 'raw', 'pretty', default to 'none'
Jasmine started
[19120:1160:1220/23055.715:ERROR:device_event_log_impl.cc(211)] [23:00:55.717] USB: usb_device_handle_x86.cc:1828 Failed to read descriptor from node connection: Uno de los dispositivos conectados al sistema no funciona. (963F)
[19120:1160:1220/23056.406:ERROR:device_event_log_impl.cc(211)] [23:00:56.409] Bluetooth: bluetooth_adapter_wdort.cc:1183 RequestRadioAccessAsync failed: RadioAccessStatus::DeniedByUserWill not be able to change radio power.

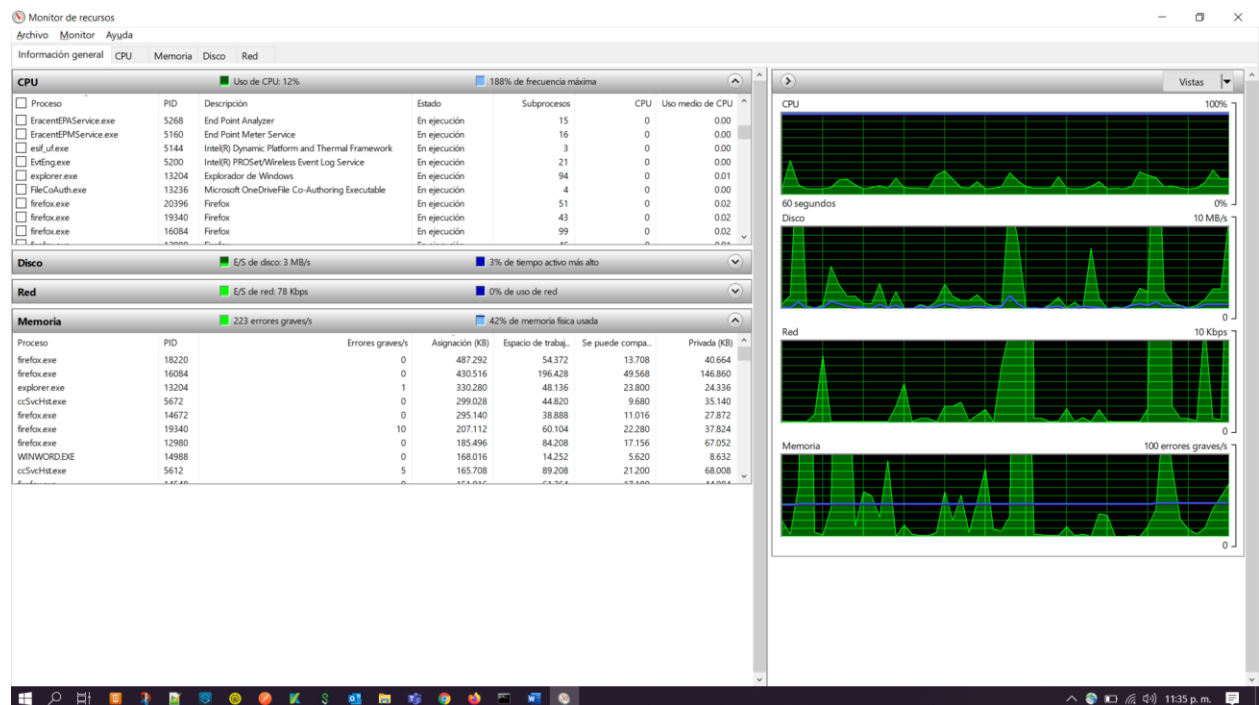
Proyecto base
Initial page
  ✓ has title 'Tour of Heroes'
  ✓ has id 'Tour of Heroes'
  ✓ has view HomeComponent
  ✓ has view HomeComponent
  ✓ has dashboard as the active view

Executed 4 of 4 specs (0.013 s, 2 secs)
[23:00:57] [I/launcher] - 0 instance(s) of WebDriver still running
[23:00:57] [I/launcher] - chrome 801 passed
```

Headfull:

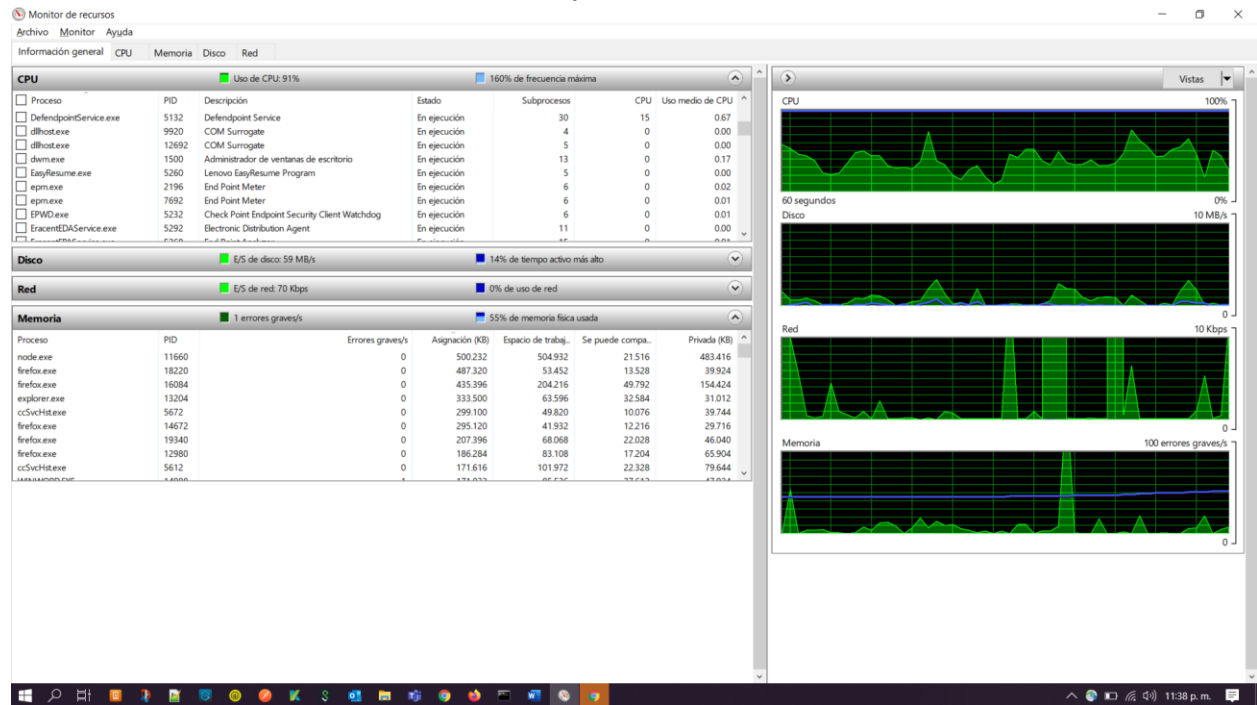
12,179 s

Recursos



antes:

Recursos durante la ejecución de Protractor Headfull:



Protractor Headless:

```

Administrador: c:\windows\system32\cmd.exe

C:\Personal\UniAndes\Materias\Pruebas\tour-of-heroes-cli-master>ng e2e
[23:56:48] I/update - chromedriver: file exists C:\Personal\UniAndes\Materias\Pruebas\tour-of-heroes-cli-master\node_modules\protractor\node_modules\webdriver-manager\selenium\chromedriver_87.0.4280.88.zip
[23:56:48] I/update - chromedriver: unzipping chromedriver_87.0.4280.88.zip
[23:56:48] I/update - chromedriver: chromedriver_87.0.4280.88.exe up to date
✓ Browser application bundle generation complete.

Initial Chunk Files | Names | Size
vendor.js | vendor | 2.77 MB
polyfills.js | polyfills | 141.33 kB
main.js | main | 69.42 kB
runtime.js | runtime | 6.15 kB
styles.css | styles | 1.05 kB
| Initial Total | 2.99 MB

Build at: 2020-12-21T04:57:05.994Z - Hash: c47a6eab98bb7e26abd - Time: 8935ms

** Angular Live Development Server is listening on localhost:4200, open your browser on http://localhost:4200/ **

✓ Compiled successfully.
[23:57:06] I/launcher - Running 1 instances of WebDriver
[23:57:06] I/direct - Using ChromeDriver directly...
DevTools listening on ws://127.0.0.1:59251/devtools/browser/5c7572c6-866c-4459-9029-e9ee4088d31f
WARN: jasmine-spec-reporter 'displayStacktrace' option supports value ('none', 'raw', 'pretty'), default to 'none'
Jasmine started
[1220/235711.891:INFO:CONSOLE(43311)] "Angular is running in development mode. Call enableProdMode() to enable production mode.", source: http://localhost:4200/vendor.js (43311)

Projecto base

Initial page
✓ has title 'Tour of Heroes'
✓ has h1 'Tour of Heroes'
✓ has views Dashboard,Heroes
✓ has dashboard as the active view

Executed 4 of 4 specs SUCCESS in 1 sec.
[23:57:12] I/launcher - 0 instance(s) of WebDriver still running
[23:57:12] I/launcher - chrome #01 passed

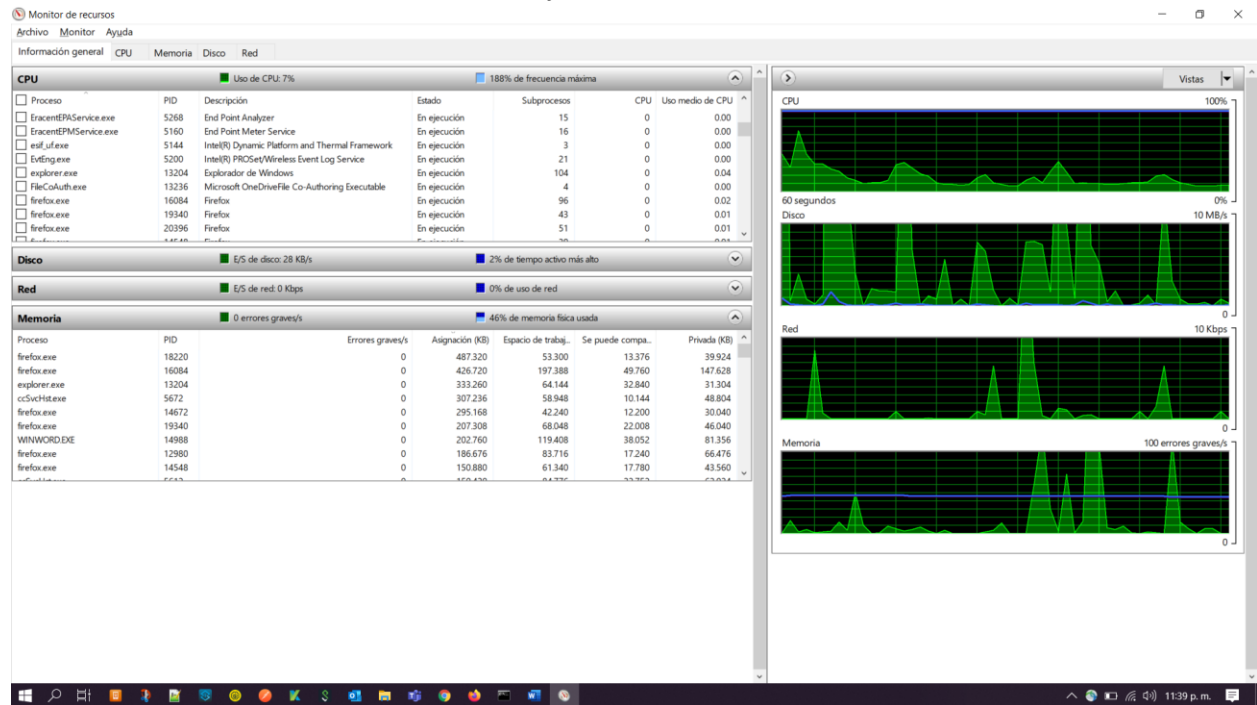
C:\Personal\UniAndes\Materias\Pruebas\tour-of-heroes-cli-master>

```

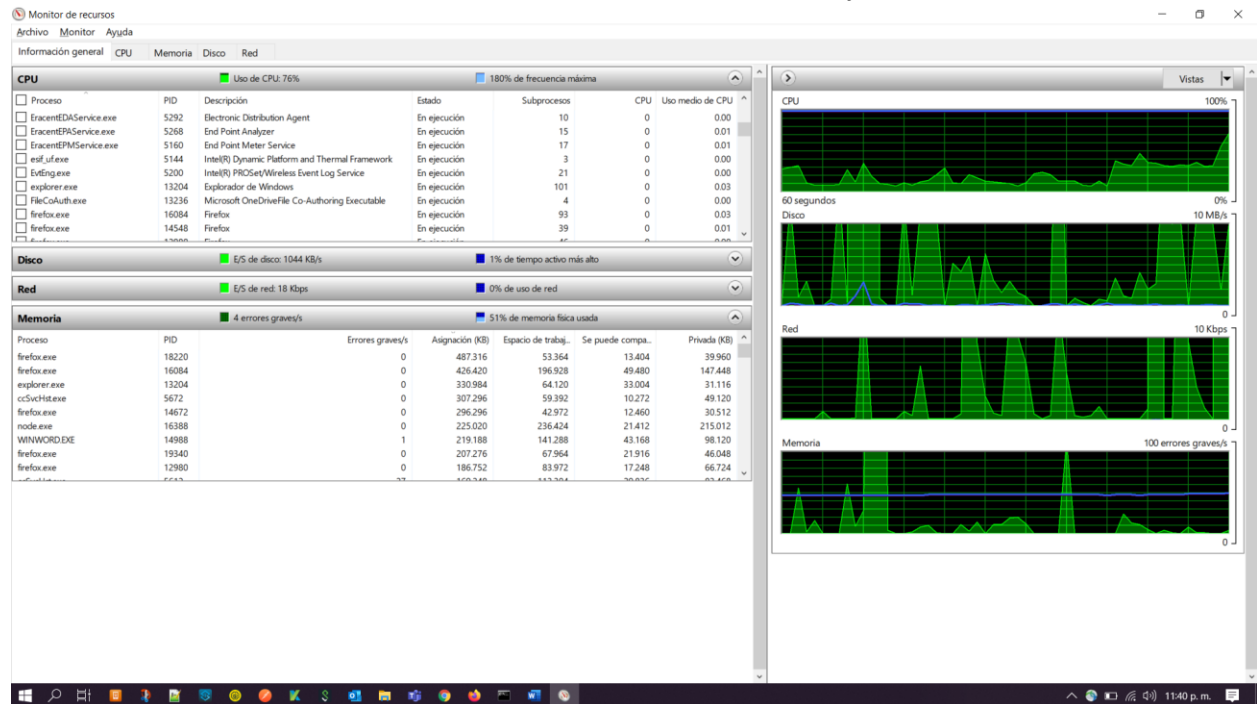
8,935

S

Recursos antes de ejecutar Protractor modo Headless:



Recursos durante la ejecución headless:



Puppeteer Headfull:

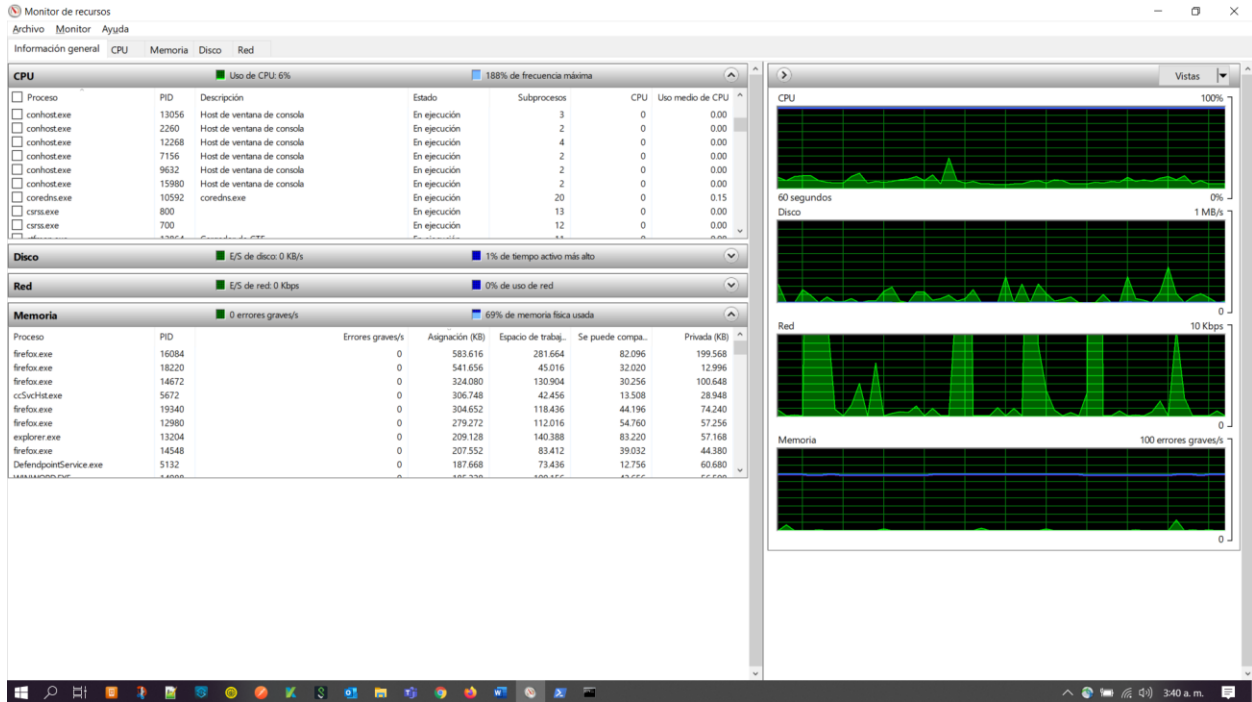
Se ajusta el .js para evitar que sea lanzado con Chromium, así:

C:\Personal\UniAndes\Materias\Pruebas\Puppeteer\login-angular.js - Notepad++

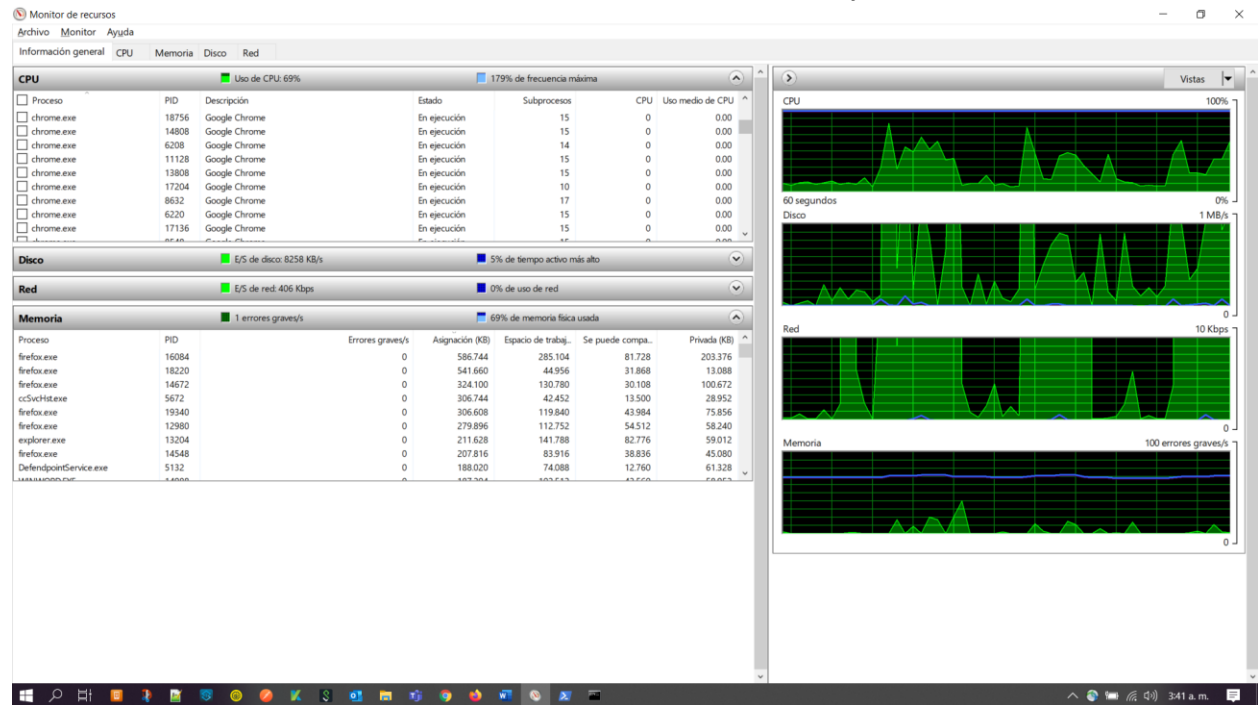
File Edit Search View Encoding Language Settings Macro Run Plugins Window ?

```
1 const puppeteer = require('puppeteer');
2 const screenshot = 'MockReg.png';
3 (async () => {
4   const browser = await puppeteer.launch({headless: false, executablePath: 'C:\\Program Files (x86)\\Google\\Chromium\\Application\\chrome.exe'});
5   const page = await browser.newPage();
6   await page.goto('https://angular-6-registration-login-example.stackblitz.io/register')
```

Recursos antes de lanzar Puppeteer:



Recursos durante la ejecución Headfull:

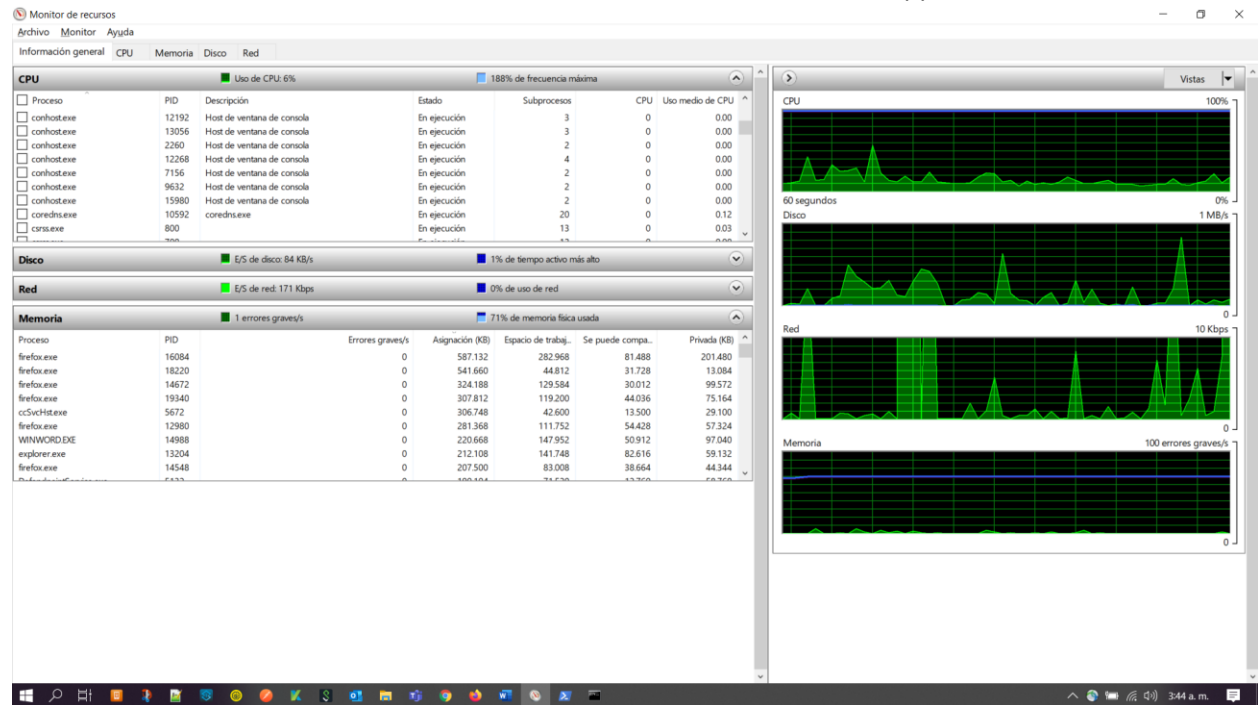


Puppeteer Headless:

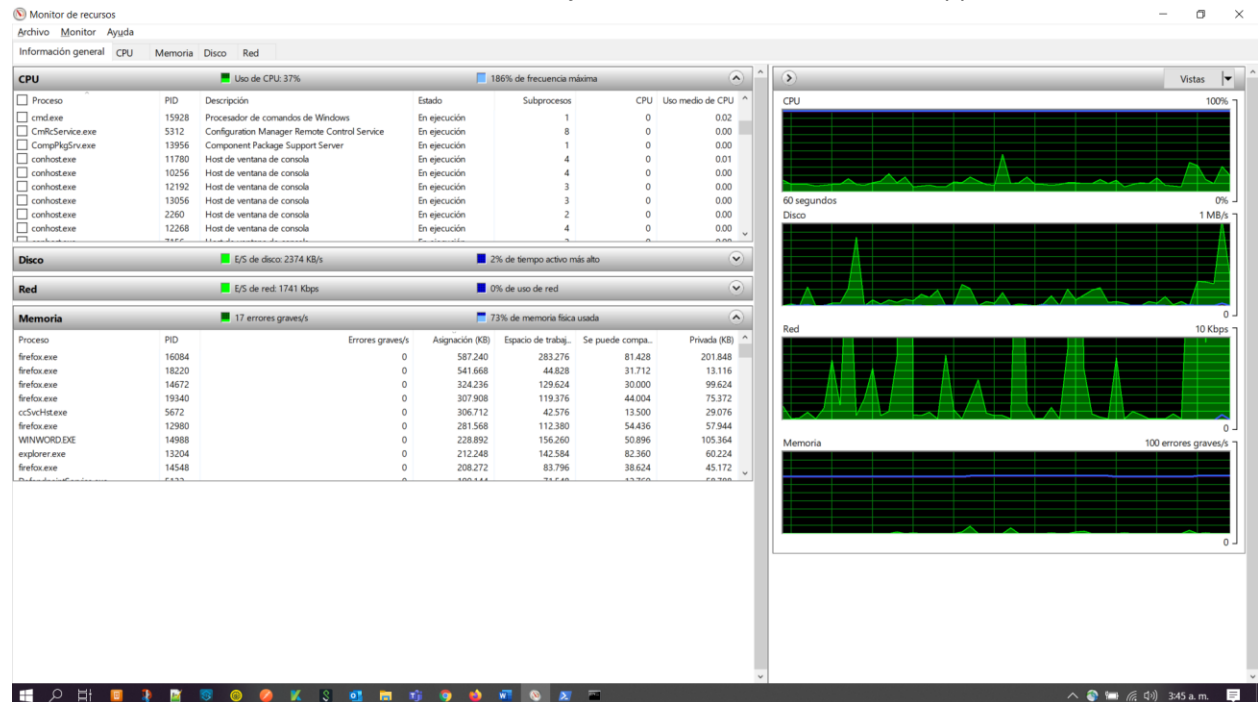
Se ajusta el .js para su ejecución Headless, así:

```
C:\Personal\UniAndes\Materias\Pruebas\Puppeteer\login-angular.js - Notepad++
File Edit Search View Encoding Language Settings Macro Run Plugins Window 2
new 2 new 3 new 4 new 5 new 10 new 13 new 15 new 16 new 17 new 18 login-angular.js simple.spec.js
1 const puppeteer = require('puppeteer');
2 const screenshot = 'MockReg.png';
3 (async () => {
4   const browser = await puppeteer.launch({headless: true, executablePath: 'C:\\Program Files (x86)\\Google\\Chrome\\Application\\chrome.exe'})
5   const page = await browser.newPage()
6   await page.goto('https://angular-6-registration-login-example.stackblitz.io/register')
7 })
```

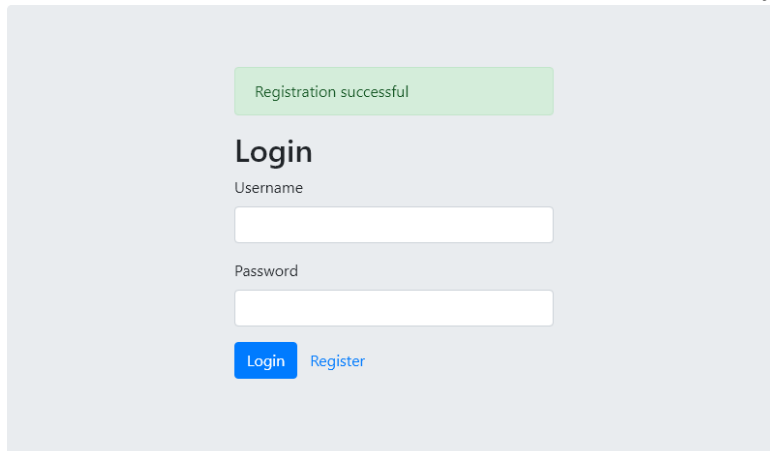
Recursos antes de lanzar Puppeteer Headless:



Recursos durante la ejecución de Puppeteer Headless:



Evidencia de ejecución exitosa:



[Angular 6 User Registration and Login Example & Tutorial](#)

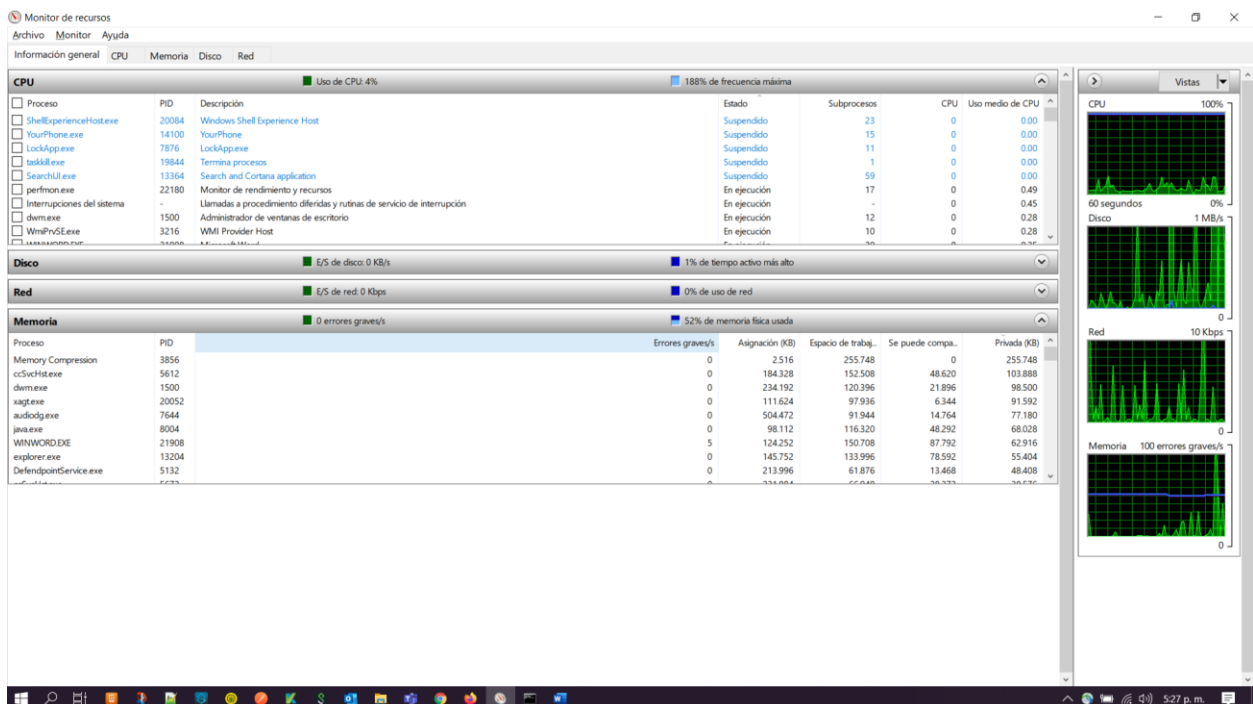
[JasonWatmore.com](#)

Playwright Headfull:

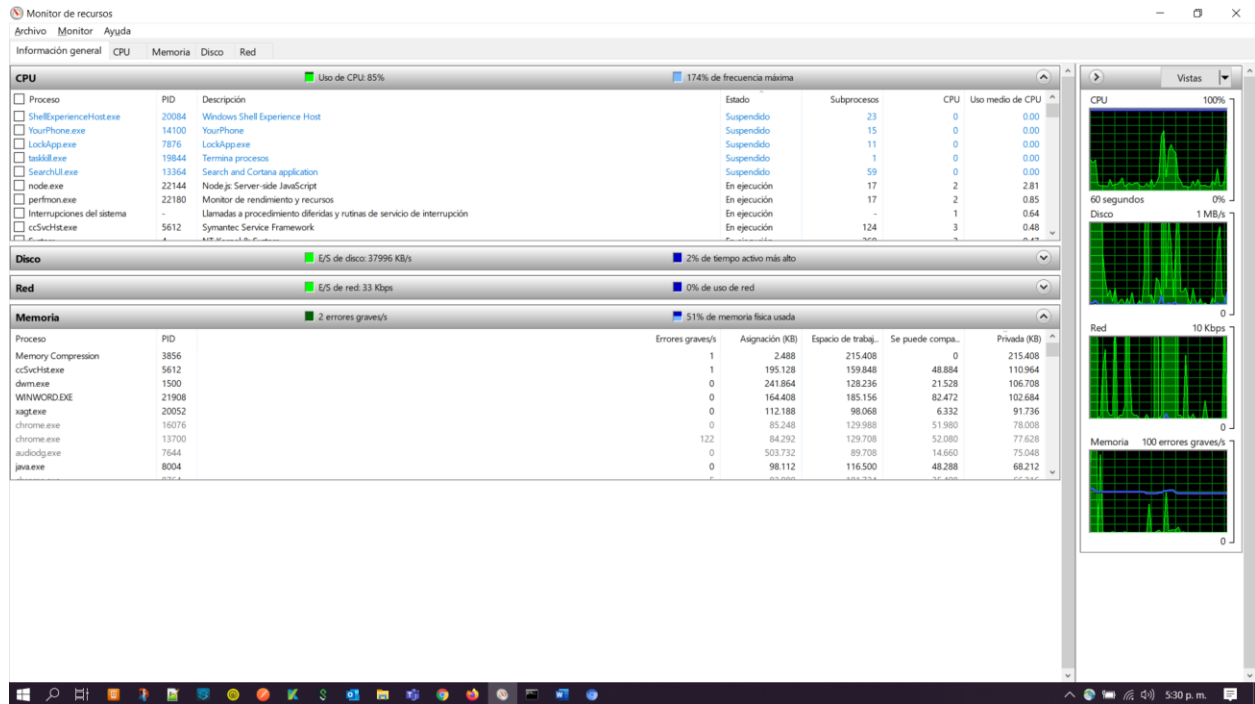
Se ajusta en el código el parámetro headless = false

```
const playwright = require('playwright');
const screenshot = 'MockReg.png';
(async () => {
  const browser = await playwright.chromium.launch({ headless: false });
  const page = await browser.newPage();
  await page.goto('https://angular-6-registration-login-example.stackblitz.io/register')
```

Recursos antes de Playwright Headfull:



Recursos durante Playwright Headfull:

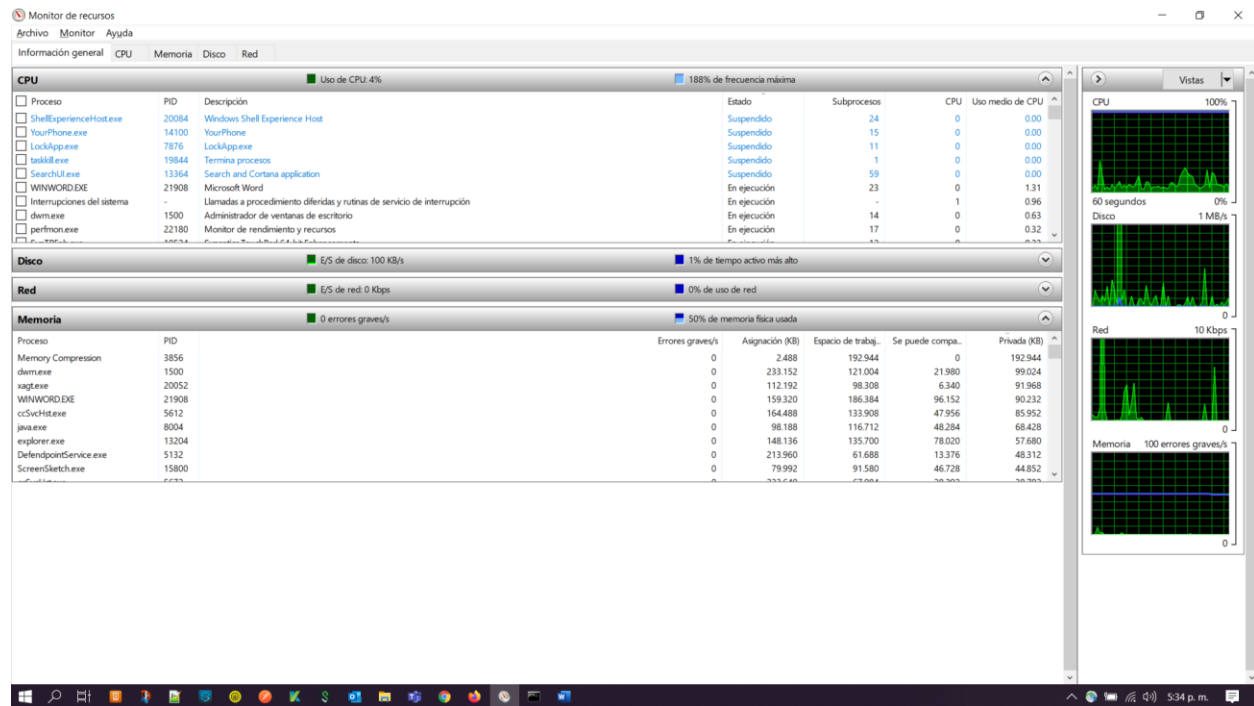


Playwright Headless:

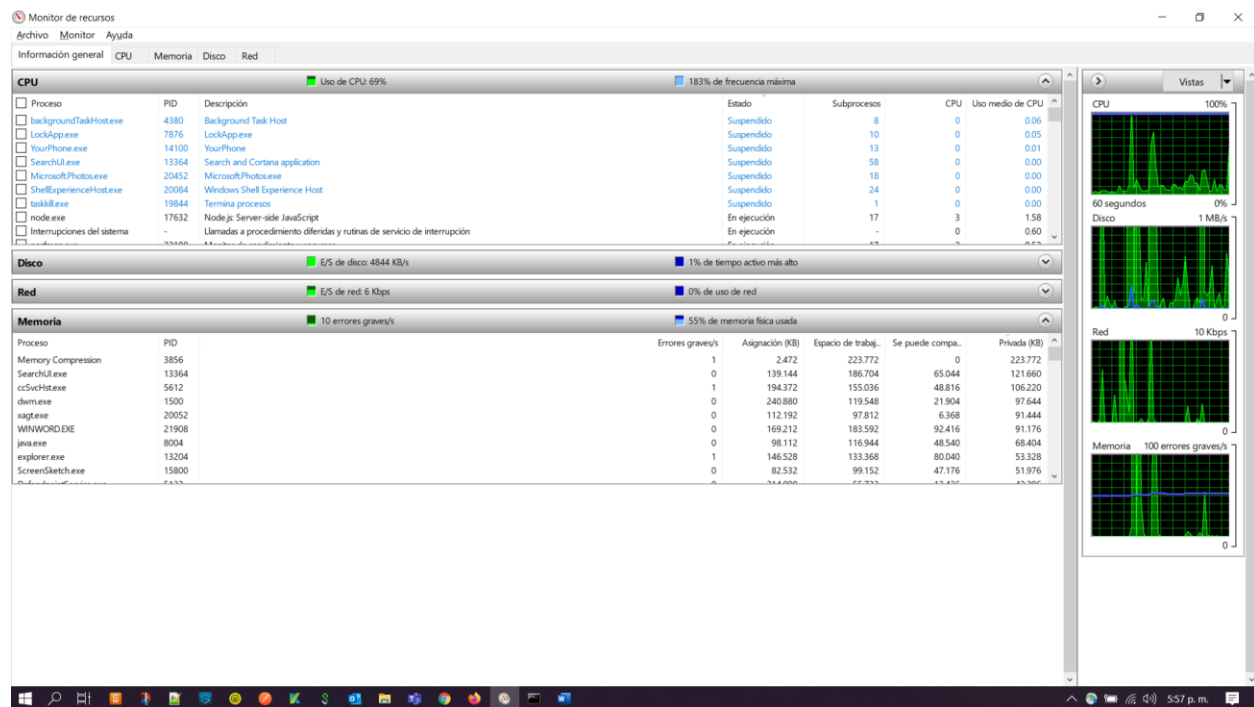
Se ajusta en el código el parámetro headless = true (también se podría quitar, porque viene headless por default).

```
const playwright = require('playwright');
const screenshot = 'MockReg.png';
(async () => {
  const browser = await playwright.chromium.launch({ headless: true });
  const page = await browser.newPage();
  await page.goto('https://angular-6-registration-login-example.stackblitz.io/register')
```

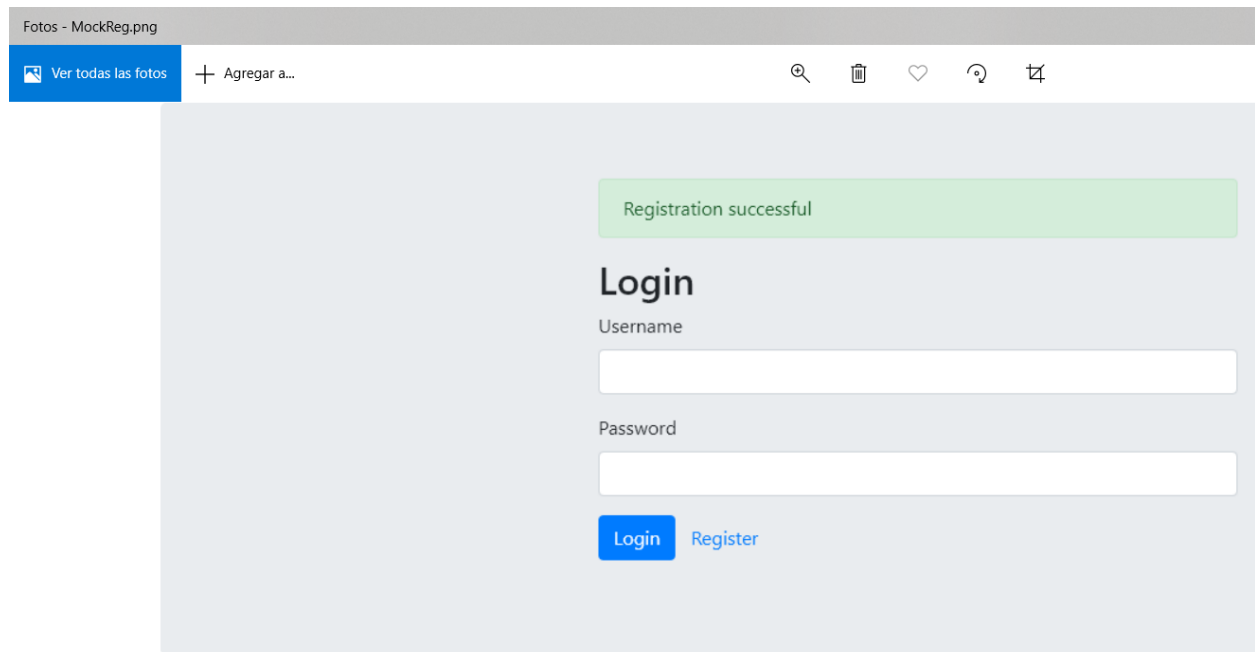
Recursos antes de Playwright Headless:



Recursos durante Playwright Headless:



Evidencia de ejecución exitosa:



[Angular 6 User Registration and Login Example & Tutorial](#)

[JasonWatmore.com](#)

¿Qué tantos recursos se pueden ahorrar ejecutando las pruebas de manera headless?

Comparando las imágenes, el consumo de memoria al ejecutarse headless disminuye en un pequeño porcentaje con respecto a lo mismo consumido en modo headfull. El consumo de CPU, en algunos casos de más del 30% de diferencia, es la mejor referencia de ejecución en modo headless.

¿En qué casos cree que valdría la pena ejecutar sus pruebas de esta forma?

En la medida de lo posible, TODO o que se pueda ejecutar headless, va a ser muchísimo más provechoso. Si se necesitan imágenes de evidencias, se incluye este parámetro en los puntos coyunturales de ejecución de la automatización.

Puede haber unas pocas excepciones, quizás a nivel gráfico que se requiera un seguimiento minucioso del proceso, pero para este caso también aplicaría almacenar evidencia(s) en video, e igual se ejecutaría headless.

En el caso de requerir probar y/o medir sistemas en escenarios o ambientes pre-producción, donde el sistema debe comportarse lo más fidedigno al "real", es uno de estos pocos casos.