Instituto Tecnológico de Costa Rica

Sede Interuniversitaria de Alajuela

NBA6831-RDP:

Reporte de Pruebas

NBA ARENAS

Autores

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Reporte de Pruebas Unitarias

Herramientas: *Jasmine / Karma*

Executing: `ng test --code-coverage`

Se realizaron un total de 45 pruebas unitarias para las diferentes vistas en Angular. Todas pasaron en la versión final del proyecto.

<mark>45 specs, 0 failures</mark>

ApiService

    #getArenas

    should retrieve arenas from API GET

AppComponent

    should create the app

    should have as title 'app'

FooterComponent

    should create

HeaderComponent

    should create

ArenaComponent

    should create

    #ngOnInit

    should load the Arenas

ArenaCreateComponent

    should create

    Arena form should be valid && Submit button enabled. If: All fields are valid.

    Arena form should be invalid && Submit button disabled. If: Date field has invalid format.

ArenaDetailsComponent

    should create

    #ngOnInit

    should load existing Arena

ArenaEditComponent

    should create

    #ngOnInit

    Should load existing Arena. Form should be valid and Submit enabled.

    Arena form should be invalid && Submit button disabled. If: Date field has invalid format.

    Arena form should be invalid && Submit button disabled. If: Fields are empty.

HomeComponent

should create

LoginComponent

should create

Login form should be invalid if username is empty

Login form should be invalid if password is empty

Login form should be valid if username and password are entered

Login Button should be disabled if fields are invalid.

Login Button should be enabled if fields are valid.

PagenotfoundComponent

should create

RegisterComponent

should create

Register form should be invalid if username is empty

Register form should be invalid if email is empty

Register form should be invalid if email has wrong format

Register form should be invalid if password is empty

Register form should be valid if username and password are entered

Register Button should be disabled if fields are invalid.

Register Button should be enabled if fields are valid.

TeamComponent

should create

#ngOnInit

should load the Teams

TeamCreateComponent

should create

#ngOnInit

should load the Arenas

Arena form should be invalid && Submit button disabled. If: Date field has invalid format.

Arena form should be valid && Submit button enabled. If: All fields are valid.

TeamDetailsComponent

should create

#ngOnInit

should load existing Team

TeamEditComponent

should create

#ngOnInit

Should load existing Team. Form should be valid and Submit enabled.

Team form should be invalid && Submit button disabled. If: Date field has invalid format.

Team form should be invalid && Submit button disabled. If: Fields are empty.

UsersComponent

should create

Code Coverage

File	Statements	Branches	Functions	Lines
src	100%	100%	100%	100%
src/app	57.60%	10%	29.63%	56.41%
src/app/main-layout/footer	100%	100%	100%	100%
src/app/main-layout/header	83.33%	50%	80%	78.57%
src/app/views	100%	100%	100%	100%
src/app/views/arenas/arena-all	96%	100%	88.89%	95%
src/app/views/arenas/arena-create	76.92%	100%	50%	76.19%
src/app/views/arenas/arena-details	81.82%	100%	62.50%	81.25%
src/app/views/arenas/arena-edit	80.56%	100%	55.56%	79.31%
src/app/views/home	100%	100%	100%	100%
src/app/views/login	66.67%	100%	50%	63.16%
src/app/views/pagenotfound	100%	100%	100%	100%
src/app/views/register	80.95%	100%	50%	81.25%
src/app/views/teams/team-all	96%	100%	88.89%	95%
src/app/views/teams/team-create	80.95%	100%	50%	79.41%
src/app/views/teams/team-details	81.82%	100%	62.50%	81.25%
src/app/views/teams/team-edit	80%	100%	54.55%	78.13%
src/app/views/users	100%	100%	100%	100%

Pruebas de Integración

Herramienta : Postman

Para las pruebas de integración entre el API y la base de datos en MongoDB se realizaron llamadas GET, POST, PUT y DELETE a los diferentes módulos y se corroboró que este retornara los códigos de estado y valores de respuesta correctos.

Request	URL	Code	Name	Response Details
Authentication - Valid Test Cases				
Register User	/api/auth/register	201	Created	Indicates that the user was registered successfully.
Login	/api/auth/login	200	OK	Standard response for successful HTTP requests. The login was successful.
Check Authenticated Token	/api/auth/me	200	OK	Standard response for successful HTTP requests. The token of the user was successfully verified.
Authentication - Invalid Test Cases				
Register - Invalid Data	/api/auth/register	400	Bad Request	The request cannot be fulfilled due to one or more empty or invalid fields.
Login - Empty User	/api/auth/login	404	Not Found	The entered username was not found.
Login - Incorrect Password	/api/auth/login	401	Unauthorized	Authentication failed due to password mismatch, the user may attempt to authorize again.
Arenas - Valid Test Cases				
Arena - Retrieve All	/api/arenas	200	OK	Standard response for successful HTTP requests. The arenas information was successfully retrieved.
Arena - Create	/api/arenas	201	Created	Code indicates a newly created object. The new arena was successfully created.
Arena - Update	/api/arenas/5bb557d3324b8a2cc8487656	200	OK	Standard response for successful HTTP requests. The information of the recently created arena was successfully updated.

Arena - Retrieve One	/api/arenas/5bb557d3324b8a2cc8487656	200	OK	Standard response for successful HTTP requests. The information of the recently created arena was successfully retrieved.
Arena - Delete	/api/arenas/5bb557d3324b8a2cc8487656	200	OK	Standard response for successful HTTP requests. The arena was successfully deleted.
Arenas - Invalid Test Cases				
Arena - Unauthenticated - Retrieve All	/api/arenas	401	Unauthorized	Authentication failed due to invalid token sent in the header.
Arena - Invalid ID - Retrieve One	/api/arenas/not a valid arena	404	Not Found	The requested arena was not found due to invalid ID.
Arena - Invalid Data - Create	/api/arenas	400	Bad Request	The request cannot be fulfilled due to one or more empty or invalid fields.
Arena - Invalid ID - Update	/api/arenas/not a valid arena	404	Not Found	The requested arena was not found due to invalid ID.
Teams - Valid Test Cases				
Arena - Create	/api/arenas	201	Created	Code indicates a newly created object. The new arena was successfully created.
Teams - Retrieve All	/api/teams	200	OK	Standard response for successful HTTP requests. The Teams information was retrieved.
Team - Create	/api/teams	200 201	OK Created	Standard response for successful HTTP requests. The Team was created. Wanted response: Correct response should be 201 Created.
Team - Update	/api/teams/5bb557d4324b8a2cc8487659	200	OK	Standard response for successful HTTP requests. The information of the recently created arena was successfully updated.
Teams - Retrieve One	/api/teams/5bb557d4324b8a2cc8487659	200	OK	Standard response for successful HTTP requests. The information of the recently created team was successfully retrieved.
Team - Delete	/api/teams/5bb557d4324b8a2cc84	200	OK	Standard response for successful HTTP requests. The recently created

	87659			team was successfully deleted.
Arena - Delete	/api/arenas/5bb5 57d4324b8a2cc8 487658	200	OK	Standard response for successful HTTP requests. The arena was successfully deleted.
Teams - Invalid Test Cases				
Team - Unauthenticated - Retrieve All	/api/teams	401	Unauthorized	Authentication failed due to invalid token sent in the header.
Team - Invalid ID - Retrieve One	/api/teams/not a valid team	404	Not Found	The requested Team was not found due to invalid ID.
Team - Invalid Data - Create	/api/teams	400	Bad Request	The request cannot be fulfilled due to one or more empty or invalid fields.
Team - Invalid ID - Update	/api/teams/not a valid team	404	Not Found	The requested Team was not found due to invalid ID.

Pruebas de Carga y Rendimiento

Herramientas : Artillery

Las pruebas de carga se realizaron con Artillery con el objetivo de obtener las siguientes métricas.

Métricas de Respuesta
- Latencia promedio.
- Latencia máxima.
- Tasa de Error.

Medidas de Volumen
- Usuarios concurrentes.
- Solicitudes por segundo (RPS - Requests per second).

Summary

Test duration	20 sec
Scenarios created	75
Scenarios completed	75

Scenario counts:

0	75 (100%)

Codes

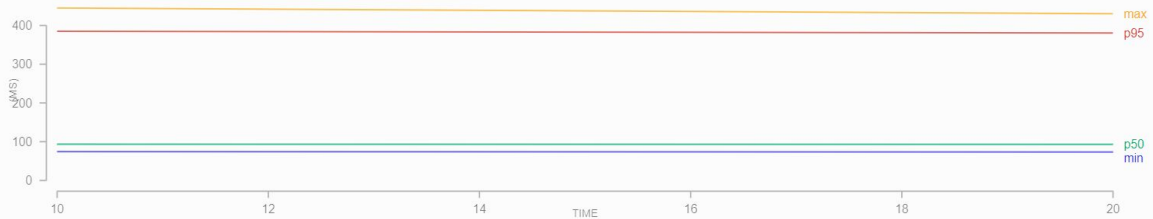| 200	450

Errors
✓ Test completed without network or OS errors.
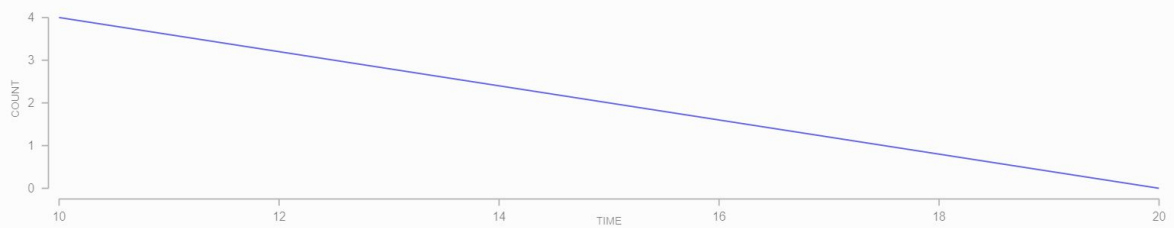
Charts

Overall Latency Distribution
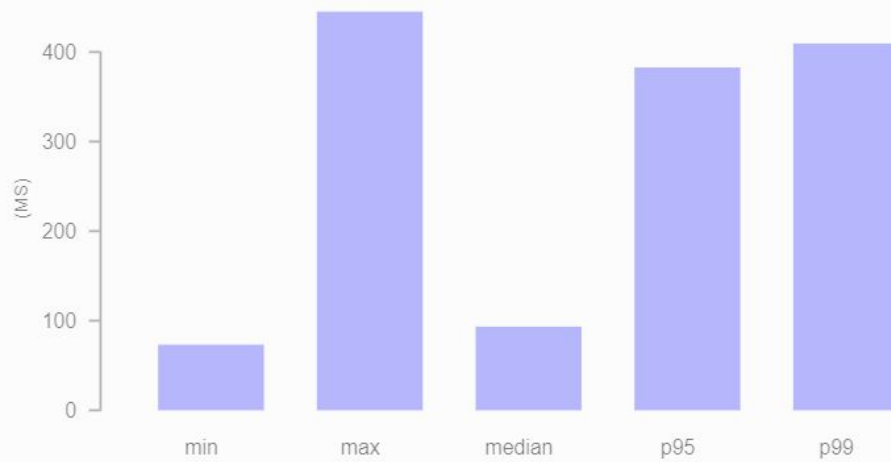
Latency At Intervals

Concurrent users

Mean RPS

Json de respuesta de las pruebas.

```json
{
  "aggregate": {
    "timestamp": "2018-10-13T22:14:35.424Z",
    "scenariosCreated": 75,
    "scenariosCompleted": 75,
    "requestsCompleted": 450,
    "latency": {
      "min": 73.3,
      "max": 445.1,
      "median": 93.4,
      "p95": 382.8,
      "p99": 409.5
    },
    "rps": {
      "count": 450,
      "mean": 28.54
    },
    "scenarioDuration": {
      "min": 703.4,
      "max": 1001.7,
      "median": 847.2,
      "p95": 938.9,
      "p99": 994.1
    },
    "scenarioCounts": {
      "0": 75
    },
    "errors": {},
    "codes": {
      "200": 450
    },
    "matches": 75,
    "customStats": {},
    "counters": {},
    "phases": [
      {
        "duration": 15,
        "arrivalRate": 5
      }
    ]
}
```