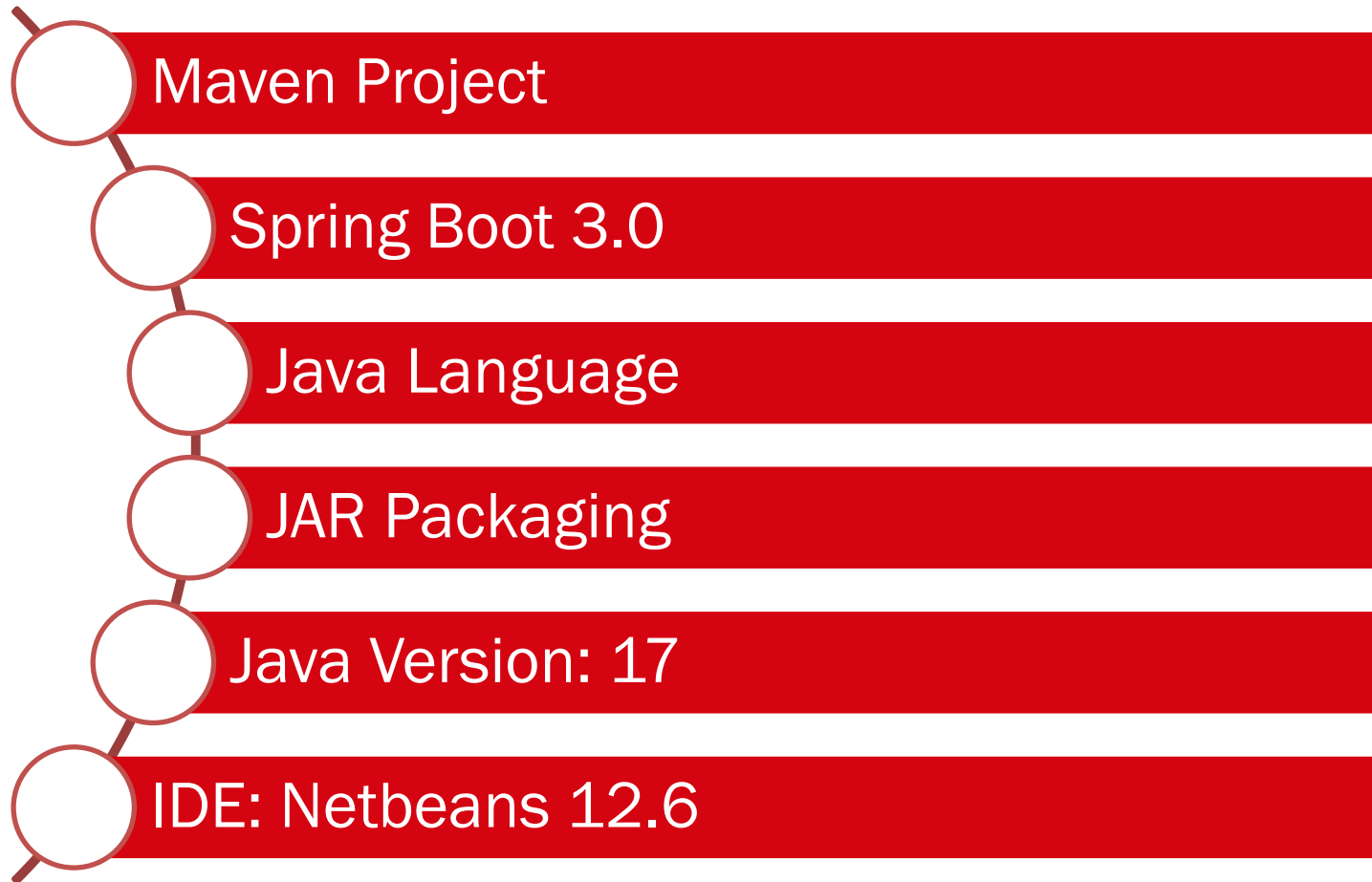


Solution Problem Statement

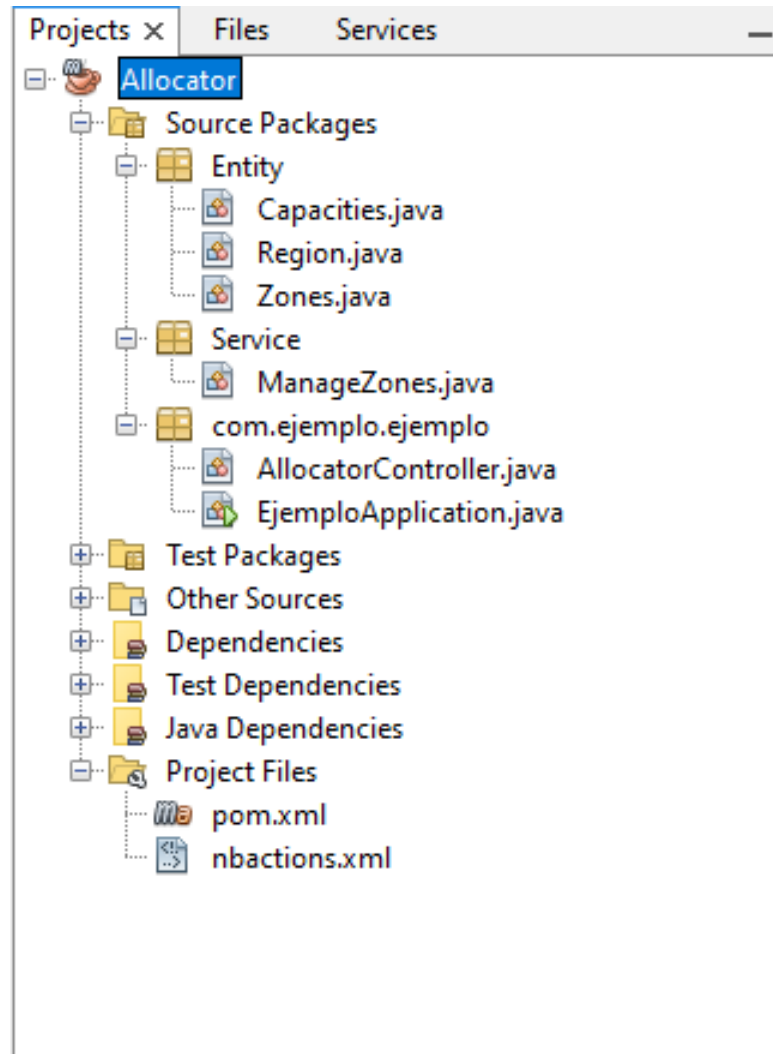


Full Stack Senior Software Engineer
Alexander Meneses Valverde

Technical Project Description



Project Structure



Test Cases

Number	Description	Precondition	Test Values	Conditions	Result
1	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 1150 units for 1 hour	New York \$ 10.150 India \$ 9.520 China \$ 8.570	Successful
2	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 230 units for 5 hours	New York \$ 11.000 India \$ 10.665 China \$ 9.450	Successful
3	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 100 units for 24 hours	New York \$ 24.096 India \$ 26.544 China \$ 20.880	Successful
4	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 1100 units for 12 hours	New York \$ 118.248 India \$ 112.596 China \$ 100.200	Successful

Test Cases

Number	Description	Precondition	Test Values	Conditions	Result
5	Validate API Behavior when capacity is not multiple of 10	Run the project locally Use GET method Use Allocator	Capacity of 15 units for 12 hours	Error Message	Successful
6	Validate API Behavior when hours is not greater than 0	Run the project locally Use GET method Use Allocator	Capacity of 150 units for 0 hours	Error Message	Successful
7	Validate Capacity Input is Required	Run the project locally Use GET method Use Allocator	Capacity input missing	Error Message	Successful
8	Validate Hours Input is Required	Run the project locally Use GET method Use Allocator	Hours input missing	Error Message	Successful

Unit Test

001. Validate API Endpoint (Postman)

Number	Description	Precondition	Test Values	Conditions	Result
1	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 1150 units for 1 hour	New York \$ 10.150 India \$ 9.520 China \$ 8.570	Successful

GET

http://localhost:8080/allocator?capacity=1150&hours=1

Params ●

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	1150	
<input checked="" type="checkbox"/>	hours	1	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON



```
1  [
2    "Output": [
3      {
4        "region": "New York",
5        "total_cost": "$10150",
6        "machines": "[(8XLarge,7),(XLarge,1),(Large,1)]"
7      },
8      {
9        "region": "India",
10       "total_cost": "$9520",
11       "machines": "[(8XLarge,7),(Large,3)]"
12     },
13     {
14       "region": "China",
15       "total_cost": "$8570",
16       "machines": "[(8XLarge,7),(XLarge,1),(Large,1)]"
17     }
18   ]
```



Unit Test

002. Validate API Endpoint (Postman)

Number	Description	Precondition	Test Values	Conditions	Result
2	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 230 units for 5 hours	New York \$ 11.000 India \$ 10.665 China \$ 9.450	Successful

GET

http://localhost:8080/allocator?capacity=230&hours=5

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	230	
<input checked="" type="checkbox"/>	hours	5	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON



```
1  {
2    "Output": [
3      {
4        "region": "New York",
5        "total_cost": "$11000",
6        "machines": "[(8XLarge,1),(2XLarge,1),(XLarge,1),(Large,1)]"
7      },
8      {
9        "region": "India",
10       "total_cost": "$10665",
11       "machines": "[(8XLarge,1),(2XLarge,1),(Large,3)]"
12     },
13     {
14       "region": "China",
15       "total_cost": "$9450",
16       "machines": "[(8XLarge,1),(XLarge,3),(Large,1)]"
17     }
18   ]
19 }
```



Unit Test

003. Validate API Endpoint (Postman)

Number	Description	Precondition	Test Values	Conditions	Result
3	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 100 units for 24 hours	New York \$ 24.096 India \$ 26.544 China \$ 20.880	Successful

GET



http://localhost:8080/allocator?capacity=100&hours=24

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	100	
<input checked="" type="checkbox"/>	hours	24	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON



```
1  [
2    "Output": [
3      {
4        "region": "New York",
5        "total_cost": "$24096",
6        "machines": "[(4XLarge,1),(XLarge,1)]"
7      },
8      {
9        "region": "India",
10       "total_cost": "$26544",
11       "machines": "[(2XLarge,2),(Large,2)]"
12     },
13     {
14       "region": "China",
15       "total_cost": "$20880",
16       "machines": "[(4XLarge,1),(XLarge,1)]"
17     }
18   ]
19 ]
```



Unit Test

004. Validate API Endpoint (Postman)

Number	Description	Precondition	Test Values	Conditions	Result
4	Validate API EndPoint (Postman)	Run the project locally Use GET method Use Allocator	Capacity of 1100 units for 12 hours	New York \$ 118.248 India \$ 112.596 China \$ 100.200	Successful

GET

http://localhost:8080/allocator?capacity=1100&hours=12

Params

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	1100	
<input checked="" type="checkbox"/>	hours	12	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK Tim

Pretty

Raw

Preview

Visualize

JSON



```
1  [
2    "Output": [
3      {
4        "region": "New York",
5        "total_cost": "$118248",
6        "machines": "[(8XLarge,6),(4XLarge,1),(2XLarge,1),(XLarge,1)]"
7      },
8      {
9        "region": "India",
10       "total_cost": "$112596",
11       "machines": "[(8XLarge,6),(4XLarge,1),(2XLarge,1),(Large,2)]"
12     },
13     {
14       "region": "China",
15       "total_cost": "$100200",
16       "machines": "[(8XLarge,6),(4XLarge,1),(XLarge,3)]"
17     }
18   ]
```



Unit Test

005. Validate API Behavior when capacity is not multiple of ten

Number	Description	Precondition	Test Values	Conditions	Result
5	Validate API Behavior when capacity is not multiple of ten	Run the project locally Use GET method Use Allocator	Capacity of 15 units for 12 hours	Error Message	Successful

GET



http://localhost:8080/allocator?capacity=15&hours=12

Params ●

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	15	
<input checked="" type="checkbox"/>	hours	12	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "codError": 10,
3   "Description": "Units must be multiple of 10"
4 }
```

Unit Test

006. Validate API Behavior when hour value is not greater than zero

Number	Description	Precondition	Test Values	Conditions	Result
6	Validate API Behavior when hour value is not greater than zero	Run the project locally Use GET method Use Allocator	Capacity of 150 units for 0 hours	Error Message	Successful

GET



http://localhost:8080/allocator?capacity=150&hours=0

Params ●

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	150	
<input checked="" type="checkbox"/>	hours	0	
	Key	Value	Description

Body

Cookies

Headers (5)

Test Results



Status: 200 OK 1

Pretty

Raw

Preview

Visualize

JSON



```
1
2  "codError:": 12,
3  "Description": "Hours must be greater than 0"
4
```

Unit Test

007. Validate Capacity Input is Required

Number	Description	Precondition	Test Values	Conditions	Result
7	Validate Capacity Input is Required	Run the project locally Use GET method Use Allocator	Capacity input missing	Error Message	Successful

GET



http://localhost:8080/allocator?hours=0

Params ●

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input type="checkbox"/>	capacity		
<input checked="" type="checkbox"/>	hours	0	
	Key	Value	Description

Body

Cookies

Headers (4)

Test Results



Status: 400 Bad Request

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "timestamp": "2022-11-29T04:42:41.527+0000",
3   "status": 400,
4   "error": "Bad Request",
5   "path": "/allocator"
6 }
```

Unit Test

008. Validate Hours Input is Required

Number	Description	Precondition	Test Values	Conditions	Result
8	Validate Hours Input is Required	Run the project locally Use GET method Use Allocator	Hours input missing	Error Message	Successful

GET



http://localhost:8080/allocator?capacity=150

Params ●

Authorization

Headers (6)

Body

Pre-request Script

Tests

Settings

Query Params

	KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/>	capacity	150	
<input type="checkbox"/>	hours	0	
	Key	Value	Description

Body

Cookies

Headers (4)

Test Results



Status: 400 Bad Request

Pretty

Raw

Preview

Visualize

JSON



```
1 {
2   "timestamp": "2022-11-29T04:46:15.578+0000",
3   "status": 400,
4   "error": "Bad Request",
5   "path": "/allocator"
6 }
```

GitHub Repository

- <https://github.com/alexmeval1983/ResourceAllocator.git>

Get -in- TOUCH

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