

Appendix H - API test cases

1. Users controller

Endpoint	Request	Result	Fail/Pass
GET '/users/{id}'	Existing user: id = 96	HTTP 200 { "userId": 96, "name": "Maria Magdalena", "email": "mariamgd@gmail.com", "password": "password", "role": "ADMINISTRATOR" }	Pass
	Non-registered user: id = 1	HTTP 400 User with the given ID doesn't exist	Pass
GET '/users'	All registered users:	HTTP 200 [{ "userId": 89, "name": "Geana banana", "email": "Geana@stefi.dk", "password": "miaumiau", "role": "EMPLOYEE" }, { "userId": 96, "name": "Maria Magdalena", "email": "mariamgd@gmail.com", "password": "password", "role": "ADMINISTRATOR" }, { "userId": 100, "name": "Test Testensen", "email": "test@test.com", "password": "Test1234", "role": "ADMINISTRATOR" }, { "userId": 102, "name": "delete", }]	Pass

		<pre> "email": "delete@gmail.com", "password": "delete", "role": "EMPLOYEE" }] </pre>	
POST '/users'	Valid user: <pre> { "userId": 0, "name": "Sombrero", "email": "sombrero@farmerama. dk", "password": "holaMiAmigos", "role": "ADMINISTRATOR" } </pre>	HTTP 200 <pre> { "userId": 103, "name": "Sombrero", "email": "sombrero@farmerama.dk", "password": "holaMiAmigos", "role": "ADMINISTRATOR" } </pre>	Pass
	Invalid name: <pre> { "userId": 0, "name": "", "email": "sombrero@farmerama. dk", "password": "holaMiAmigos", "role": "ADMINISTRATOR" } </pre>	HTTP 400 Please fill in all the required fields	Pass
	Invalid email: <pre> { "userId": 0, "name": "Sombrero", "email": "", "password": "holaMiAmigos", "role": "ADMINISTRATOR" } </pre>	HTTP 400 Please fill in all the required fields	Pass
	Invalid password: <pre> { "userId": 0, "name": "Sombrero", "email": </pre>	HTTP 400 Please fill in all the required fields	Pass

	<pre>"sombreiro@farmerama. dk", "password": "", "role": "ADMINISTRATOR" }</pre>		
	Invalid role: <pre>{ "userId": 0, "name": "Sombreiro", "email": "sombreiro@farmerama. dk", "password": "", "role": null }</pre>	HTTP 400 Please assign a role first	Pass
	Post with the same email: <pre>{ "userId": 0, "name": "Sombreiro", "email": "sombreiro@farmerama. dk", "password": "holaMiAmigos", "role": "ADMINISTRATOR" }</pre>	HTTP 400 Email already exists	Pass
POST 'users/login'	Existing user: <pre>{ "email": "sombreiro@farmerama. dk", "password": "holaMiAmigos" }</pre>	HTTP 200 <pre>{ "userId": 103, "name": "Sombreiro", "email": "sombreiro@farmerama.dk", "password": "holaMiAmigos", "role": "ADMINISTRATOR" }</pre>	Pass
	Non registered user: <pre>{ "email": "sombreiro@gmail.com" , "password": "holaMiAmigos" }</pre>	HTTP 400 Email not registered	Pass

	}		
	Invalid email: { "email": "", "password": "holaMiAmigos" }	HTTP 400 Please fill in all the required fields	Pass
	Invalid password: { "email": "sombrero@farmerama.dk", "password": "" }	HTTP 400 Please fill in all the required fields	Pass
PUT 'users/{id}'	Valid user: Id = 103 { "userId": 0, "name": "Adriana", "email": "sombrero@farmerarma.dk", "password": "goHome", "role": "ADMINISTRATOR" }	HTTP 200 { "userId": 103, "name": "Adriana", "email": "sombrero@farmerarma.dk", "password": "goHome", "role": "ADMINISTRATOR" }	Pass
	Non existing user: Id = 75 { "userId": 0, "name": "Adriana", "email": "sombrero@farmerarma.dk", "password": "goHome", "role": "ADMINISTRATOR" }	HTTP 400 User with the given ID doesn't exist	Pass
	Invalid Email: Id = 103 { "userId": 0,	HTTP 400 Please fill in all the fields	Pass

	<pre> "name": "Adriana", "email": "", "password": "goHome", "role": "ADMINISTRATOR" } </pre>		
	Invalid name: Id = 103 <pre> { "userId": 0, "name": "", "email": "sombrero@farmerarma .dk", "password": "goHome", "role": "ADMINISTRATOR" } </pre>	HTTP 400 Please fill in all the fields	Pass
DELETE '/users/{id}'	Valid user Id = 103	<pre> { "userId": 103, "name": "Adriana", "email": "sombrero@farmerarma.dk", "password": "goHome", "role": "ADMINISTRATOR" } </pre>	Pass
	Invalid user Id = 999	HTTP 400 User with the given Id doesn't exist	Pass

2. Areas controller

Endpoint	Request	Result	Fail/Pass
GET '/areas/{id}'	Existing Area: id = 9	HTTP 200 <pre> { "areald": 9, "barn": { "barnld": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, </pre>	Pass

		<pre> "hardwareId": "0004A30B002528D3" } </pre>	
	Non existing area: id = 93	Area with the given Id doesn't exist	Pass
GET '/areas'	All registered areas	<pre> HTTP 200 [{ "areaid": 1, "barn": { "barnId": 1, "name": "barn1" }, "name": "AREA1", "description": "edited", "numberOfPigs": 10098, "hardwareId": "gsjhfcjdacsa" }, { "areaid": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": "0004A30B002528D3" }, { "areaid": 13, "barn": { "barnId": 4, "name": "string" }, "name": "string", "description": "string", "numberOfPigs": 0, "hardwareId": "string" }, { "areaid": 14, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "FirstArea", </pre>	Pass

		<pre> "description": "The most beautiful area", "numberOfPigs": 0, "hardwareId": "0004A30B00ED6757" }, { "areaid": 15, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Old VIA", "description": "old stuff", "numberOfPigs": 5250, "hardwareId": "HONDRGHBFOKNB" }] </pre>	
POST '/areas'	Valid area: <pre> { "areaid": 0, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	HTTP 200 <pre> { "areaid": 16, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	Pass
	Invalid Barn: <pre> { "areaid": 0, "barn": { "barnId": 0, "name": "Farmerama" }, "name": "Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	HTTP 400 No value present	Pass
	Empty area name:	HTTP 400	Pass

	<pre>{ "areald": 0, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" }</pre>	Please fill in the requested fields	
	<p>Empty hardwareId:</p> <pre>{ "areald": 0, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "" }</pre>	<p>HTTP 400</p> <p>Please fill in the requested fields</p>	Pass
	<p>Identical name in the same barn:</p> <pre>{ "areald": 0, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" }</pre>	<p>HTTP 400</p> <p>Area already exists</p>	Pass
PUT '/areas/{id}'	<p>Existing Area:</p> <p>Id = 16</p> <pre>{ "areald": 16, "barn": { "barnId": 2,</pre>	<p>HTTP 200</p> <pre>{ "areald": 16, "barn": { "barnId": 2, "name": "Farmerama"</pre>	Pass

	<pre> "name": "Farmerama" }, "name": "Edited Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	<pre> }, "name": "Edited Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	
Invalid Id: Id = 75	<pre> { "areaid": 75, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Edited Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	HTTP 400 No value present	Pass
Empty name: Id = 16	<pre> { "areaid": 16, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	HTTP 400 Please fill in all the required fields	Pass
Empty Hardware ID: Id = 16	<pre> { "areaid": 75, "barn": { "barnId": 2, "name": "Farmerama" }, </pre>	HTTP 400 Please fill in all the required fields	Pass

	<pre> "name": "Edited Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "" } </pre>		
	<pre> Duplicate Hardware Id: Id = 16 { "areald": 75, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "Edited Test Area", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "" } </pre>		
DELETE '/areas/{id}'	Valid id Id = 16	<pre> { "areald": 16, "barn": { "barnId": 2, "name": "Farmerama" }, "name": "", "description": "An area for testing", "numberOfPigs": 4, "hardwareId": "0004A30B002528D3" } </pre>	Pass
	Invalid id Id = 999	HTTP 400 Area with the given id doesn't exist	Pass

3. Thresholds controller

Endpoint	Request	Result	Fail/Pass
GET '/thresholds/{id}'	Existing areald = 9 Type = Temperature	HTTP 200 { "thresholdId": 15,	Pass

		<pre> "minimum": 10, "maximum": 35, "type": "TEMPERATURE", "area": { "areald": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": "0004A30B002528D3" } } </pre>	
	<p>Existing areald = 9 Type = Humidity</p>	<pre> HTTP 200 { "thresholdId": 21, "minimum": 48, "maximum": 55, "type": "HUMIDITY", "area": { "areald": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": "0004A30B002528D3" } } </pre>	Pass
	<p>Existing areald = 9 Type = CO2</p>	<pre> HTTP 200 { "thresholdId": 22, "minimum": 500, "maximum": 700, "type": "CO2", "area": { "areald": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": </pre>	Pass

		<pre>"0004A30B002528D3" } }</pre>	
	Existing areald = 9 Type = CO2	<pre>HTTP 200 { "thresholdId": 18, "minimum": 10, "maximum": 17, "type": "SOUND", "area": { "areald": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": "0004A30B002528D3" } }</pre>	Pass
	Not existing areald = 999 Type = Humidity	<pre>HTTP 400 Threshold doesn't exist</pre>	Pass [Improve error message]
GET /thresholds/{ areald}/logs	Existing areald = 9 Type = Humidity Date = 2022-05-20	<pre>HTTP 200 [{ "value": 71.6, "type": "HUMIDITY", "measurementId": 27175, "measuredDate": "2022-05-20T23:59:09.167", "threshold": 55 }, { "value": 70.9, "type": "HUMIDITY", "measurementId": 27174, "measuredDate": "2022-05-20T23:53:19.94", "threshold": 55 },]</pre>	Pass
GET /thresholds/{ areald}/logs	Not existing areald = 999 Type = Humidity Date = 2022-05-20	<pre>HTTP 200 []</pre>	Fail - Should display error message
GET /thresholds/	Not required	<pre>HTTP 200 []</pre>	Pass - there are no records in

ogs/latest			database - Could display message
GET /thresholds/ogs/latest	Not required	HTTP 200 <pre>[{ "value": 99, "type": "SOUND", "threshold": 17, "areaName": "VIA" }, { "value": 98, "type": "SOUND", "threshold": 17, "areaName": "VIA" }, { "value": 60.9, "type": "HUMIDITY", "threshold": 50, "areaName": "VIA" }]</pre>	Pass
PUT /thresholds/{areald}	Existing areald = 9 Type = Temperature Existing userId = 89 Threshold { "minimum": 10, "maximum": 35 }	HTTP 200 <pre>{ "thresholdId": 15, "minimum": 10, "maximum": 35, "type": "TEMPERATURE", "area": { "areald": 9, "barn": { "barnId": 1, "name": "barn1" }, "name": "VIA", "description": "Oink", "numberOfPigs": 1336, "hardwareId": "0004A30B002528D3" } }</pre>	Pass
PUT /thresholds/{areald}	Existing areald = 9 Type = Temperature Not existing userId = 9 Threshold { "minimum": 10, "maximum": 35 }	HTTP 400 User with the given ID does not exist.	Pass

		<pre>"name": "string" }, { "barnId": 4, "name": "string" }, { "barnId": 6, "name": "New Barn" }]</pre>	
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5. Temperatures controller

Endpoint	Request	Result	Fail/Pass
GET '/areas/{id}/temperatures'	Latest temperatures valid Id: id = 9 Latest = true	HTTP 200 { "value": 22.3, "areald": 9, "measurementId": 28046, "measuredDate": "2022-05-30T13:49:10.453" }	Pass
	Temperatures valid Id: Id = 9 Latest = false	HTTP 200 { "value": 22.3, "areald": 9, "measurementId": 28037, "measuredDate": "2022-05-30T12:33:14.083" }, { "value": 22.6, "areald": 9, "measurementId": 28038, "measuredDate": "2022-05-30T12:39:03.317" }, { "value": 22.7, "areald": 9, "measurementId": 28039, "measuredDate": "2022-05-30T12:50:41.903" }, { "value": 22.4, "areald": 9, "measurementId": 28040, "measuredDate": "2022-05-30T13:08:09.897" }, }	Pass
	Temperatures valid date, valid id: Id = 9 Date = '2022-05-26'	{ "value": 23.7, "areald": 9, "measurementId": 27720, "measuredDate": "2022-05-26T09:34:07.823" }, { "value": 24.3, "areald": 9, }	Pass

		<pre> "measurementId": 27721, "measuredDate": "2022-05-26T09:51:19.477" }, { "value": 24.5, "areald": 9, "measurementId": 27722, "measuredDate": "2022-05-26T09:57:09.233" }, { "value": 24.7, "areald": 9, "measurementId": 27723, "measuredDate": "2022-05-26T10:02:58.91" } </pre>	
	Temperatures invalid id: Id = 96 Date = '2022-05-26'	HTTP 400 Area with the given Id doesn't exist	Pass
	Temperatures invalid date Id = 9 Date = 'dfid'	HTTP 400	Pass

6. Sounds controller

Endpoint	Request	Result	Fail/Pass
GET "/areas/{id}/sounds"	Latest sounds valid Id: id = 9 Latest = true	HTTP 200 { "value": 14, "measurementId": 28046, "measuredDate": "2022-05-30T13:49:10.453", "areaid": 9 }	Pass
	Sounds valid Id: Id = 9 Latest = false	HTTP 200 { "value": 99, "measurementId": 28037, "measuredDate": "2022-05-30T12:33:14.083", "areaid": 9 }, { "value": 98, "measurementId": 28038, "measuredDate": "2022-05-30T12:39:03.317", "areaid": 9 }, { "value": 98, "measurementId": 28039, "measuredDate": "2022-05-30T12:50:41.903", "areaid": 9 }, { "value": 98, "measurementId": 28040, "measuredDate": "2022-05-30T13:08:09.897", "areaid": 9 }, }	Pass
	Sounds valid date, valid id: Id = 9 Date = '2022-05-26'	{ "value": 14, "measurementId": 27720, "measuredDate": "2022-05-26T09:34:07.823", "areaid": 9 }, {	Pass

		<pre> "value": 18, "measurementId": 27721, "measuredDate": "2022-05-26T09:51:19.477", "areald": 9 }, { "value": 18, "measurementId": 27722, "measuredDate": "2022-05-26T09:57:09.233", "areald": 9 }, { "value": 18, "measurementId": 27723, "measuredDate": "2022-05-26T10:02:58.91", "areald": 9 } </pre>	
	Sounds invalid id: Id = 96 Date = '2022-05-26'	HTTP 400 Area with the given Id doesn't exist	Pass
	Sounds invalid date Id = 9 Date = 'dfifd'	HTTP 400	Pass

7. Humidity controller

Endpoint	Request	Result	Fail/Pass
GET '/areas/{id}/humidity'	Latest humidity valid Id: id = 9 Latest = true	HTTP 200 { "value": 44.8, "areald": 9, "measurementId": 28046, "measuredDate": "2022-05-30T13:49:10.453" }	Pass
	Humidity valid Id: Id = 9 Latest = false	HTTP 200 { "value": 60.9, "areald": 9, "measurementId": 28037,	Pass

		<pre> "measuredDate": "2022-05-30T12:33:14.083" }, { "value": 60, "areald": 9, "measurementId": 28038, "measuredDate": "2022-05-30T12:39:03.317" }, { "value": 49.7, "areald": 9, "measurementId": 28039, "measuredDate": "2022-05-30T12:50:41.903" }, { "value": 51.3, "areald": 9, "measurementId": 28040, "measuredDate": "2022-05-30T13:08:09.897" }, </pre>	
	Humidity valid date, valid id: Id = 9 Date = '2022-05-26'	<pre> { "value": 41, "areald": 9, "measurementId": 27720, "measuredDate": "2022-05-26T09:34:07.823" }, { "value": 36.8, "areald": 9, "measurementId": 27721, "measuredDate": "2022-05-26T09:51:19.477" }, { "value": 35.8, "areald": 9, "measurementId": 27722, "measuredDate": "2022-05-26T09:57:09.233" }, { "value": 35.2, "areald": 9, "measurementId": 27723, "measuredDate": "2022-05-26T10:02:58.91" </pre>	Pass

		},	
	Humidity invalid id: Id = 96 Date = '2022-05-26'	HTTP 400 Area with the given Id doesn't exist	Pass
	Humidity invalid date Id = 9 Date = 'dfid'	HTTP 400	Pass

8. Co2 controller

Endpoint	Request	Result	Fail/Pass
GET '/areas/{id}/co2'	Latest co2s valid Id: id = 9 Latest = true	HTTP 200 { "value": 631, "areaid": 9, "measurementId": 28046, "measuredDate": "2022-05-30T13:49:10.453" }	Pass
	Co2 valid Id: Id = 9 Latest = false	HTTP 200 { "value": 550, "areaid": 9, "measurementId": 28037, "measuredDate": "2022-05-30T12:33:14.083" }, { "value": 1087, "areaid": 9, "measurementId": 28038, "measuredDate": "2022-05-30T12:39:03.317" }, { "value": 1071, "areaid": 9, "measurementId": 28039, "measuredDate": "2022-05-30T12:50:41.903" }, { "value": 694,	Pass

		<pre> "areald": 9, "measurementId": 28040, "measuredDate": "2022-05-30T13:08:09.897" } </pre>	
	Co2 valid date, valid id: Id = 9 Date = '2022-05-26'	<pre> { "value": 550, "areald": 9, "measurementId": 27720, "measuredDate": "2022-05-26T09:34:07.823" }, { "value": 557, "areald": 9, "measurementId": 27721, "measuredDate": "2022-05-26T09:51:19.477" }, { "value": 540, "areald": 9, "measurementId": 27722, "measuredDate": "2022-05-26T09:57:09.233" }, { "value": 540, "areald": 9, "measurementId": 27723, "measuredDate": "2022-05-26T10:02:58.91" } </pre>	Pass
	Co2 invalid id: Id = 96 Date = '2022-05-26'	HTTP 400 Area with the given Id doesn't exist	Pass
	Co2 invalid date Id = 9 Date = 'dfifd'	HTTP 400	Pass