Backend Elaborated Test Cases (Sprint 2+)

Focus:

- Accessing database
- Search functionality
- 404 page for incorrect URLs

Implementation: Automated testing using tools including JEST, Playwright, Firebase Emulator Suite; continuous integration using GitHub action

- We are still in the process of writing test scripts for automating the tests, so some testings are performed manually. Tests with written test scripts have a tick next to them

Gallery (AC 2)

2b.1: List domain in gallery (successful)

Precondition:

- have an animation stored in the database with fields “description“, “name“, and “sessionLink“
- have its thumbnail stored as public/assets/resources/thumbnails/name.png

Test-data:

ID	description	name	sessionlink	thumbnail stored
2b.1.1	There is a robot with two grippers. It can carry a ball in each. The goal is to take N balls from one room to another.	Gripper	PDDL Editor	yes

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	site should open, with Gripper thumbnail and name listed in the gallery	as expected	Pass (manually)

2b.2: List domain in gallery (unsuccessful)

Precondition:

an animation stored in the database with:

- one of “description“, “name“, and “sessionLink“ not stored, OR
- one of “description“, “name“, and “sessionLink“ have empty string value, OR

- its thumbnail is not stored as public/assets/resources/thumbnails/name.png

Test-data:

ID	description	name	sessionlink	thumbnail stored
2b.2.1	“”	Gripper	PDDL Editor	yes
2b.2.2	Helloworld	N/A	PDDL Editor	yes
2b.2.3	Helloworld	Gripper	N/A	yes
2b.2.4	Helloworld	Helloworld	PDDL Editor	no

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	site should open, where the domain is not listed in the gallery	The domain is listed	Fail (manually)

2b.3: Search domain (successful)

Precondition:

- have an animation stored in the database with fields “description“, “name“, and “sessionLink“
- have its thumbnail stored as public/assets/resources/thumbnails/name.png

Test-data:

- description = There is a robot with two grippers. It can carry a ball in each. The goal is to take N balls from one room to another.
- name = Gripper
- sessionLink = PDDL Editor
- Gripper.png stored in public/assets/resources/thumbnails/

ID	search value
2b.3.1	Gripper
2b.3.2	gripper
2b.3.3	pper
2b.3.4	gRiP

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	site should open, where the Gripper domain is listed in the gallery	As expected	Pass (manually)

2	in the search bar, enter the search values	the domain would remain on the gallery	As expected	Pass (manually)

2b.4: Search domain (unsuccessful)

Precondition:

- have an animation stored in the database with fields “description“, “name“, and “sessionLink“
- have its thumbnail stored as public/assets/resources/thumbnails/name.png

Test-data:

- description = There is a robot with two grippers. It can carry a ball in each. The goal is to take N balls from one room to another.
- name = Gripper
- sessionLink = PDDL Editor
- Gripper.png stored in public/assets/resources/thumbnails/

ID	search value
2b.4.1	freecell

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	site should open, where the Gripper domain is listed in the gallery	As expected	Pass (manually)
2	in the search bar, enter the search values	the Gripper domain should no longer be displayed	As expected	Pass (manually)

Documentation (AC 3)

3b.1: View functioin in table (successful) ✅

Precondition:

- have a function stored in the database with fields “briefDescription“, “category“, “example“, “functionName“, “youtubeEmbeddingLink“, “videoCode“, “videoExplanation“ stored

Test-data:

all of the following stored in database

briefDescription	category	example	functionName	youtubeEmbeddingLink	videoCode	videoExplanation

This function aligns `obj1` to the middle of `obj2`.	other	(equal (?obj1 x) (function align_middle (objects ?obj1 ?obj2)))	align_middle	`align_middle` demo	(:predicate boarded\n :parameters (?person lift)\n :custom lift\n :effect(\n (equal (?person y) (lift y))\n (equal (?person x) (function align_middle (objects ?person lift)))\n)\n)	The function is used in the elevator domain when a passenger boards the lift. The passenger stands in the middle of the lift.
This function distributes objects along a vertical plane.	distribute	(assign (?obj y) (function distributey (objects ?obj)))	distributey	`distributey` demo	(:predicate city\n :parameters (?city)\n :effect(\n (assign (?city y) (function distributey (objects ?city) (settings (initial 1))\n)\n)	The function is used in the logistics domain when initiating positions of the cities. The 6 cities are distributed vertically.

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Documentation	site should open, with distributex name and description under distribute section, and align_middle name and description under others function	As expected	Pass (automated)

3b.2: View function in table (unsuccessful)

Precondition:

- have a function stored in the database with on of the fields “briefDescription“, “category“, “example“, “functionName“, “youtubeEmbeddingLink“, “videoCode“, “videoExplanation“ not stored/empty

Test-data:

ID	briefDescription	category	example	functionName	youtubeEmbeddingLink	videoCode	videoExplanation
3b.2.1	““	other	(equal (?obj1 x) (function align_middle	align_middle	`align_middle` demo	(:predicate boarded\n :parameters	The function is used in the elevator

			(objects ?obj1 ?obj2)))			(?person lift)\n :custom lift\n :effect(\n (equal (? person y) (lift y))\n (equal (? person x) (function align_middle (objects ? person lift)))\n)\n)	domain when a passenger boards the lift. The passenger stands in the middle of the lift.
3b.2.2	This function distributes objects along a horizontal plane.	N/A	(assign (?obj x) (function distributex (objects ?obj) (settings (spacebtw 40))))	distributex	`distributex` demo	(:predicate ontable\n :parameters (?x)\n :effect(\n (assign (?x x) (function distributex (objects ?x) (settings (spacebtw 40))))\n (equal (?x y) 0)\n)\n)	The function is used in the blocksworld domain when placing blocks on the table. The objects are distributed horizontally.
3b.2.3	“”	other	(equal (?obj1 x) (function align_middle (objects ?obj1 ?obj2)))	align_middle	N/A	(:predicate boarded\n :parameters (?person lift)\n :custom lift\n :effect(\n (equal (? person y) (lift y))\n (equal (? person x) (function align_middle (objects ? person lift)))\n)\n)	The function is used in the elevator domain when a passenger boards the lift. The passenger stands in the middle of the lift.

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended

1	Navigate to Planimation Documentation	site should open, and the test-data functions are not displayed	The functions would be displayed	Fail (manually)

3b.3: Search function (successful)

Precondition:

- have a function stored in the database with fields “briefDescription“, “category“, “example“, “functionName“, “youtubeEmbeddingLink“, “videoCode“, “videoExplanation“ stored

Test-data:

all of the following stored in the database

briefDescription	category	example	functionName	youtubeEmbeddingLink	videoCode	videoExplanation
This function aligns `obj1` to the middle of `obj2`.	other	(equal (?obj1 x) (function align_middle (objects ?obj1 ?obj2)))	align_middle	`align_middle` demo	(:predicate boarded\n :parameters (?person lift)\n :custom lift\n :effect(\n (equal (?person y) (lift y))\n (equal (?person x) (function align_middle (objects ?person lift)))\n)\n)	The function is used in the elevator domain when a passenger boards the lift. The passenger stands in the middle of the lift.
This function distributes objects along a horizontal plane.	distribute	(assign (?obj x) (function distributex (objects ?obj) (settings (spacebtw 40))))	distributex	`distributex` demo	(:predicate ontable\n :parameters (?x)\n :effect(\n (assign (?x x) (function distributex (objects ?x) (settings (spacebtw 40))))\n (equal (?x y) 0)\n)\n)	The function is used in the blocksworld domain when placing blocks on the table. The objects are distributed horizontally.

enter each of the following

ID	searched value

3b.3.1	distributex
3b.3.2	DisTri
3b.3.3	ign_mid

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Documentation	site should open, with the function name and brief description listed under corresponding category	As expected	Pass (manually)
2	enter in the search box the searched values	for 4b.5.1 and 4b.5.2, distributex function should remain under the distribute section. for 4b.5.3, align_middle function should remain under the others section.	As expected	Pass (manually)

3b.4: Search function (unsuccessful)

Precondition:

- none of the functions have name “q”

Test-data:

ID	searched value
3b.4.1	q

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Documentation	site should open, with the function name and brief description listed under corresponding category	As expected	Pass (manually)
2	enter in the search box the searched values	a message saying “*No functions match your search in this category.*“ should be displayed under both others and distribute sections	As expected	Pass (manually)

3b.5: View visual properties

Precondition:

- a visual properties with “name“, “type“, “description“ and at least 1 datatype is stored in the database
- customised properties “example“ and “notes“ stored in database

Test-data:

name	type	description	datatype(s)
x	compulsory	horizontal position of the object on screen	• Integer • NULL

and customised property example and note.

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Documentation	site should open, with the visual property listed under the visual properties section; and the customised property example and notes listed under the customised property section	As expected	Pass (manually)

Domain (AC 4)

4b.1: View domain detail (successful)

Precondition:

- have an animation stored in the database with fields “description“, “name“, and “sessionLink“
- have its thumbnail stored as public/assets/resources/thumbnails/name.png

Test-data:

ID	description	name	sessionlink	thumbnail stored
4b.1.1	There is a robot with two grippers. It can carry a ball in each. The goal is to take N balls from one room to another.	Gripper	PDDL Editor	yes

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	site should open, with Gripper thumbnail and name listed in the gallery	As expected	Pass (manually)
2	a) click on the Gripper thumbnail or name	site should open, with Gripper name, description, and an embedded PDDL editor frame	As expected	Pass (manually)

	b) navigate to Planimation Animations			

4b.2: View domain detail (unsuccessful)

Precondition: none of the domain stored are of name “x”

Test-data:

ID	URL
4b.2.1	Planimation Animations

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Animations	404 error page displayed	As expected	Pass (manually)

Function (AC 5)

5b.1: View function detail (successful)

Precondition:

- have a function stored in the database with fields “briefDescription“, “category“, “example“, “functionName“, “youtubeEmbeddingLink“, “videoCode“, “videoExplanation“ stored

Test-data:

ID	briefDescription	category	example	functionName	youtubeEmbeddingLink	videoCode	videoExplanation	parameters
5b.1.1	This function aligns `obj1` to the middle of `obj2`.	other	(equal (? obj1 x) (function align_middle (objects ?obj1 ? obj2)))	align_middle	`align_middle` demo	(:predicate boarded\n :parameters (?person lift)\n :custom lift\n :effect(\n (equal (? person y) (lift y))\n (equal (? person x) (function align_midd	The function is used in the elevator domain when a passenger boards the lift. The passenger stands in the middle of the lift.	

						le (objects ?person lift)))\n)\n)		
5b.1.2	This function distributes objects along a vertical plane.	distribute	(assign (? obj y) (function distributey (objects ? obj)))	distributey	`distributey` demo	(:predicate city\n :parameters (?city)\n :effect(\n (assign (? city y) (function distributey (objects ? city) (settings (initial 1))\n)\n)	The function is used in the logistics domain when initiating positions of the cities. The 6 cities are distributed vertically.	{defaultValue=20 explanation="governs the space between objects." parameterName="spacebtw"}

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to https://planimation-staging-181bc.web.app/documentation	site should open, with the function name and brief description listed under corresponding category	As expected	Pass (manually)
2	a) click on the function name b) navigate to Planimation Documentation	site should open, with the function name, parameters (if any), example, youtube embedded video, video code, and video example displayed	As expected	Pass (manually)

5b.2: View function detail (unsuccessful)

Precondition:

- none of the functions have name "x"

Test-data:

ID	URL
5b.2.1	Planimation Documentation

Step:

Step	Step detail	expected result	Actual Results	Pass/ Fail/ Not executed/ Suspended
1	Navigate to Planimation Documentation	404 error page	As expected	Pass (manually)