



GRADUATION PROJECT

Testing Web Application

Agenda

- Introduction
- Problem Statement
- Solution Overview
- System Design
- Demo
- Conclusion

Project Overview

Testing Web Application

- **Team Members**

Menna Allah Tarek EL Shahid (Team Leader)

Yasmine Alsyied Marey

Nermeen Elsayed Mohammed Fawzy

Asmaa Atef Abd- El Naby Shahin

- **Supervisor**

Eng :Basil Khalid

- **Tech Stack**

Selenium



◆ Overview

In this project, our team applied three different testing approaches Manual Testing, Automation Testing, and API Testing to ensure full coverage and validation of the entire web application.

1. Manual Testing (Executed test scenarios on the web application (Demo Blaze))

Key Advantages

- Strong UI validation: catches visual and usability issues automation may miss.
- Flexible & efficient for exploratory testing.
- Useful in early development stages where requirements frequently change.

2. Automation Testing (Automated major flows on SauceDemo using Selenium)

Key Advantages

- Saves time on repetitive test cases.
- More accurate, reducing human error.
- Ideal for regression testing after each build or deployment.

3. API Testing(Tested Fake Store (Platzi) API)

Key Advantages

- Fast execution and easier debugging compared to UI tests.
- Deep backend coverage even when UI is unavailable or unstable.
- Supports early testing before frontend development is complete.

Menna Tarek – Manual, Automation & API Testing

Manual Testing :

I performed manual testing on the Sign Up, log in, log out, About Us And Contact.

docs.google.com/spreadsheets/d/1M5OPdqDeiTm5EHinKjBHhzWk4TBnjD2H6EV_lqESi8/edit?gid=0#gid=0

Manual Testing Project on DemoBlaze Website

J10	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	id	Title	Precondition	Steps	Test Data	Expected Result	Actual Result	Status	Bug Report							
2		Sign Up with valid username & password		1. Go to Sign Up page 2. Enter valid username & password 3. Click Sign Up		Account created successfully and alert appears	Alert: "Sign up successful."	Pass								
3		Sign Up with empty username		1. Go to Sign Up page 2. Leave username empty, enter valid password 3. Click Sign Up		Error message: "Please fill out Username and Password"	Alert: "Please fill out Username and Password"	Pass								
4		Sign Up with empty password		1. Go to Sign Up page 2. Enter valid username, leave password empty 3. Click Sign Up		Error message: "Please fill out Username and Password"	Alert: "Please fill out Username and Password"	Pass								
5		Sign Up with existing username		1. Go to Sign Up page 2. Enter an already registered username and password 3. Click Sign Up		Error message: "This user already exists"	Alert: "This user already exists."	Pass								
6		Sign Up with weak/short password	User is on Sign Up page	1. Go to Sign Up page 2. Enter valid username and weak password 3. Click Sign Up		Error message: "Password must be ≥ 8 characters"	DemoBlaze does not validate password length → User created anyway	Fail	https://docs.google.com/document/d/1clwvhwvC8oND2ipM8nR16bnWqXVuUuUMIA85Ql78P2UY/edit?usp=sharing							
7		username with Arabic characters		1. Enter Arabic username 2. Enter valid password 3. Click Sign Up	username = مenna	System should accept both English and Arabic usernames	System displays "Sign up successful"	Pass								
8		username with extra long input		1. Enter long username (50+ chars) 2. Click Sign Up	Username = منناaaaaaaaaaaaaaaaaaaaaaaa >Password = "Test@123"	System should show alert "Username too long"	System displays "Sign up successful"	Fail	https://docs.google.com/document/d/1V1FNFUQgh2kvSSWtOeGg_yyev_c4vCeSqQvd82YHc/edit?usp=sharing							
9		Verify password requires at least one uppercase letter		1. Enter password without uppercase 2. Click Sign Up	Username = "Menna" Password = "test@123"	System should show alert "Password must include at least one uppercase letter"	System displays "Sign up successful"	Fail	https://docs.google.com/document/d/1Fb5lr4CfZvY1Lko6pFL5O7iF86lkWxcSm2lsBwA/edit?usp=sharing							
10		Verify password requires at least one number		1. Enter password without numbers 2. Click Sign Up	Username = "Menna" Password = "Test@abc"	System should show alert "Password must include at least one number"	System displays "Sign up successful"	Fail	https://docs.google.com/document/d/1Fb5lr4CfZvY1Lko6pFL5O7iF86lkWxcSm2lsBwA/edit?usp=sharing							
11		Verify password requires at least one special character		1. Enter password without special character 2. Click Sign Up	Username = "Menna" Password = "Test123"	System should show alert "Password must include at least one special character"	System displays "Sign up successful"	Fail								
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Bug Report (Sign up #6)

Bug Report

Title: System allows sign-up with weak/short password

Environment: DemoBlaze Website

Precondition: User is logged out and on Sign-Up modal

Steps:

1. Open DemoBlaze
2. Click "Sign Up"
3. Enter valid username
4. Enter password < 8 characters (e.g., 12345)
5. Click "Sign Up" Expected Result: Alert "Password must be ≥ 8 characters" and user not created

Expected Result:

System should reject the short password and display an error message (e.g., "Password must be at least 8 characters long"). User account should NOT be created

Actual Result: System accepts password and creates user successfully

Attachments:

Manual Testing :

I performed manual testing on Checkout (Payment process)

docs.google.com/spreadsheets/d/1M5OPdqDelTm5EHiNkRjBHzWk4TBnjD2H6EV_lqESi8/edit?gid=1070808103#gid=1070808103

Manual Testing Project on DemoBlaze Website

ID	Title	Preconditions	test data	Steps	Expected Result	Actual Result	status	Bug report
10	1 Open Payment Form	- add product to the cart - User is on the cart page		- Go to the Cart page. - Click the "Place Order" button	<ul style="list-style-type: none"> - Payment form opens successfully. - Fields displayed: Name, Country, Credit Card, Month, Year. - Message: "Payment form opened successfully." 	Payment form opened as expected; all fields displayed correctly.	pass	
11	2 Open Payment Form	user is on the cart page without adding product to the cart		- Go to the Cart page. - Click the "Place Order" button	<ul style="list-style-type: none"> - the system should not allow checkout if cart is empty - alert message should appear: "your cart is empty - please add items before proceeding to payment." 	<ul style="list-style-type: none"> - the payment form opened directly even though no items were added to the cart. - no validation or error message appeared. 	fail	https://docs.google.com/document/d/1tvkSGl8MfpqCORLsBY3vyAQLVfzvGlz3OQ20NLTICA/edit?usp=sharing
12	3 Open Payment Form	- add product to the cart - User is on the cart page	Check the amount displayed in the payment form	- Go to the Cart page. - Click the "Place Order" button	<ul style="list-style-type: none"> - Amount should match the order total and be visible 	Amount is correctly displayed at the top of the payment form	pass	
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Sign up log in log out About Us Contact Categories Open Payment Form Close Payment Form enter Payment details Confirm Purchase

22°C 12:28 PM ENG 11/30/2025

Bug Report

Actual Result:

- The Payment form opened directly even though no items were added to the cart.
- No validation or error message appeared.

Severity: High
Priority: High
Status: New
Type: Functional / Validation Bug

Notes:
This issue allows users to reach the payment step without having any products in the cart, which can cause transaction and logic inconsistencies.

Screenshot

The screenshot shows a web browser window for the 'PRODUCT STORE' website. The URL is https://www.demoblaze.com/. The page displays a product list with a 'Place Order' button. At the bottom, there is an 'About Us' section with a message about the software development cycle, a 'Get In Touch' section with contact information, and a 'Activate Windows' section with a link to 'Windows'. The status bar at the bottom right shows the date and time as 12:28 PM on 11/30/2025.



Manual Testing :

I performed manual testing on the View Cart, Add product, Remove Product And Update Product Quantity

Manual Testing :

I performed manual testing on the Categories

Screenshot of a Google Sheets document titled "Manual Testing Project on DemoBlaze Website". The sheet contains a table of test cases for the DemoBlaze website's categories.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
id	Title	Precondition	Steps	Test Data	Expected Result	Actual Result	Status	Bug Report							
1	View Phones category (page 1)	User is logged in OR guest	1. Click Phones in Navbar		Only phone products are displayed on first page	Only phones displayed	Pass								
2	View Laptops category (page 1)	User is logged in OR guest	1. Click Laptops in Navbar		Only laptop products are displayed on first page	Only laptops displayed	Pass								
3	View Monitors category (page 1)	User is logged in OR guest	1. Click Monitors in Navbar		Only monitor products are displayed on first page	Only monitors displayed	Pass								
4															
5	Previous button on page 2 of category	User opened page 2 of Phones/Laptops/Monitors	1. Go to a category 2. Navigate to page 2 3. Click Previous	Phones/Laptops/Monitors	Goes back to previous page of the same category	Returns to main page with all products	Fail	https://docs.google.com/document/d/1Nomuq5Etk8BqtRRSMF9vccaKeKOQnbmth_SqfPh9ZLU/edit?usp=sharing							
6	Phones → Next page	User clicked Phones	1. Click Phones 2. Navigate with Next	Phones	Should show only phones (page 2)	Shows Laptops/Monitors mixed	Fail	https://docs.google.com/document/d/1A1GNdM33_9uH1FFJotWSwvGcZdsMLzuuaJiedJ8/edit?usp=sharing							
7	Laptops → Next page	User clicked Laptops	1. Click Laptops 2. Navigate with Next	Laptops	Should show only laptops (page 2)	Shows laptops + monitors mixed	Fail	https://docs.google.com/document/d/1A1GNdM33_9uH1FFJotWSwvGcZdsMLzuuaJiedJ8/edit?usp=sharing							
8	Monitors → Next page	User clicked Monitors	1. Click Monitors 2. Navigate with Next	Monitors	Should show only monitors (page 2)	Shows laptops + monitors mixed	Fail	https://docs.google.com/document/d/1A1GNdM33_9uH1FFJotWSwvGcZdsMLzuuaJiedJ8/edit?usp=sharing							
9	Verify category name highlighted after selection	Open Home Page	1. Click on "Phones" 2. Observe UI		The selected category should be highlighted (visually marked)	Category not highlighted (no UI change)	Fail	https://docs.google.com/document/d/1wWTvk2Mf6aC9aL1AVMMfWQhzNGfRh-TVvRLRNdpM/edit?usp=sharing							
10	Verify product details (image, name, price) display correctly for selected category	Open Home Page	1. Click on "Phones" 2. Observe displayed items		Product name, image, and price should display correctly	All products displayed correctly	Pass								
11	Verify "Next" button is disabled or hidden on the last page of category	Open category (Phones/Laptops/Monitors) and navigate to last page	1. Click "Next" until last page 2. Observe "Next" button		"Next" button should be disabled or hidden when on last page	"Next" button not visible on last page	Pass								
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Details from the Bug Report (Category #5):

- Title:** Previous button on category page 2 returns to all products instead of previous category page
- Environment:** DemoBlaze Web — Production
- Preconditions:** User is on page 2 of any category (Phones/Laptops/Monitors)
- Steps:**
 1. Go to Home Page
 2. Click a category (Phones / Laptops / Monitors)
 3. Click Next to go to page 2
 4. Click Previous
- Expected Result:** User should return to page 1 of the same category
- Actual Result:** User returns to the main page with all products
- Attachments:**

Automation Testing :

I performed Automation testing on the Check out And About

https://drive.google.com/drive/folders/1mKx-Vv9lOS2O4IM0_chyCi-rn3TTPzaM?usp=sharing

Automation Testing :

I performed Automation testing on the Login, Logout And Reset app state

<https://drive.google.com/drive/folders/1K2TxGzl6vrfRAcsfogUoJwAdUjOKH7il>

Automation Testing :

I performed Automation testing on the Add to cart And Remove

<https://drive.google.com/drive/folders/1dqhsTarGUtLbF54nATzzQsftAnklizzR>

Automation Testing :

I performed Automation testing on the Footer link And Sort box

<https://drive.google.com/drive/folders/1cThVORVSskousGUI0O2ElIgTABS14p9M>

API Testing :

I performed API testing on the All Products, Get a single product by ID, Create a product, Update a product And Authentication with JWT (Login)

API Testing :

I performed API testing on the Get a single user, Create a user, And Update a user

API Testing on Platzi														
13	Create User	/api/v1/users	POST	Send request without name	F	G	H	I	J	K	L	M		
TC12					3. Choose POST from the dropdown menu next to the URL input field. 4. Enter the Endpoint URL: https://api.escuelajs.co/api/v1/users 5. Go to the "Body" tab below the URL bar and select "Raw". 6. Enter the following JSON body in the Body section: { "email": "sara.test@test.com", "password": "123456", "avatar": "https://i.pravatar.cc/200" }		"statusCode": 500, "message": "Internal server error"	500 fail		https://docs.google.com/document/d/1s-6toU93w6qKwBRFb9OHJQLvcatDHB1csrWBHCMzw/edit?usp=sharing	Bug Report!	5. Click Send	Expected Result:	• API should return: ◦ 400 Bad Request ◦ Validation message such as: "Name is required" • Request should not proceed to backend logic
14				Send extremely long name (50–100 chars)	1. Open Postman and create a new POST request. 2. Set Method to POST in the request. 3. Choose POST from the dropdown menu next to the URL input field. 4. Enter the Endpoint URL: https://api.escuelajs.co/api/v1/users 5. Go to the "Body" tab below the URL bar and select "Raw". 6. Enter the following JSON body in the Body section: { "name": "aa", "email": "longname@test.com", "password": "123456", "avatar": "https://i.pravatar.cc/290" }		400 Bad Request – "name is required"	202 created	201 FAIL	https://docs.google.com/document/d/1P2WGuYEfnKobgJKbednKzD0NymBFyvJsJE9AfLCmJ3IM/edit?usp=sharing	Actual Result: API returns a server crash error:	Expected Result: • No validation message returned • Backend throws an exception		
TC13				Send request without avatar	1. Open Postman and create a new POST request. 2. Set Method to POST in the request. 3. Choose POST from the dropdown menu next to the URL input field. 4. Enter the Endpoint URL: https://api.escuelajs.co/api/v1/users 5. Go to the "Body" tab below the URL bar and select "Raw". 6. Enter the following JSON body in the Body section: { "name": "sara test", "email": "sara.test@test.com", "password": "123456", }		"message": ["avatar should not be empty", "avatar must be a URL address"]	400 pass			Attachments:			
15	TC14			Invalid avatar string	1. Open Postman and create a new POST request. 2. Set Method to POST in the request. 3. Choose POST from the dropdown menu next to the URL input field. 4. Enter the Endpoint URL: https://api.escuelajs.co/api/v1/users 5. Go to the "Body" tab below the URL bar and select "Raw". 6. Enter the following JSON body in the Body section: { "name": "sara test", "email": "sara.test@test.com", "password": "123456", "avatar": "invalidAvatarString" }		"message": ["avatar must be a URL address"]				Severity: High	Reason: Missing validation → API crashes instead of returning logical input error. This affects API stability and reliability.	Priority: High	

API Testing :

I performed API testing on the Get a single category by slug, Create a category And Delete a category

docs.google.com/spreadsheets/d/1wGYPi54EtUoPD_PKVqJp3j21xDfOaAiNIHG_I8AeUI8/edit?gid=1502199944#gid=1502199944

API Testing on Platzi

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Id	API Name	EndPoints	Method	Test Steps	Expected result	Actual result	Status Code	Bug Report						
2					1. Open Postman 2. Method = POST 3. URL → /categories/ 4. Body → raw → JSON: {"name": "Electronics", "image": " https://i.imgur.com/example.jpg " 5. Click Send	201 Created, response Contains new data(id, name, image, createdAt, updatedAt)	As Expected	201 Created (PASS)	https://docs.google.com/document/d/1JHcxuHS3i_grq58SVc4qlxubdeYW6YE/W5tcXIUzs/edit?usp=sharing						
3					Body missing name: {"image": " https://i.imgur.com/example.jpg "}	400 Bad Request – "name is required"	"statusCode": 500, "message": "Internal server error"	500 Internal Server Error (FAIL)	https://docs.google.com/document/d/1JHcxuHS3i_grq58SVc4qlxubdeYW6YE/W5tcXIUzs/edit?usp=sharing						
4					Body with empty name: {"name": "", "image": " https://i.imgur.com/example.jpg "}	"statusCode": 400 "error": "Bad Request", "message": ["name should not be empty"]	As Expected	400 Bad Request (PASS)							
5					Body missing image: {"name": "Electronics"}	"statusCode": 400 "error": "Bad Request", "message": ["image should not be empty", "image must be a URL address"]	As Expected	400 Bad Request (PASS)							
6		Categories	/categories/	POST											
7					Invalid image URL: {"name": "Electronics", "image": "invalid_url"}	400 Bad Request – "image must be a valid URL"	201 Created	201 Created (FAIL)	https://docs.google.com/document/d/1u3FSSGW7uGyEZ3VUhUbnuUsRaQuBHCt57BQvVyc/edit?usp=sharing						
8					Duplicate category name: {"name": "Electronics", "image": " https://i.imgur.com/example.jpg "}	409 Conflict – "Category already exists"	400 Bad Request "message": "SQLiteError: UNIQUE constraint failed: category.slug", "category.slug": "	400 Bad Request (FAIL)	https://docs.google.com/document/d/1JwlKv4kegATlhWKao-uKTaCIDo81nLA_Q2cah4IQo/edit?usp=sharing						
					Body with extra fields: {"name": "Electronics", "image": " https://i.imgur.com/example.jpg ", "role": "admin"}	201 Created – extra fields ignored	400 Bad Request "message": "SQLiteError: UNIQUE constraint failed: category.slug"	400 Bad Request (FAIL)	https://docs.google.com/document/d/1HTQVVY03PhwjlP2qgbAJICUQ8m39BKu1AiSXf0RlaQd2usn=sharing						

Attachments:

Activate Windows
Go to Settings to activate Windows.

Severity: High

12:37 PM
11/30/2025

API Testing :
I performed API testing on the **Filter by Title**, **Filter by Price**, **Filter by Category**.

System Design

- [Git Hub Link](#)
- [Manual testing Link](#)
- [Automation Testing Link](#)
- [API Testing Link](#)

Conclusion

- Summary

We applied three testing techniques to cover UI, backend logic, and automation stability.

Each method provided different insights and helped uncover defects at different layers.

Together, they gave us 100% test coverage and improved overall quality of the system.

Thank you