1. Equivalence Class Testing
1.1 Login-Credentials

Variables	Valid ECs	Representing values for valid ECs	Invalid ECs	Representing values for invalid ECs
Username	(1) Username should start with alphabet	Username = "admin"	(1) Username contains only numeric values (2) Empty field	Username = "1234" Username = ""
Password	(1) Password should be at least 3 digit	Password= "admin123"	(1) Password less than 3 digit (2) Empty field	Password= "12" Password = ""

Test case type	Test case no.	Purpose	Username	Password	Expected Output	Actual Output
For valid ECs	1.1.1	Are username and password valid	admin	admin123	Login successful	Login successful

Test case type	Test case no.	Purpose	Username	Password	Expected Output	Actual Output
For invalid ECs	1.1.2	Is username invalid	1234	admin123	Login unsuccessful	Login successful
	1.1.3	Is username empty	[N/A]	admin123	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.1.4	Is password invalid	admin	12	Login unsuccessful	Login successful
	1.1.5	Is password empty	admin	[N/A]	Display error message "Please fill out this field"	Display error message "Please fill out this field"

1.2 Register-Field values

Variables	Valid ECs	Representing values for valid ECs	Invalid ECs	Representing values for invalid ECs
Username	(1) Username should start with alphabet	Username = "admin"	(1) Username contains only numeric values (2) Empty field	Username = "1234" Username = ""
Email	(1) Email should follow format "example@gmail.com"	Email = "admin@gmail.com"	(1) Email not following format (2) Empty field	Email = "example" Email = ""
Password	(1) Password should be at least 4 digit	Password = "admin123"	(1) Password less than 4 digit (2) Empty field	Password = "123" Password = ""

Test case type	Test case no.	Purpose	Username	Password	Email	Expected Output	Actual Output
For valid ECs	1.2.1	Are username, email and password valid	admin	admin123	example@gmail.com	Register successful	Register successful

Test case type	Test case no.	Purpose	Username	Password	Email	Expected Output	Actual Output
For invalid ECs	1.2.2	Is username invalid	1234	admin123	example@gmail.com	Register unsuccessful	Register successful
	1.2.3	Is username empty	[N/A]	admin123	example@gmail.com	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.2.4	Is email invalid	admin	admin123	example	Register unsuccessful	Register successful

	1.2.5	Is email empty	admin	admin123	[N/A]	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.2.6	Is password invalid	admin	123	example @gmail.c om	Register unsucces sful	Register successful
	1.2.7	Is password empty	admin	[N/A]	example @gmail.c om	Display error message "Please fill out this field"	Display error message "Please fill out this field"

1.3 HomePage-Products

Variables	Valid ECs	Invalid ECs
Products	(1) Show all available products (2) Display "No product available" message, if there is no available product	(1) Some of the products are missing

Test case type	Test case no.	Purpose	Input	Expected Output	Actual Output
For valid ECs	1.3.1	Are all available products shown	On home page	Display all available products	Display all available products
	1.3.2	Is no available product shown	On home page and there is no product in database	Display "No product available" message	Display nothing

Test case type	Test case no.	Purpose	Input	Expected Output	Actual Output
For valid ECs	1.3.3	Are some the products missing	On home page	Display all available products	Display all available products

1.4 Add New Category Form-Text Field

Variables	Invalid ECs	Representing value
Category name	(1) Empty Field	Category = ""

Test case type	Test case no.	Purpose	Input	Expected Output	Actual Output
For invalid ECs	1.4.1	Is field empty	[N/A]	Display error message "Please fill out this field"	Display error message "Please fill out this field"

1.5 Update Category Form-Text Field

Variables	Invalid ECs	Representing value
Category name	(1) Empty Field	(1) Category = ""

Test case type	Test case no.	Purpose	Input	Expected Output	Actual Output
For invalid ECs	1.5.1	Is field empty	[N/A]	Display error message "Please fill out this field"	Update the category name to empty value

1.6 Add New Product-Text Fields

Variables	Valid ECs	Representing value	Invalid ECs	Representing value
Product Name			(1) Empty Field	Product = ""
Category			(1) Empty Field	Category = ""
Price	(1) Price > 0	Price = "3"	(1) Zero (2) negative (3) Non-numeric (4) Empty Field	Price = "0" Price = "-2" Price = "abc" Price = ""
Weight	(1) Weight > 0	Weight = "3"	(1) Zero (2) negative (3) Non-numeric (4) Empty Field	Weight = "0" Weight = "-2" Weight = "abc" Weight = ""
Available Quantity	(1) Quantity > 0	Quantity = "3"	(1) Zero (2) negative (3) Non-numeric (4) Empty Field	Quantity = "0" Quantity = "-2" Quantity = "abc" Quantity = ""
Image link			(1) Wrong link format (2) Empty Field	Link = ""

Test case type	Test case no.	Purpose	Price	Weight	Quantity	Expected Output	Actual Output
For valid ECs	1.6.1	Input is valid	1	2	3	New product added	New product added

Test case type	Test case no.	Purpose	Product Name	Category	Price	Weight	Quantity	Image link	Expected Output	Actual Output
For invalid ECs	1.6.2	Is name field empty	[N/A]	Fruits	3	12	34	https://freepngimg.com/sa	Display error message "Please fill	Display error message "Please fill out this field"

								ve/95 57-ap ple-fru it-tran spare nt/744 x744	out this field"	
	1.6.3	Is category field empty	Apple	[N/A]	3	12	34	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Please fill out this field"	Throws SQL exception
	1.6.4	Price is zero	Apple	Fruits	0	12	34	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Value must be greater than equal to 1"	Display error message "Value must be greater than equal to 1"
	1.6.5	Price is negative	Apple	Fruits	-5	12	34	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Value must be greater than equal to 1"	Display error message "Value must be greater than equal to 1"

	1.6.6	Price is non-numeric	Apple	Fruits	abc	12	34	https://freepngimg.com/save/9557-apple-fruit-transparent/744x744	Non numeric input disabled	Non numeric input disabled
	1.6.7	Is price field empty	Apple	Fruits	[N/A]	12	34	https://freepngimg.com/save/9557-apple-fruit-transparent/744x744	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.6.8	Weight is zero	Apple	Fruits	3	0	34	https://freepngimg.com/save/9557-apple-fruit-transparent/744x744	Display error message "Value must be greater than equal to 1"	Display error message "Value must be greater than equal to 1"
	1.6.9	Weight is negative	Apple	Fruits	3	-5	34	https://freepngimg.com/save/9557-apple-fruit-tran	Display error message "Value must be greater than equal to 1"	Display error message "Value must be greater than equal to 1"

							spare nt/744 x744		
	1.6.10	Weight is non-numeric	Apple	Fruits	3	abc	34	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Non numeric input disabled	Non numeric input disabled
	1.6.11	Is weight field empty	Apple	Fruits	3	[N/A]	34	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.6.12	Quantity is zero	Apple	Fruits	3	12	0	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Value must be greater than equal to 1"	Display error message "Value must be greater than equal to 1"
	1.6.13	Quantity is negative	Apple	Fruits	3	12	-5	https:// freepn gimg.c om/sa	Display error message "Value must be greater	Display error message "Value must be greater than equal to

									than equal to 1"	1"
	1.6.14	Quantity is non-num eric	Apple	Fruits	3	12	abc	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Non numeric input disabled	Non numeric input disabled
	1.6.15	Is Quantity field empty	Apple	Fruits	3	12	[N/A]	https:// freepn gimg.c om/sa ve/95 57-ap ple-fru it-tran spare nt/744 x744	Display error message "Please fill out this field"	Display error message "Please fill out this field"
	1.6.16	Wrong link format	Apple	Fruits	3	12	34	1234	Display error message "Not correct image link format"	Adds product
	1.6.17	Is link field empty	Apple	Fruits	3	12	34	[N/A]	Display error message "Please fill out this field"	Display error message "Please fill out this field"

2. Use Case Testing

2.1 Login-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.1.1	Is **register** button working correctly	Register button clicked	navigates to register page	navigates to Register page
2.1.2	Credentials are valid	Login button clicked	navigates to Home page	navigates to Home page
2.1.3	Is **login** button working correctly	Login button clicked	navigates to Home page	navigates to Home page
2.1.4	Are credentials invalid	Login button clicked	Display error message "Invalid username or password"	White label error page

2.2 Register-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.2.1	Is **register** button working correctly	Register button clicked	navigates to Login page	navigates to Login page
2.2.2	Is **login** button working correctly	Login button clicked	navigates to Login page	navigates to Login page

2.3 HomePage-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.3.1	Is **add to cart** button working correctly	Add to cart button clicked	Display message "Item added to cart"	No action
2.3.2	Is **cart** button working correctly	Cart button clicked	navigates to Cart page	No action
2.3.3	Is **profile** button working correctly	Profile button clicked	navigates to Profile page	Error
2.3.4	Is **logout** button working correctly	Logout button clicked	navigates to Login page	Error

2.4 Dashboard-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.4.1	Is **Manage Categories** button working correctly	Manage Categories button clicked	navigates to Categories page	navigates to Categories page
2.4.2	Is **Manage Product** button working correctly	Manage Products button clicked	navigates to Products page	navigates to Products page
2.4.3	Is **Manage Customer** button working correctly	Manage Customer button clicked	navigates to Customers page	navigates to Customers page
2.4.4	Is **Homepage** button working correctly	Homepage button clicked	navigates to Homepage	Whitelabel error page
2.4.5	Is **Logout** button working correctly	Logout button clicked	navigates to Login page	navigates to Login page

2.5 Category-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.5.1	Is **Add Category** button working correctly	Add Category button clicked	Open Add new Category form	Open Add new Category form
2.5.2	Is **Delete** button working correctly	Delete button clicked	Deletes category	Whitelabel error page
2.5.3	Is **Update** button working correctly	Update button clicked	Opens Update category form	Opens Update category form
2.5.4	Is **Homepage** button working correctly	Homepage button clicked	navigates to Homepage	Whitelabel error page
2.5.5	Is **Logout** button working correctly	Logout button clicked	navigates to Login page	Whitelabel error page

2.6 Add New Category Form-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.6.1	Is **Cross** button working correctly	Cross button clicked	Exits the form	Exits the form
2.6.2	Is **Close** button working correctly	Close button clicked	Exits the form	Exits the form
2.6.3	Is **Save Changes** button working correctly	Save Changes button clicked	Adds new category	Adds new category

2.7 Update Category Form-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.7.1	Is **Cross** button working correctly	Cross button clicked	Exits the form	Exits the form
2.7.2	Is **Close** button working correctly	Close button clicked	Exits the form	Exits the form
2.7.3	Is **Update Changes** button working correctly	Update Changes button clicked	Updates the category name	Updates the category name

2.8 Products-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.8.1	Is **Add Product** button working correctly	Add Product button clicked	Open Add new Product page	Open Add new Product page
2.8.2	Is **Delete** button working correctly	Delete button clicked	Deletes the product	Deletes the product
2.8.3	Is **Update** button working correctly	Update button clicked	Opens Update Product form	Whitelabel error page
2.8.4	Is **Homepage** button working correctly	Homepage button clicked	navigates to Homepage	Whitelabel error page
2.8.5	Is **Logout** button working correctly	Logout button clicked	navigates to Login page	Whitelabel error page

2.9 Add New Product-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.9.1	Is **Homepage** button working correctly	HomePage button clicked	Navigates to homepage	Whitelabel error page
2.9.2	Is **Logout** button working correctly	Logout button clicked	Navigates to Login page	Whitelabel error page
2.9.3	Is **Submit** button working correctly	Submit button clicked	Adds new product	Adds new product
2.9.4	Is **Increment** button working correctly	Increment button clicked	Increases value of field by 1	Increases value of field by 1
2.9.5	Is **Decrement** button working correctly	Decrement button clicked	Decreases value of field by 1	Decreases value of field by 1

2.10 Customers-Buttons

Test case no.	Purpose	Action	Expected Response	Actual Response
2.10.1	Is **Homepage** button working correctly	HomePage button clicked	Navigates to homepage	Whitelabel error page
2.10.2	Is **Logout** button working correctly	Logout button clicked	Navigates to Login page	Whitelabel error page