

Title: Online Auction System

BLACK BOX TESTING

Sign Up - Black Box Testing

Equivalent Class Partitioning:

- VC1: Username should be alphanumeric (valid).
- IVC1: Username is Empty / contains special characters (invalid).
- VC2: Full Name should be alphabetic (valid).
- IVC2: Full Name is Empty / contains non-alphabetic characters except spaces (invalid).
- VC3: Email should be in proper format (valid).
- IVC3: Email is empty or not in proper format (invalid).
- VC4: Password should be greater than or equal to 8 characters and less than or equal to 16 characters (valid).
- IVC4: Password is empty or less than 8 characters. (invalid).
- IVC5: Password is greater than 16 characters (invalid).
- VC5: Confirm password should match entered password (valid).
- IVC6: Confirm password is empty or not equal to entered password (invalid).
- VC6: Terms and conditions checkbox is checked (valid).

- IVC7: Terms and conditions checkbox is not checked (invalid).

Validity check:

ClassID	Input	Output
VC1	Username	Alphanumeric
VC2	Fullname	alphabetic
VC3	Email	Proper email format
VC4	Password	8 <= Password <= 16
VC5	Confirm Password	Matches Password
VC6	T&C Checkbox	Checked

Invalidity check:

ClassID	Input	Output
IVC1	Username	Empty / contains special characters
IVC2	Fullname	Empty / contains non-alphabetic characters
IVC3	Email	Invalid Email Format / Empty
IVC4	Password	Length < 8 / Empty
IVC5	Password	Length > 16
IVC6	Confirm Password	Does not match password / empty
IVC7	T&C Checkbox	Not checked

Boundary value analysis:

Username and Fullname:

- Boundary Case: Minimum valid length of 1 character.
- Invalid Boundary: Empty input.

Password:

- Valid Boundary: Password of exactly 9 characters and password of exactly 15 .
- Invalid Boundary: Password of 7 characters or password of 17 characters.

Confirm Password:

- Valid Boundary: Matches password.
- Invalid Boundary: One character mismatch.

Test Cases:

Test Case ID	Username	Fullname	Email	Password	Confirm Password	T&C	Desired Output	Displayed Output	Classes covered
TC1	userF18	Name F	user@example.com	userAccPassword	userAccPassword	Checked	Sign-Up Successful	Sign-Up Successful	VC1, VC2, VC3, VC4, VC5, VC6
TC2	userF@18	Name F	user@example.com	Pass1234	Pass1234	Checked	Enter valid username	Enter valid username	IVC1
TC3		Name F	user@example.com	Pass1234	Pass1234	Checked	Enter Username	Enter Username	IVC1

TC4	userF18		user@example.com	Pass1234	Pass1234	Checked	Enter Password	Enter Password	IVC2
TC5	userF18	Name F		Pass1234	Pass1234	Checked	Enter Email	Enter Email	IVC3
TC6	userF18	Name F	user.com	Pass1234	Pass1234	Checked	Enter valid Email	Enter valid Email	IVC3
TC7	userF	Name F	user@example.com	Pass12	Pass12	Checked	Enter longer password	Enter password longer than 8 chars.	IVC4
TC8	userF	Name F	user@exe.com	UserPassword12345	UserPassword12345	Checked	Enter password less than 16 chars.	Enter password less than 16 chars.	IVC5
TC9	userF	Name F	user@example.com	Pass12345	Pass1234	Checked	Password not matched	Password not matched	IVC6
TC10	userF	Name F	user@example.com	Pass1234	Pass1234	Not checked	T&C Not Checked	T&C Not Checked	IVC7
TC11	userF	Name F	user@example.com		Pass1234	Checked	Enter Password	Enter Password	IVC4
TC12	userF	Name F	user@example.com			Checked	Enter Password	Enter Password	IVC4
TC13	userF1	Name F	user@example.com	Pass1234		Checked	Enter confirm Password	Enter confirm Password	IVC6

Login - Black Box Testing

Equivalent Class Partitioning:

- VC1: Email should have a valid format (valid).
- IVC1: Email is empty or not in a valid format (invalid).
- VC2: Password is of 8 or more characters (valid).
- IVC2: Password is empty or less than 8 characters (invalid).

Validity check:

ClassID	Input	Output
VC1	Email	Valid Email Format
VC2	Password	Length > 7

Invalidity check:

ClassID	Input	Output
IVC1	Email	Invalid Email Format / Empty
IVC2	Password	Length < 8 / Empty

Equivalent Classes:

ClassID	Email	Password	Desired Output
EC1	Invalid	Invalid	Invalid
EC2	Invalid	Valid	Invalid
EC3	Valid	Invalid	Invalid
EC4	Valid	Valid	Valid

Boundary value analysis:

Password length ≥ 8
Test for 7 and 9 too.

ClassID	Email	Password	Desired Output	Boundary Condition
BVA1	a@b.com	Pass123	Invalid	Invalid Boundary
BVA2	a@b.com	Pass12345	Valid	Valid Boundary

Test Cases:

Test Case ID	Email	Password	Desired Output	Displayed Output	Classes covered
TC1	abc@something.com	Password123	Login Successful	Login Successful	VC1, VC2
TC2	abc.com	Password123	Enter valid email	Enter valid email	IVC1
TC3		Password123	Enter valid email	Enter valid email	IVC1
TC4	abc@something.com	Pass	Enter valid password	Enter valid password	IVC2
TC5	abc@something.com		Enter valid password	Enter valid password	IVC2

TC6	abc.com	Pass	Enter valid email and password	Enter valid email and password	IVC1, IVC2
TC7	Ab c@.com		Enter valid email and password	Enter valid email and password	IVC1, IVC2
TC8			Enter valid email and password	Enter valid email and password	IVC1, IVC2

Add Products - Black Box Testing

Equivalent Class Partitioning:

- VC1: Product name is a non-empty string with any characters (valid).
- IVC1: Product name is an empty string (invalid).
- VC2: Product Description is a non-empty string with any characters (valid).
- IVC2: Product Description is an empty string (invalid).
- VC3: Reserve Price is greater than 0 (valid).
- IVC3: Reserve Price is less than or equal to 0 OR empty (invalid).
- VC4: Dimensions is a non-empty string (valid).
- IVC4: Dimensions is an empty string (invalid).

- VC5: Weight is greater than 0 (valid).
- IVC5: Weight is less than or equal to 0 OR empty (invalid).
- VC6: Year of Manufacture is a Positive integer greater than 0(valid).
- IVC6: Year of Manufacture is a 0, negative integer OR empty (invalid).
- VC7: Manufacturer is a non-empty string (valid).
- IVC7: Manufacturer is an empty string (invalid).
- VC8: Category is any from the list provided (valid).
- IVC8: Category is Empty value OR value not in the list.
- VC9: Subcategory is a non-empty string (valid).
- IVC9: Subcategory is an empty string (invalid).
- VC10: One image uploaded.
- IVC10: No image uploaded.
- VC11: At least one Certification PDF file uploaded.
- IVC11: No Certification PDF file uploaded.

Validity check:

ClassID	Input	Output
VC1	Product Name	Non-empty string with any characters
VC2	Product Description	Non-empty string with any characters

VC3	Reserve Price	Greater than 0
VC4	Dimensions	Non-empty string
VC5	Weight	Greater than 0
VC6	Year of Manufacture	Positive integer greater than 0
VC7	Manufacturer	Non-empty string
VC8	Category	Value from provided list
VC9	Subcategory	Non-empty string
VC10	Image	One image uploaded
VC11	Certification PDF	One certification PDF uploaded

Invalidity check:

ClassID	Input	Output
IVC1	Product Name	Empty string
IVC2	Product Description	Empty string
IVC3	Reserve Price	Less than or equal to 0 OR empty
IVC4	Dimensions	Empty string
IVC5	Weight	Less than or equal to 0 OR empty
IVC6	Year of Manufacture	0, negative integer, OR empty
IVC7	Manufacturer	Empty string
IVC8	Category	Empty OR value not in the list
IVC9	Subcategory	Empty string
IVC10	Image	No image uploaded
IVC11	Certification PDF	No certification PDF uploaded

Test Cases:

Input : Product Name, Product Description, Reserve Price, Dimensions, Weight, Year of Manufacture, Manufacturer, Category, Subcategory, Images, Certifications.

Test Case ID	Input	Expected Output	Displayed Output	Classes Covered
TC1	"Product", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Product added successfully.	Product added successfully.	VC1, VC2, VC3, VC4, VC5, VC6, VC7, VC8, VC9, VC10, VC11
TC2	"", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Product name cannot be empty.	Product name cannot be empty.	IVC1
TC3	"Product", "", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Product description cannot be empty.	Product description cannot be empty.	IVC2
TC4	"Product", "Description", 0, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Reserve price must be greater than 0.	Reserve price must be greater than 0.	IVC3
TC5	"Product", "Description", 100, "", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Dimensions cannot be empty.	Dimensions cannot be empty.	IVC4
TC6	"Product", "Description", 100, "10x10x10", 0, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Weight must be greater than 0.	Weight must be greater than 0.	IVC5
TC7	"Product", "Description", 100, "10x10x10", 5, -2020, "Manufacturer A", "Electronics", "Mobile", 1, 1	Year of manufacture must be a positive integer.	Year of manufacture must be a positive integer.	IVC6
TC8	"Product", "Description", 100, "10x10x10", 5, 2020, "", "Electronics", "Mobile", 1, 1	Manufacturer cannot be empty.	Manufacturer cannot be empty.	IVC7

TC9	"Product", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "", "Mobile", 1, 1	Category cannot be empty.	Category cannot be empty.	IVC8
TC10	"Product", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "", 1, 1	Subcategory cannot be empty.	Subcategory cannot be empty.	IVC9
TC11	"Product", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 0, 1	At least one image must be uploaded.	At least one image must be uploaded.	IVC10
TC12	"Product", "Description", 100, "10x10x10", 5, 2020, "Manufacturer A", "Electronics", "Mobile", 1, 0	At least one certification PDF must be uploaded.	At least one certification PDF must be uploaded.	IVC11

Forgot Password - Black Box Testing

Equivalent Class Partitioning (ECP)

- **VC1:** Email exists in the database (valid).
- **IVC1:** Email is empty or does not exist in the database (invalid).
- **VC2:** OTP is a valid 4-digit number (valid).
- **IVC2:** OTP is empty, not 4 digits, or incorrect (invalid).
- **VC3:** New password and confirm password match and meet length criteria (valid).
- **IVC3:** New password and confirm password do not match (invalid).
- **VC4:** Password is between 8 and 16 characters (valid).
- **IVC4:** Password is empty, less than 8 characters, or greater than 16 characters (invalid).

Boundary Value Analysis :

Email Address:

- Boundary Case: Valid email address format (e.g., [user@example.com](#)).
- Invalid Boundary: Empty input or improper format (e.g., [user.com](#)).

OTP:

- Valid Boundary: OTP of exactly 4 digits (e.g., [1234](#)).
- Invalid Boundary: OTP of less than 4 digits (e.g., [123](#)) or more than 4 digits (e.g., [12345](#)).

Password:

- Valid Boundary: Password of exactly 8 characters and password of exactly 16 characters.
- Invalid Boundary: Password of less than 8 characters (e.g., **Pass7**) or more than 16 characters (e.g., **LongPassword123456**).

Confirm Password:

- Valid Boundary: Matches the new password exactly.
- Invalid Boundary: Does not match new password (e.g., one character mismatch like **Password123** and **Password124**).

Test Case ID	Input Scenario	Expected Output	Classes Covered
TC1	Enter a valid email (user@example.com)	OTP sent successfully	VC1
TC2	Enter an invalid email (user.com)	Error: "Please enter a valid email address"	IVC1
TC3	Leave email field empty	Error: "Please enter a valid email address"	IVC1
TC4	Enter correct 4-digit OTP (1234)	Open Change Password popup	VC2
TC5	Enter incorrect OTP (1111)	Error: "Please enter a valid 4-digit OTP"	IVC2
TC6	Enter OTP with non-numeric characters (12a4)	Error: "Please enter a valid 4-digit OTP"	IVC2
TC7	Leave OTP field empty	Error: "Please enter a valid 4-digit OTP"	IVC2

TC8	Enter matching passwords (Password123 and Password123)	Password changed successfully	VC3, VC4
TC9	Enter non-matching passwords (Password123 and Password456)	Error: "Both Password Does Not Match"	IVC3
TC10	Enter a password less than 8 characters (Pass7)	Error: Invalid password length	IVC4
TC11	Enter a password more than 16 characters (ThisIsVeryLongPassword123)	Error: Invalid password length	IVC4