

IT-314 Software Engineering

System/Black Box Testing

Group 25

GenScholar-Collaborative Research Paper Explorer

1 Login Page

1.1 Username

Equivalence Classes (Valid)

- Username with ≥ 3 characters.
- Only alphabets, digits, and underscores.
- Username exists in database.

Equivalence Classes (Invalid)

- Username not found in DB.
- Less than 3 characters.
- Username containing spaces.
- Username with special characters other than underscore.

Test Cases

TC ID	Input Username	Expected Result	Equivalence Class
1	Vedant123	Accepted	Valid: 3 chars, valid characters, exists in DB
2	ve	Rejected	Invalid: < 3 chars
3	“ vedant”	Rejected	Invalid: leading space
4	“veda nt”	Rejected	Invalid: space in middle
5	“vedant ”	Rejected	Invalid: trailing space
6	veda@nt	Rejected	Invalid: special character
7	xyz123	Rejected	Username not found

1.2 Boundary Value Analysis (Username)

Valid

- Exactly 3 characters.
- Contains digits 0 and 9.
- Contains A and Z.
- Contains a and z.
- Only underscores.

Invalid

- Exactly 2 characters.
- Empty username.
- Leading / trailing space.
- Contains ASCII-before or ASCII-after boundary characters.

Boundary Test Cases

TC ID	Input	Expected Result	Boundary Covered
BVA01	abc	Accepted	Minimum valid length
BVA02	0a9	Accepted	Lowest and highest digits
BVA03	A_Z	Accepted	Uppercase boundary
BVA04	a_z	Accepted	Lowercase boundary
BVA05	---	Accepted	Underscore only
BVA06	ab	Rejected	Length 2
BVA07	""	Rejected	Empty input
BVA08	" abc"	Rejected	Leading space
BVA09	"abc "	Rejected	Trailing space
BVA10	"/ab"	Rejected	ASCII before 0
BVA11	"9:9"	Rejected	ASCII after 9
BVA12	"@abc"	Rejected	ASCII before A
BVA13	"Z[a"	Rejected	ASCII after Z

2 Password

Valid Classes

- 8 characters with upper, lower, digit, special character.
- Must not match/contain/reverse username.

Invalid Classes

- Less than 8 characters.
- Missing uppercase, lowercase, digit or special char.
- Contains username or reversed username.

Test Cases

TC ID	Password	Expected Result	Covered Class
VP01	Vedant@123	Accepted	Meets all rules
VP02	Abc@1234	Accepted	Strong password
VP03	Zx9!pqwe	Accepted	Valid password
VP04	V3d@Nt45	Accepted	Does not contain username
IP01	Ab1@cd	Rejected	↓ 8 chars
IP02	password123@	Rejected	No uppercase
IP03	PASSWORD123@	Rejected	No lowercase
IP04	Password@	Rejected	No digit
IP05	Password123	Rejected	No special char
IP06	vedant@123	Rejected	Contains username
IP07	123antdev@	Rejected	Contains reverse username
IP08	myvedpass@1	Rejected	Contains username substring

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Invalid credentials

Email or username

Password

[Forgot password?](#)

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Invalid credentials

Email or username

Email or username is required

Password

[Forgot password?](#)

[Login](#)

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Login

Create Account

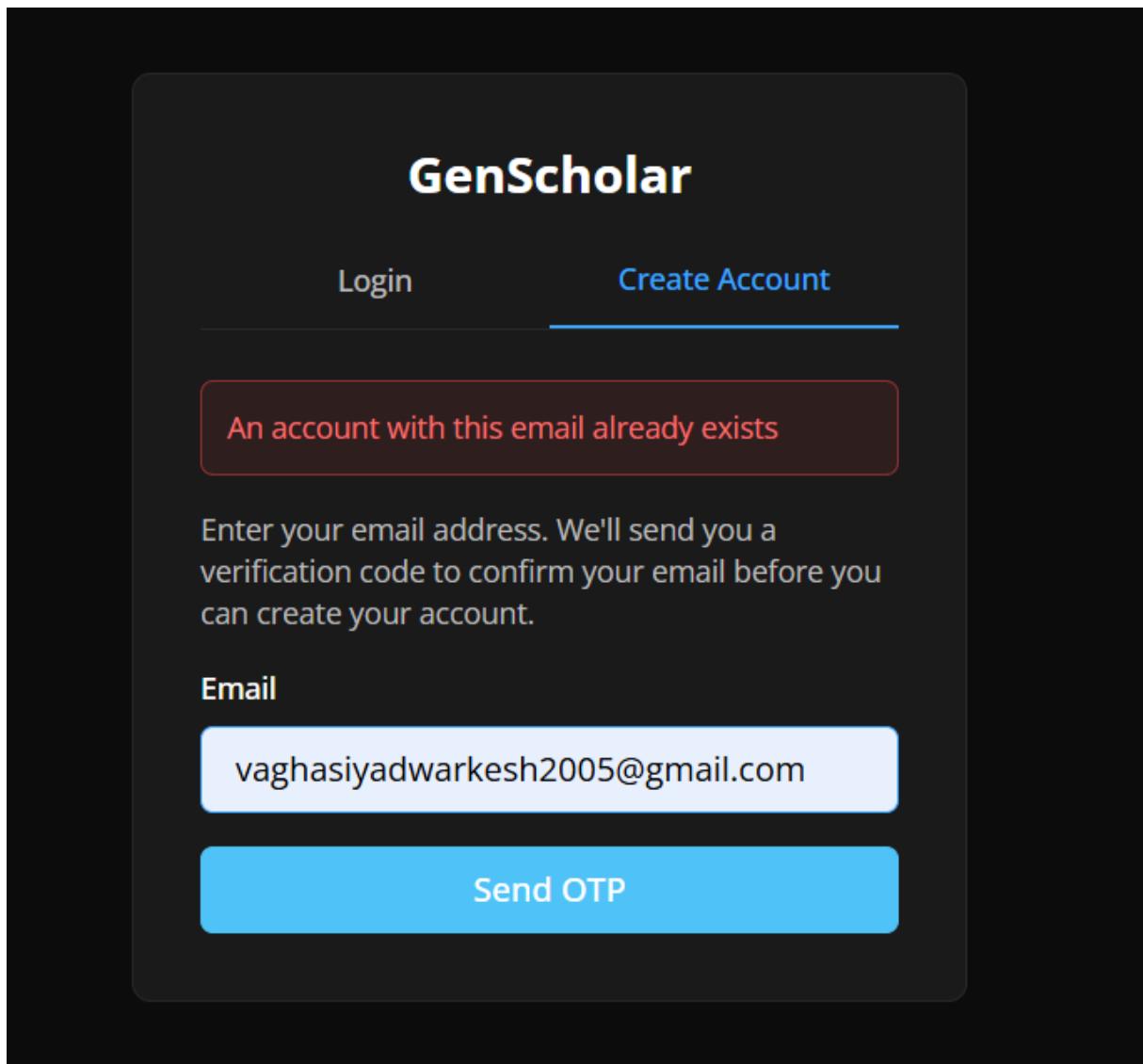
Invalid email address

Enter your email address. We'll send you a verification code to confirm your email before you can create your account.

Email

arav@gmail.com

Send OTP



3 OTP – Signup Page

Valid

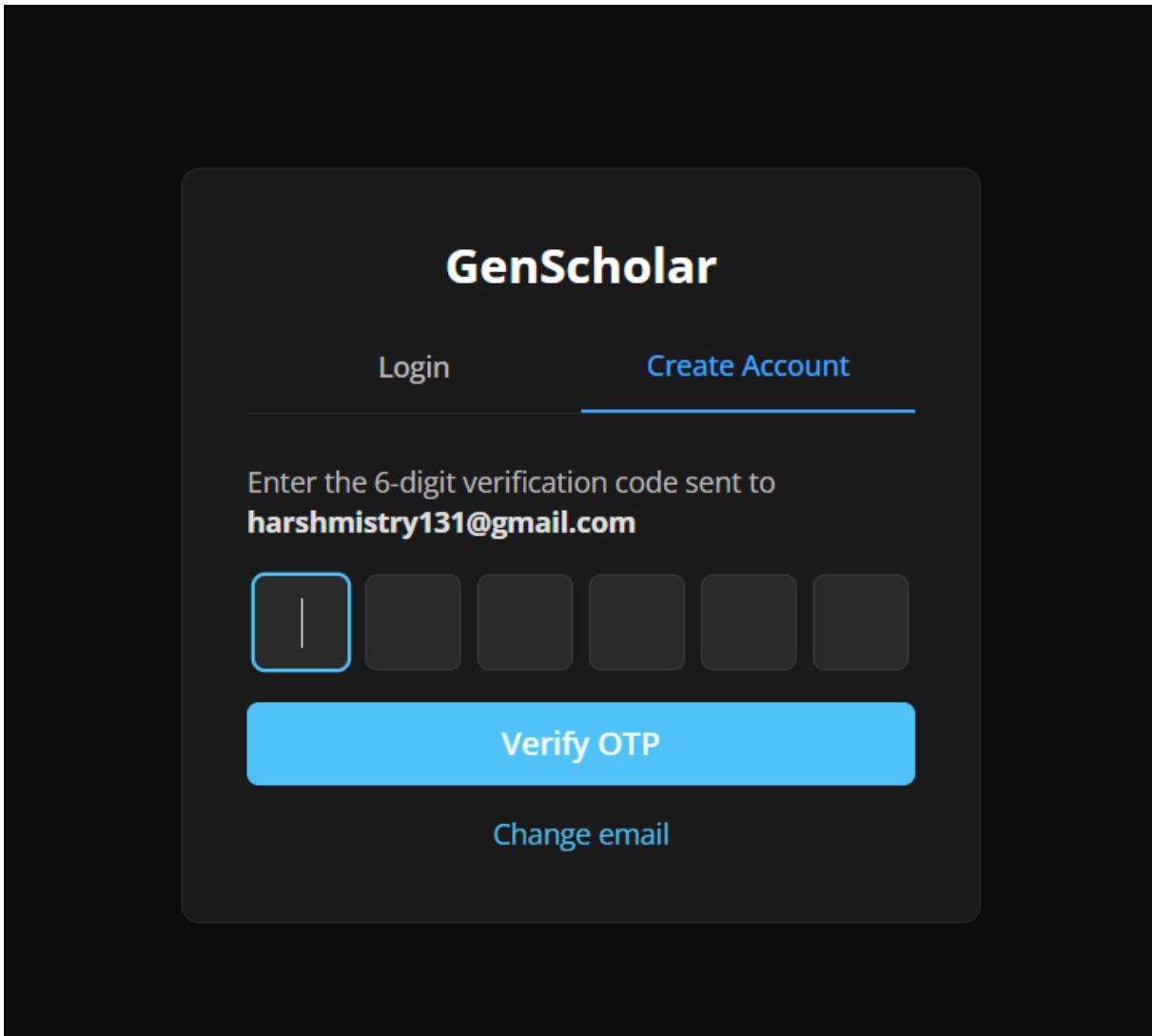
- Correct 6-digit numeric OTP.
- Entered within 10 minutes.

Invalid

- Wrong OTP.
- OTP with alphabets/special chars.
- After 10 minutes.

OTP Test Cases

TC ID	Input OTP	Time	Expected Result	Covered Class
VOTP01	482915	2 min	Accepted	Exact 6-digit OTP
VOTP02	482915	0 min	Accepted	Immediate use
VOTP03	482915	5 min	Accepted	Valid window
IOTP01	192837	2 min	Rejected	Wrong OTP
IOTP02	48A915	1 min	Rejected	Alphabet
IOTP03	48@915	1 min	Rejected	Special character
IOTP04	48 915	1 min	Rejected	Space
IOTP05	482915	10:01	Rejected	Exceeded time
IOTP06	482915	15 min	Rejected	Expired



4 Dashboard: Search Workspace

Valid

- Partial word/substring search.
- Case-insensitive search.
- Empty search shows all workspaces.

Invalid

- Keyword not found.
- Search with spaces.

(Include tables as needed.)

Workspaces

abc

Abcd

:

Created 29/11/2025

Workspaces

No workspaces found

5 Create Workspace

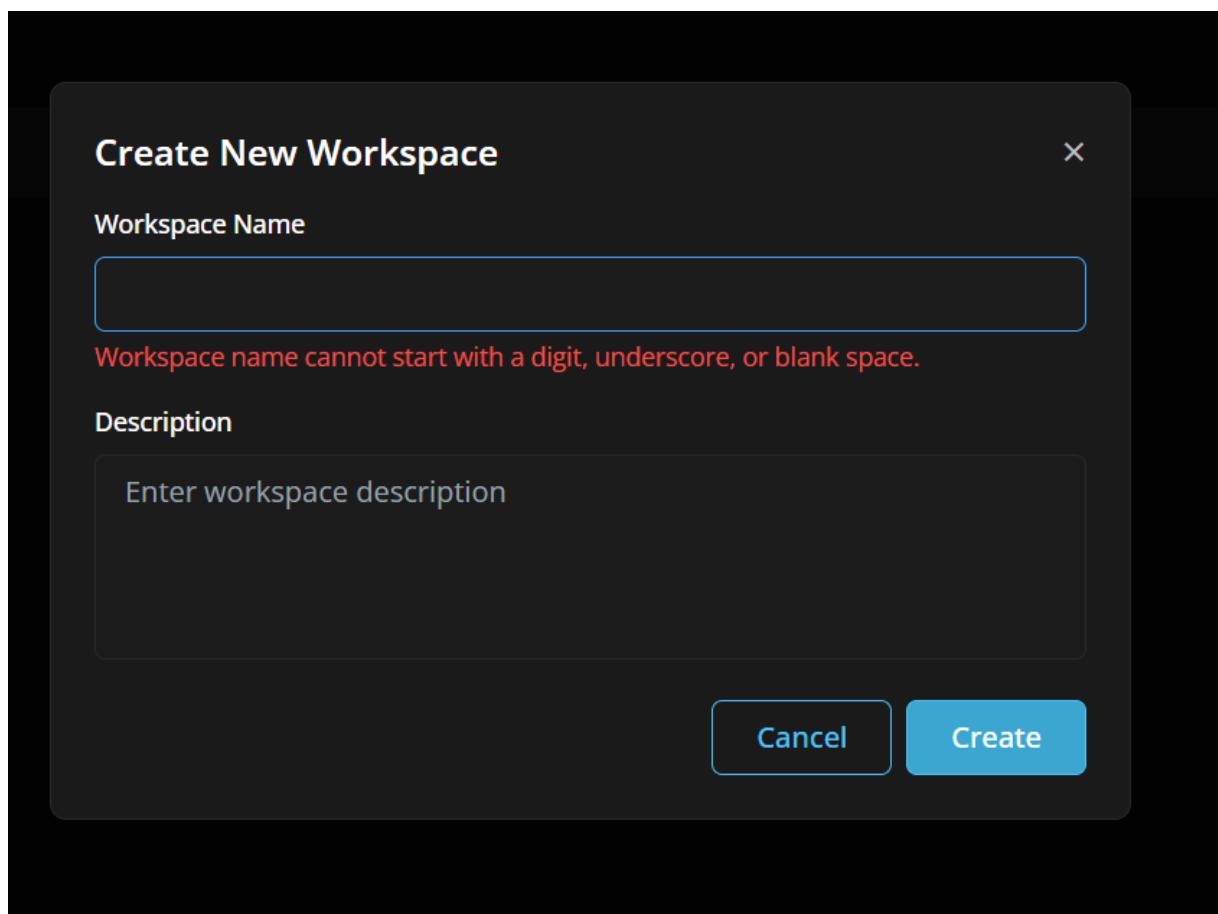
Valid

- Researcher can create workspace.
- Unique alphanumeric title.
- Description optional.
- Title cannot start with digit/underscore/space.

Invalid

- Blank title.
- Duplicate title (bug).
- Title exceeding DB limit.

(Include boundary tables.)



6 Workspace Features

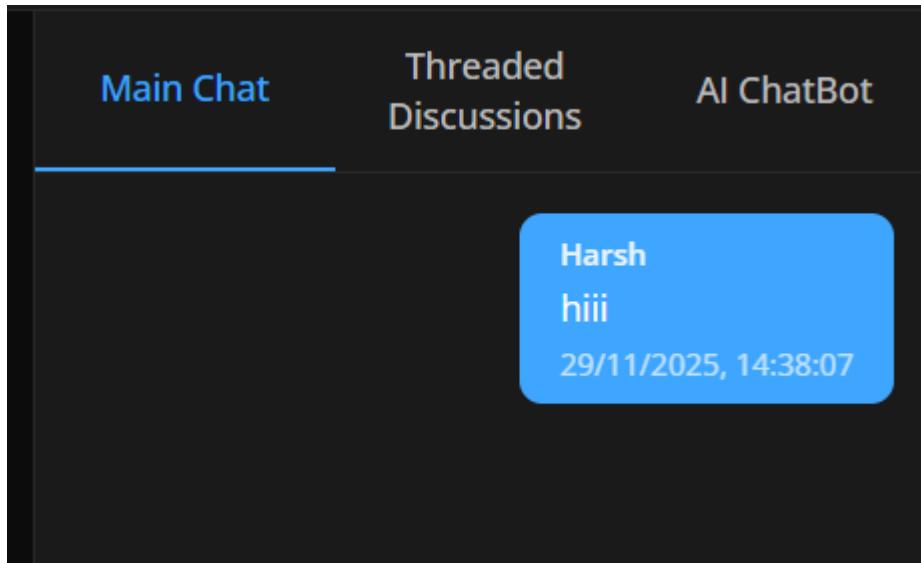
6.1 Upload PDF

Valid: PDF extension, displayed after upload. Invalid: Non-PDF, upload failure.



6.2 Main Chat

Valid: Any text/symbols. Invalid: Empty message, only spaces.



6.3 Invite User

Valid: Researcher invites valid user. Invalid: Invalid username, duplicate pending invite, reviewer assigns roles.

Invite User

User already a member

Harsh

Role

Researcher

Invite

Invite User

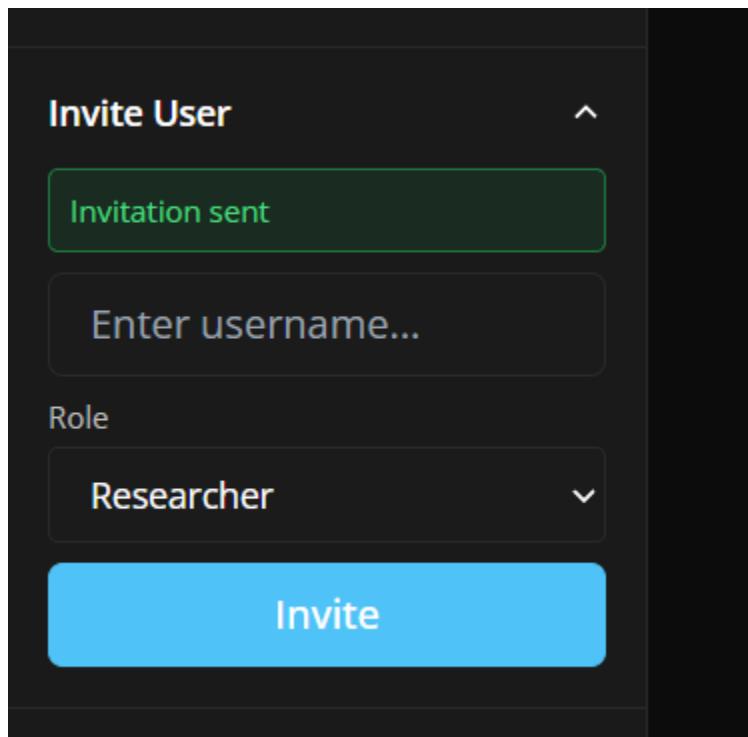
User not found

a

Role

Researcher

Invite



Bugs in my website:

- Multiple workspaces with the same name can be created.
- Same pdfs can be opened multiple times in a workspace.