PROJECT: EXPENSIFY

IT314 – SOFTWARE ENGINEERING

GROUP 26

TASK : SYSTEM TESTING

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BlackBox Testing

1. Signup test:

Username constraints:

Username must contain one non-number character

Email constraints:

Should contain '@' sign with character before and after.

Should not already be registered.

Should not have empty character

Password constraints:

Your password must contain 8 or more characters.

Equivalence class partitioning:

Note: Each attribute of the equivalence table which satisfies their constraints is considered as the valid input otherwise it will be considered as invalid input.

Equivalence class	Username	E-mail	Password	Result
E1	valid	valid	valid	success
E2	valid	invalid	valid	error
E3	valid	valid	invalid	error
E4	valid	invalid	invalid	error
E5	invalid	valid	valid	error
E6	invalid	invalid	valid	error
E7	invalid	valid	invalid	error
E8	Invalid	invalid	invalid	error

Boundary Value Analysis:

Username	E-mail	Password	Expected Output	Actual Output	Reason
Antony123	abd@	Abcd@123	fail	fail	Email constraint
Antony123	@gmail.com	Abcd@123	fail	fail	Email constraint
123456	abcd@gmail.com	Abcd@123	fail	fail	Username Constraint
Antony123	abcd@gmail.com	abcd@12	fail	fail	Password constraint
Antony123	abce@gmail.com	Abcd@123	success	success	E-mail Should not be used before

2. Login Test:

Email constraint:
　　　Required field (cannot be empty) , already registered.
Password constraint:
　　　Required field (cannot be empty) (not checking for another constraints as it is already stored in database)

Equivalence class partitioning:
Note: Each attribute of the equivalence table which satisfies their constraints is considered as the valid input otherwise it will be considered as invalid input.

Equivalence class	Username or Email	Password	Result
E1	valid	valid	success
E2	invalid	Valid	error
E3	valid	invalid	error
E8	invalid	invalid	error

Boundary Value Analysis:

E-mail	Password	Expected Output	Actual Output	Reason
a@	Abcd@123	fail	fail	Email constraint
@gmail.com	Abcd@123	fail	fail	Email constraint
abc@gmail.com	abcd@123	fail	fail	Password constraint
abc@gmail.com	Abcd@123	success	fail	If E-mail Is not registered
abc@gmail.com	Abcd@123	success	success	If E-mail Is registered

BLACKBOX TESTING

1) **Create or Update Budget :**
   - **Budget Name :**
     - Budget Name cannot be empty
   - **Budget Amount :**
     - Budget Amount cannot be empty
     - Budget Amount does not contain any space
     - Budget amount has only numerical value

   ➢ **Equivalence class :**

Equivalence class	Name	Amount	Result
E1	valid	valid	success
E2	invalid	valid	error
E3	valid	invalid	error
E4	invalid	valid	error

   ➢ **Boundary value analysis :**

Budget Name	Budget Amount	Expected Output	Actual Output	Reason for Outcome
--	1000	Fail	Error : Button is locked	Name Constraint
ABC	--	Fail	Error : Button is locked	Amount Constraint
XYZ	ABC	Fail	Error : Button is locked	Amount Constraint
ABC	50 00	Fail	Error : Button is locked	Amount Constraint
ABY	5678	Pass	Pass	Success

2) Add New Expense :

- **Expense Name :**
  - Expense Name cannot be empty

- **Expense Amount :**
  - Expense Amount cannot be empty
  - Expense Amount does not contain any space
  - Expense Amount has only numerical value

➢ Equivalence class :

Equivalence class	Name	Amount	Result
E1	valid	valid	success
E2	invalid	valid	error
E3	valid	invalid	error
E4	invalid	invalid	error

➢ Boundary value analysis :

Expense Name	Expense Amount	Expect Output	Actual Output	Reason for Outcome
--	1000	Fail	Error : Button is locked	Name Constraint
ABC	--	Fail	Error : Button is locked	Amount Constraint
ABC	XYZ	Fail	Error : Button is locked	Amount Constraint
ABC	50 00	Fail	Error : Button is locked	Amount constraint
ABC	5678	Pass	Pass	Success

3) Download :

- **Start date :**
  - Start date must be chosen
  - Start date must be less or Equal to End date
- **End date :**
  - End date must be chosen

➢ **Equivalence class :**

Equivalence class	Name	Amount	Result
E1	valid	valid	success
E2	invalid	valid	error
E3	valid	invalid	error
E4	invalid	invalid	error

➢ **Boundary value analysis :**

Start Date	End Date	Expect Output	Actual Output	Reason for Outcome
--	--	Fail	Error : Please select both dates	Did not choose both
2-12-2024	--	Fail	Error : Please select both dates	Did not choose both
--	2-12-2024	Fail	Error : Please select both dates	Did not choose both
2-12-2024	1-12-2024	Fail	Error : StartDate <= Enddate	Date Constraint
1-12-2024	2-12-2024	Pass	Pass	Success

BLACKBOX TESTING

Manage Your Account :

i)Profile

CONSTRAINTS

Image:
- Image size must be less than 10MB for valid.

Username:
- Username must be between 4 and 64 characters long.
- Username must contain one non-number character.
- Username can only contain letters, numbers and '_' or '-'.
- Username can't contain space ( ) between any letters, numbers, '_' or '-'.

Email addresses:
- Remove the Connected Account before deleting primary email address.
- Primary address can't be removed.
- Any other added email must have valid email id.
- Added other email can be verified by inserting verification code sent on that email.
- Added other email can be set as primary email address after verifying it.

Phone numbers:
- We can add new phone number but it must be valid and not same as primary phone number or used by other users.
- Phone number must contain 10 digits.
- Added Phone number can be verified by inserting verification code sent on that phone number.
- Added Phone number can be set as primary phone number after verifying it.

Equivalence Class:

Equivalence class	Image(Size)	Username	Email addresses	Phone number	Result
E1	valid	valid	valid	valid	success
E2	invalid	valid	valid	invalid	error
E3	valid	invalid	valid	valid	error
E4	valid	valid	invalid	invalid	error
E5	valid	invalid	invalid	valid	error
E6	invalid	valid	invalid	invalid	error
E7	invalid	invalid	valid	valid	error
E8	invalid	invalid	invalid	invalid	error

Boundary value analysis:

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
0	student	Valid primary email (Ex. student@daiict.ac.in)	9876543210	Success	Success	Lower boundary for image size; valid inputs for username, email, and phone number.
10	student	Valid secondary email, verified	9876543210	Success	Success	Upper boundary for image size. Inputs meet all other constraints.
10.1	student	Valid secondary email, not verified	9876543210	Failure (Image too large)	Error: "Image can't be updated"	Image size exceeds the upper limit.
5	abc	Valid primary email, unverified secondary email	9876543210	Failure (Username too short)	Error: (Username must be between 4 and 64 characters long.)	Username violates the minimum length constraint.
5	thisusernameis64charslongexactly_____1234567890_9876543210	Valid primary email	9876543210	Success	Success	Upper boundary for username length.

5	thisusernameis65charslongexactly_____1234567890_98765432101	Valid primary email	9876543210	Failure (Username too long)	Error: "Username must be between 4 and 64 characters long".	Username exceeds the maximum length constraint.
5	1234	Valid primary email, unverified secondary email	1234567890	Failure (Username lacks non-numeric char)	Error: "Username must contain one non-number character".	Username violates the non-numeric character constraint.
5	abc def	Valid primary email	1234567890	Failure (Space in username)	Error: "Username can only contain letters, numbers and '_' or '-'. "	Username contains invalid spaces.
5	student	Invalid secondary email	1234567890	Failure (Invalid email address)	Error: "Please match the requested format"	Email does not meet validity checks.
5	student	Valid primary email, secondary unverified	1234567890	Failure (Unverified secondary email)	Error: "It shows email is unverified."	Secondary email must be verified before being used.
5	student	Valid primary email	9106050800	Failure (Phone number already primary)	Error: "This phone number is taken. Please try another."	Secondary phone number cannot match the primary phone number.
5	student	Valid primary email	9426023787	Failure (Phone number used by another user)	Error: "This phone number is taken. Please try another."	Phone number violates the uniqueness constraint.
5	student	Valid primary email	123456789	Failure (Phone number too short)	Error: "Phone number must be a valid phone number."	Phone number violates the minimum length constraint.
5	student	Valid primary email, unverified secondary email	12345678901	Failure (Phone number too long)	Error: "Phone number must be a valid phone number."	Phone number violates the maximum length constraint.

5	student	Valid primary and secondary email	9876543210	Success	Success	All inputs meet constraints.

Acceptance Testing

1)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	abc	Valid primary email, unverified secondary email	9876543210	Failure (Username too short)	Error: (Username must be between 4 and 64 characters long.)	Username violates the minimum length constraint.

2)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	thisusernameis64charslongexactly_____1234567890_9876543210	Valid primary address	9876543210	Success	Success	Upper boundary for username length.

3)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	thisusernameis65charslongexactly_____1234567890_98765432101	Valid primary email	9876543210	Failure (Username too long)	Error: "Username must be between 4 and 64 characters long".	Username exceeds the maximum length constraint.

4)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	1234	Valid primary email, unverified secondary email	1234567890	Failure (Username lacks non-numeric char)	Error: "Username must contain one non-number character".	Username violates the non-numeric character constraint.

5)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	abc def	Valid primary email	1234567890	Failure (Space in username)	Error: "Username can only contain letters, numbers and '_' or '-'."	Username contains invalid spaces.

6)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Invalid secondary email	1234567890	Failure (Invalid email address)	Error: "Please match the requested format"	Email does not meet validity checks.

7)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary email, secondary email unverified	1234567890	Failure (Unverified secondary email)	Error: "It shows email is unverified."	Secondary email must be verified before being used.

8)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary email	9106050800	Failure (Phone number already primary)	Error: "This phone number is taken. Please try another."	Secondary phone number cannot match the primary phone number.

9)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary email	9426023787	Failure (Phone number used by another user)	Error: "This phone number is taken. Please try another."	Phone number violates the uniqueness constraint.

Account

Manage your account info.

- 👤 Profile
- 🛡 Security

Profile — student daiict — Update profile

Username — student — Update username

Email addresses — aadpatel1@gmail.com [Primary] · · ·

+ Add email address

Phone numbers — +91 91060-50800 [Primary] · · ·

Add phone number

A text message containing a verification code will be sent to this phone number. Message and data rates may apply.

Phone number

IN ⇕ +91 94260-23787

❗ This phone number is taken. Please try another.

Cancel   Add

Connected accounts — G Google · aadpatel1@gmail.com · · ·

+ Connect account

Secured by 🔴 clerk

Development mode

10)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary email	123456789	Failure (Phone number too short)	Error: "Phone number must be a valid phone number."	Phone number violates the minimum length constraint.

Account

Manage your account info.

- 👤 Profile
- 🛡 Security

Profile   student daiict   Update profile

Username   student   Update username

Email addresses   aadpatel1@gmail.com [Primary]   · · ·

    +   Add email address

Phone numbers   +91 91060-50800 [Primary]   · · ·

Add phone number

A text message containing a verification code will be sent to this phone number. Message and data rates may apply.

Phone number

IN ◇   +91 12345-6789

❗ `phone_number` must be a `phone_number`.

Cancel   **Add**

Connected accounts   G   Google · aadpatel1@gmail.com   · · ·

    +   Connect account

Secured by 🔒 clerk

Development mode

11)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary email, unverified secondary email	12345678901	Failure (Phone number too long)	Error: "Phone number must be a valid phone number."	Phone number violates the maximum length constraint.

12)

Upload Image Size(in MB)	Username	email addresses	phone number	Expected Output	Actual Output	Reason for Outcome
5	student	Valid primary and secondary email	9876543210	Success	Success	All inputs meet constraints.

Account

Manage your account info.

- 👤 Profile
- 🛡 Security

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Development mode

Profile details   ✕

Profile	👤 student daiict	Update profile

Username	student	Update username

Email addresses
aadpatel1@gmail.com [Primary]   · · ·
202201452@daiict.ac.in   · · ·
+ Add email address

Phone numbers
+91 91060-50800 [Primary]   · · ·
+ Add phone number

Connected accounts
G Google · aadpatel1@gmail.com   · · ·
+ Connect account

Acceptance Testing

1. SIGN UP:

Test: 1

Username: Antony@123

Email: abd@

password: Abcd@123

Output: Invalid

Create your account

Welcome! Please fill in the details to get started.

or

First name Optional   Last name Optional

Manav   Parekh

Username

Antony123

Email address

abd@

Phor   ⚠ Please match the requested format.

IN ⇕ +91 88665-13413

Password

••••••••   👁

✅ Your password meets all the necessary requirements.

Continue ▶

Already have an account? Sign in

Secured by ⓒ clerk

Test: 2
Username: Antony@123
Email: @gmail.com
password: Abcd@123
Output: Invalid

Create your account

Welcome! Please fill in the details to get started.

or

First name   Optional   Last name   Optional

Manav   Parekh

Username

Antony123

Email address

@gmail.com

⊗ Email address must be a valid email address.

Phone number

IN ⇕   +91 88665-13413

Password

•••••••••   👁

✓ Your password meets all the necessary
requirements.

Continue ▸

Test: 3
Username: 123456
Email: abcd@gmail.com
password: Abcd@123
Output: Invalid

Create your account

Welcome! Please fill in the details to get started.

		G	

or

First name	Optional	Last name	Optional
Manav		Parekh	

Username

123456

⛔ Username must contain one non-number character.

Email address

abcd@gmail.com

Phone number

IN ⇕   +91 88665-13413

Password

••••••••••••••••••••••••   👁

Continue ▶

Test: 4
Username: 123456
 Email: abcd@gmail.com
 password: Abcd@123
 Output: Invalid

Create your account

Welcome! Please fill in the details to get started.

[Apple]   [Facebook]   [Google]   [Microsoft]

or

First name   Optional   Last name   Optional

Manav   Parekh

Username

Antony123

Email address

abcd@gmail.com

Phone number

IN ⇕   +91 88665-13413

Password

••••••••   👁

🛑 This password has been found as part of a breach
and can not be used, please try another password
instead.

Continue ▶

Test: 5
Username: antony123
 Email: abcd@gmail.com
 password: Abcd@123
 Output: valid

Create your account

Welcome! Please fill in the details to get started.

or

First name   Optional   Last name   Optional

Manav   Parekh

Username

antony123

Email address

abcd@gmail.com

Phone number

IN   +91 88665-13413

Password

••••••••••••••••••••••

Your password meets all the necessary requirements.

Continue ▶

2. LOG IN

Test: 1
Email: abcd@gmail.com
password: Abcd@123
Output: invalid

Sign in to ExpenseTracker>

Welcome back! Please sign in to continue

or

Email address or username   Use phone

a@

⚠ Identifier is invalid.

Continue ▶

Don't have an account? Sign up

Secured by ⓒ clerk

Development mode

Test: 2
Email: @gmail.com
password: Abcd@123
Output: invalid

Sign in to ExpenseTracker>

Welcome back! Please sign in to continue

or

Email address or username   Use phone

@gmail.com

🛑 Identifier is invalid.

Continue ▶

Don't have an account? Sign up

Secured by 🔒 clerk

Development mode

Test: 3
Email: ambitiousstudy247@gmail.com (valid)
password: Abcd@123
 Output: invalid

Enter your password

Enter the password associated with your account

ambitiousstudy247@gmail.com ✎

Password   Forgot password?

••••••••   ◉

❗ Password is incorrect. Try again, or use another
method.

Continue ▶

Use another method

Secured by ⓒ clerk

Development mode

Test: 4
Email: manavparekh296@gmail.com (invalid)
password: Abcd@123
Output: invalid

Sign in to ExpenseTracker>

Welcome back! Please sign in to continue

or

Email address or username   Use phone

manavparekh296@gmail.com

⛔ Couldn't find your account.

Continue ▶

Don't have an account? Sign up

Secured by ⬤ clerk

Development mode

ACCEPTENCE TESTING

I.   Create or Update Budget :

1)

Budget Name	Budget Amount	Expect Output	Actual Output	Reason for Outcome
--	6000	Fail	Error : Button is locked	Name Constraint

2)

Budget Name	Budget Amount	Expect Output	Actual Output	Reason for Outcome
ABC	---	Fail	Error : Button is locked	Amount Constraint

3)

Budget Name	Budget Amount	Expect Output	Actual Output	Reason for Outcome
ABC	8765	Pass	Pass	Success

II.   Add New Expense :

1)

Expense Name	Expense Amount	Expect Output	Actual Output	Reason for Outcome
--	1000	Fail	Error : Button is locked	Name Constraint

2)

Expense Name	Expense Amount	Expect Output	Actual Output	Reason for Outcome
XYZ	--	Fail	Error : Button is locked	Amount Constraint

3)

Expense Name	Expense Amount	Expect Output	Actual Output	Reason for Outcome
XYZ	1000	Pass	Pass	Success

III.   DOWNLOAD REPORT

1)

Start Date	End Date	Expect Output	Actual Output	Reason for Outcome
2-12-2024	1-12-2024	Fail	Error : StartDate <= Enddate	Date Constraint

2)

Start Date	End Date	Expect Output	Actual Output	Reason for Outcome
2-12-2024	--	Fail	Error : Please select both dates	Did not choose both

3)

Start Date	End Date	Expect Output	Actual Output	Reason for Outcome
1-12-2024	2-12-2024	Pass	Pass	Success

BLACKBOX TESTING

Set password:

CONSTRAINTS

New Password:
- It must contain 8 or more characters.
- It must contain less than 72 characters.

Confirm Password:
- It must match the new password to set and confirm it.

Equivalence Class:

Equivalence class	New Password	Confirm Password	Result
E1	valid	Mathes	success
E2	invalid	-	error
E3	valid	Don't matched	error

Boundary value analysis:

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
studentofdaiict	studentofdaiict	Password set successfully	Password match	Minimum valid length (8 characters) matches.
	-	Password not set (too short)	Error	Less than the minimum 8 characters.
abcdefghijk…klmn	abcdefghijk…klmn	Password set successfully	Password match	Maximum valid length (72 characters) matches.
abcdefghijk…klmno	-	Password not set (too long)	Error	Exceeds maximum 72 characters.
studentofdaiict	studentof	Password not set (mismatch)	Error	Confirm password does not match the new password exactly.
Spaces only (, 8 spaces)	Spaces only (, 8 spaces)	Password set successfully	Password match	Minimum length met even with spaces.

Acceptance Testing

1)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
studentofdaiict	studentofdaiict	Password set successfully	Password match	Minimum valid length (8 characters) matches.

Set password

New password

studentofdaiict 👁

✅ Your password meets all the necessary requirements.

Confirm password

studentofdaiict 👁

✅ Passwords match.

☑ Sign out of all other devices
It is recommended to sign out of all other devices which may have used your old password.

Cancel   Save

2)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
	-	Password not set (too short)	Error	Less than the minimum 8 characters.

Set password

New password

⊗ Your password must contain 8 or more characters.

Confirm password

Please fill out this field.

☑ Sign out of all other devices
It is recommended to sign out of all other devices which may have used your old password.

Cancel   Save

3)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
abcdefghijk...klmn	abcdefghijk...klmn	Password set successfully	Password match	Maximum valid length (72 characters) matches.

New password

••• ◉

✓ Your password meets all the necessary requirements.

Confirm password

••| ◉   ◉

✓ Passwords match.

☑ Sign out of all other devices
It is recommended to sign out of all other devices which
may have used your old password.

Cancel   **Save**

4)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
abcdefghijk...klmno	-	Password not set (too long)	Error	Exceeds maximum 72 characters.

Set password

New password

•••

⚠ Your password must contain less than 72 characters.

Confirm password

☑ Sign out of all other devices
It is recommended to sign out of all other devices which may have used your old password.

Cancel   Save

5)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
studentofdaiict	studentof	Password not set (mismatch)	Error	Confirm password does not match the new password exactly.

6)

New Password	Confirm Password	Expected Outcome	Actual Outcome	Reason for Outcome
Spaces only (, 8 spaces)	Spaces only (, 8 spaces)	Password set successfully	Password match	Minimum length met even with spaces.

New password

[👁̸]

✅ Your password meets all the necessary requirements.

Confirm password

[👁̸]

✅ Passwords match.

☑ Sign out of all other devices
It is recommended to sign out of all other devices which may have used your old password.

Cancel   **Save**