IT - 314: Software Engineering

Group - 11

Black-box & Acceptance Testing

Event Sphere

Event Management and Participation Platform

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Group Mentor - Priyanshu

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Black-box Testing

Introduction :

Black Box testing is a software testing technique where the tester evaluates the functionality of an application without knowledge of its internal code or structure. The focus is on inputs, outputs, and the overall behavior of the system to ensure that it meets the specified requirements. Testers design test cases based on functional specifications, user requirements, and expected outcomes, rather than on the system's internal workings. This approach helps identify issues related to the system's functionality, usability, and performance, providing an effective way to validate the software from the user's perspective.

1. Signup Test For Student :

Equivalence classes:

First Name & Last Name

- **E1:** Valid first name/last name (contains only alphabets and spaces, length 1–30).
- **E2:** Contains numbers (invalid).
- **E3:** Contains special characters other than spaces (invalid).
- **E4:** Length > 30 characters (invalid).
- **E5:** Length = 0 (empty string, invalid).

Email

- **E6:** Valid email (contains "@", with characters before and after, not already registered).
- **E7:** Missing "@" (invalid).
- **E8:** Missing characters before "@" (e.g., "@domain.com", invalid).
- **E9:** Missing characters after "@" (e.g., "name@", invalid).
- **E10:** Already registered email (invalid).
- **E11:** Empty string (invalid).

Password

- **E12:** Valid password (length 8–30, includes a number, a lowercase letter, an uppercase letter, and a special character).
- **E13:** Length < 8 (invalid).
- **E14:** Length > 30 (invalid).
- **E15:** Missing a number (invalid).
- **E16:** Missing a lowercase letter (invalid).
- **E17:** Missing an uppercase letter (invalid).
- **E18:** Missing a special character (invalid).
- **E19:** Empty string (invalid).

Confirm Password

- **E20:** Matches password and satisfies all password rules (valid).
- **E21:** Does not match the password (invalid).
- **E22:** Empty string (invalid).

First Name	Last Name	Email Address	Password	Confirm Password	Expected Output	Actual Output	Reason	Equivalence Classes Covered
Ashok	Kumar	ashok.kumar@example.com	Abcd@123	Abcd@123	Success	Success	All constraints satisfied	E1, E6, E12, E20

Ashok123	Kumar	ashok.kumar@example.com	Abcd@123	Abcd@123	Fail	Fail	First Name invalid (contains numbers)	E2
Ashok	Kumar123	ashok.kumar@example.com	Abcd@123	Abcd@123	Fail	Fail	Last Name invalid (contains numbers)	E2
Ashok	Kumar	ashok.kumarexample.com	Abcd@123	Abcd@123	Fail	Fail	Email invalid (missing @ or domain)	E7
Ashok	Kumar	ashok.kumar@example.com	Abcd12	Abcd12	Fail	Fail	Password invalid (no uppercase, no special character)	E18
Ashok	Kumar	ashok.kumar@example.com	Abcd1234abcd1234abcd1234abcd1234	Abcd1234abcd1234abcd1234abcd1234	Fail	Fail	Password too long (max: 30 characters)	E14
Ashok	Kumar	ashok.kumar@example.com	A1@bcdE123	A1@bcdE123	Success	Success	All constraints satisfied	E1, E6, E12, E20
Ashok	Kumar	ashok.kumar@example.com	Abcd@12	Abcd@12	Fail	Fail	Password too short (min: 8 characters)	E13

2. Signup Test For College :

Equivalence classes::

College Name Constraints

- **E1:** College name is alphabetic and contains spaces (Valid).
- **E2:** College name contains numbers (Invalid).
- **E3:** College name contains special characters (Invalid).
- **E4:** College name length is less than 1 character (Invalid).
- **E5:** College name length is between 1 and 30 characters (Valid).
- **E6:** College name length exceeds 30 characters (Invalid).

College Email Constraints

- **E7:** Email contains '@' and valid characters before and after it (Valid).
- **E8:** Email is missing '@' (Invalid).
- **E9:** Email contains more than one '@' (Invalid).
- **E10:** Email already exists in the system (Invalid).
- **E11:** Email contains numbers in the username (Valid).

Password Constraints

- **E12:** Password satisfies all constraints:
    - At least 8 characters.
    - At most 30 characters.
    - Contains at least one number, one uppercase letter, one lowercase letter, and one special character (Valid).
- **E13:** Password length is less than 8 characters (Invalid).
- **E14:** Password length exceeds 30 characters (Invalid).
- **E15:** Password is missing a number (Invalid).

- **E16:** Password is missing an uppercase letter (Invalid).
- **E17:** Password is missing a lowercase letter (Invalid).
- **E18:** Password is missing a special character (Invalid).

Confirm Password Constraints

- **E19:** Confirm Password matches Password and satisfies all constraints (Valid).
- **E20:** Confirm Password does not match Password (Invalid).

Email Domain Constraints

- **E21:** Email domain matches the college domain (Valid).
- **E22:** Email domain does not match the college domain (Invalid).

College Name	College Email	Password	Confirm Password	College Domain	Expected Output	Reason	Equivalence Classes Covered
Ambani College	ambani@ambani.edu	Abcd@123	Abcd@123	ambani.edu	Success	All constraints satisfied	E1,E5, E7, E11, E12, E19, E21
Ambani College 123	ambani@ambani.edu	Abcd@123	Abcd@123	ambani.edu	Fail	College Name contains numbers	E1, E7, E11, E12, E19, E21
Ambani College	ambani@amb@ani.edu	Abcd@123	Abcd@123	ambani.edu	Fail	Invalid email format (contains more than one @)	E9
Ambani College	ambani123@ambani.edu	Abcd1234	Abcd1234	ambani.edu	Fail	Email valid (numbers in the username are not allowed)	E2
Ambani College	ambani@ambani.edu	Abcd123	Abcd1234	ambani.edu	Fail	Confirm password mismatch	E20

Ambani College	ambani@ambani.edu	Abcd@1234	Abcd@1234	ambani.ac.in	Fail	Email domain mismatch (should match "ambani.edu")	E22
Ambani College	ambani@ambani.edu	A1@bcdE123	A1@bcdE123	ambani.edu	Success	All constraints satisfied	E1,E5, E7, E11, E12, E19, E21
Ambani College	ambani@ambani.edu	A1@bcdE12	A1@bcdE12	ambani.edu	Fail	Password too short (min: 8 characters)	E13
Ambani College	ambani@ambani.edu	Abcd12@E123	Abcd12@E123	ambani.edu	Fail	Password invalid (missing special character)	E18
Ambani College	ambani@ambani.edu	Abcd@1234	Abcd@1234	ambani.edu	Success	All constraints satisfied	E1,E5, E7, E11, E12, E19, E21

3. Login Test :

Equivalence class partitioning :

Email Validation

- **E1:** Valid email (Signed In).
- **E2:** Invalid email (Not Signed In yet).

Password Validation

- **E3:** Correct password (Matches password of the email).
- **E4:** Incorrect password (Doesn't match password of the email).

Test Case ID	Email	Password	Expected Output	Reason	Classes Covered
TC1	valid@example.com	correctPassword123	Success	Valid email and valid password	E1, E3
TC2	valid@example.com	incorrectPassword	Fail	Valid email but incorrect password	E1, E4
TC3	invalid@example.com	incorrectPassword	Fail	Invalid email and incorrect password	E2, E4

4. Add Event Test :

Equivalence Classes:

Event Title Constraints

- **E1**: Event title length is between 1 and 30 characters (Valid).
- **E2**: Event title length is 0 characters (Invalid).
- **E3**: Event title length exceeds 30 characters (Invalid).

Event Description Constraints

- **E4**: Event description length is between 100 and 1000 characters (Valid).
- **E5**: Event description length is less than 100 characters (Invalid).
- **E6**: Event description length exceeds 1000 characters (Invalid).

Venue Constraints

- **E7**: Venue length is between 3 and 50 characters (Valid).
- **E8**: Venue length exceeds 50 characters (Invalid).
- **E9**: Venue length is less than 3 characters(Invalid).

Registration Start Date Constraints

- **E10**: Registration start date is today's date or a future date (Valid).
- **E11**: Registration start date is a past date (Invalid).

Registration End Date Constraints

- **E12**: Registration end date is the same as or after the start date (Valid).
- **E13:** Registration end date is before the start date (Invalid**).**

Registration Start Time Constraints

- **E14**: Registration start time is not empty and is valid for today's date (Valid).
- **E15**: Registration start time is empty (Invalid).

Registration End Time Constraints

- **E16**: Registration end time is the same as or after the start time (Valid).
- **E17**: Registration end time is before the start time (Invalid).

Contact Person 1 Email Constraints

- **E18**: Email contains '@' and valid characters before and after it (Valid).
- **E19**: Email does not contain '@' or has more than one '@' (Invalid).
- **E20**: Email contains numbers in the username (Valid).

Contact Person 1 Phone Constraints

- **E21**: Phone number is exactly 10 digits (Valid).
- **E22**: Phone number is less than 10 digits (Invalid).
- **E23**: Phone number contains non-numeric characters (Invalid).

Mode (Online or Offline) Constraints

- **E24**: Mode is selected (Valid).
- **E25**: Mode is not selected (Invalid).

Event Title	Event Description	Reg Start Date	Reg End Date	Reg Start Time	Reg End Time	Contact Person Email	Contact Person Phone	Mode	Expected Output	Reason	Classes Covered
Synapse	Valid Description	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	9876543210	Online	Pass	All fields are valid	E1, E4, E9, E12, E15, E18, E21, E23, E26

Exceeding 30 chars	Valid Description	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	9876543210	Offline	Fail	Event title exceeds 30 characters	E3
Synapse	Less than 100 chars	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	9876543210	Online	Fail	Event description is less than 100 characters	E5
Synapse	Exceeds 1000 chars	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	9876543210	Online	Fail	Event description exceeds 1000 characters	E6
Synapse	Valid Description	01-01-2023	24-11-2024	9:00	18:00	valid@email.com	9876543210	Offline	Fail	Registration start date is in the past	E11
Synapse	Valid Description	23-11-2024	22-11-2024	9:00	18:00	valid@email.com	9876543210	Offline	Fail	Registration end date precedes the start date	E13
Synapse	Valid Description	23-11-2024	24-11-2024	9:00	18:00	invalid@.com	9876543210	Online	Fail	Invalid email format	E19
Synapse	Valid Description	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	12345	Offline	Fail	Phone number is less than 10 digits	E22
Synapse	Valid Description	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	98765A3210	Online	Fail	Phone number contains non-numeric	E23

										characters	
Synapse	Valid Description	23-11-2024	24-11-2024	9:00	18:00	valid@email.com	9876543210	NULL	Fail	Mode is not selected	E25

5. Event Registration Test :

Equivalence Class Partitioning Table:

Student Status Criteria

- **E1**: User is a student (Valid).
- **E2**: User is not a student (Invalid).

Verification Status Criteria

- **E3**: User is verified (Valid).
- **E4**: User is not verified (Invalid).

College Criteria

- **E5**: User's college matches the event host's college (Valid).
- **E6**: User's college is different from the event host's college (Valid).
- **E7**: User is not associated with any college (Invalid).

Registration Date Criteria

- **E8**: Registration date is within the event's registration period (Valid).
- **E9**: Registration date is before the event start date (Invalid).
- **E10**: Registration date is after the event end date (Invalid).

Student Status	Verification Status	College	Registration Date	Expected Output	Reason	Classes Covered
Student	Verified	Same as event host's	Within start and end	Success: Registration without payment	Verified, same college, valid date	E1, E3, E5, E8
Student	Verified	Different college	Within start and end	Success: Payment flow initiated	Verified, different college, valid date	E1, E3, E6, E8

Student	Not Verified	Same college	Within start and end	Fail: Prompt user to verify first	Not verified, must verify first	E4
Not a Student	Verified	Different college	Within start and end	Fail: Registration not applicable	Non-students not allowed	E2
Student	Verified	Same college	Before start date	Fail: Registration not allowed	Registration too early	E9
Student	Verified	Same college	After end date	Fail: Registration not allowed	Registration too late	E11
Student	Verified	Same college	End date	Success: Registration without payment	Verified, same college, end date	E1, E3, E5, E10

6. Add Blog Test :

Equivalence Classes :

Title Constraints

- **E1**: Title is not empty, between 3 and 30 characters (Valid).
- **E2**: Title is less than 3 characters (Invalid).
- **E3:** Title exceeds 30 characters (Invalid).

College Constraints

- **E4**: College is not empty, between 3 and 30 characters, alphanumeric and spaces only (Valid).
- **E5**: College is less than 3 characters (Invalid).
- **E6:** College name contains invalid characters (special characters or numbers) (Invalid).
- **E7**: College name contains numbers (Invalid).
- **E8**: College name exceeds 30 characters (Invalid).

Content Constraints

- **E9**: Content is not empty, between 100 and 1000 characters (Valid).
- **E10**: Content is empty (Invalid).
- **E11**: Content is less than 100 characters (Invalid).
- **E12**: Content exceeds 1000 characters (Invalid).

Image Constraints

- **E13**: Image is uploaded, format is .jpg or .png (Valid).
- **E14**: Image is not uploaded (Invalid).
- **E15**: Image is uploaded, but the format is not .jpg or .png (Invalid).

Title	College	Content	Image	Expected Output	Reason	Classes Covered
Blog Title	ABC University	A blog with enough content (50 chars)	Uploaded	Success	All fields valid	E1, E4, E9, E13
Bl	ABC University	A blog with enough content	Uploaded	Fail	Title is empty	E2
Blog Title	Co	A blog with enough content	Uploaded	Fail	College name is empty	E5
Blog Title	ABC University	(empty)	Uploaded	Fail	Content is empty	E10
Blog Title	ABC University	Short content (49 chars)	Uploaded	Fail	Content is less than 50 chars	E11
Blog Title	ABC University	A blog with enough content	Not uploaded	Fail	Image is not uploaded	E14
Blog Title Longer Than 30 Chars	ABC University	A blog with enough content (150 chars)	Uploaded	Fail	Title exceeds 30 characters	E3
Blog Title	ABC University	A blog with enough content (50 chars)	Not uploaded	Fail	Image is missing	E14
Blog Title	ABC23 University	Content exceeds 1000 chars	Uploaded	Fail	Content exceeds 1000 characters	E6
Blog Title	ABC University	A blog with enough content (150 chars)	Invalid file format	Fail	Invalid image file format	E15

7. Student Profile Edit Test :

Equivalence Classes :

DOB Constraints

- **E1**: DOB is a valid past date (before today) (Valid).
- **E2**: DOB is today's date (Invalid).
- **E3**: DOB is a future date (Invalid).

Field	Boundary Value	Valid/Invalid	Expected Output	Reason	Classes Covered
DOB	Today's date	Invalid	Error: DOB cannot be today or in the future	DOB cannot be today's date or a future date	E2, E3
DOB	Yesterday's date	Valid	Success: DOB accepted	DOB is a valid past date	E1

8. Student Verification Test :

Equivalence Classes :

Student Email Constraints

- **E1**: Email contains the college domain (Valid).
- **E2**: Email domain does not match the college's domain (Invalid).
- **E3**: Email is missing "@" (Invalid).
- **E4**: Email is missing the domain (e.g., "student@") (Invalid).
- **E5**: Email is missing characters before and after "@" (e.g., "@college.edu") (Invalid).
- **E6**: Email is an empty string (Invalid).
- **E7**: Email is already verified (Valid).

Domain Constraints :

- **E8**: Domain matches one of the registered college domains (Valid).
- **E9**: Domain does not match any registered college domains (Invalid).

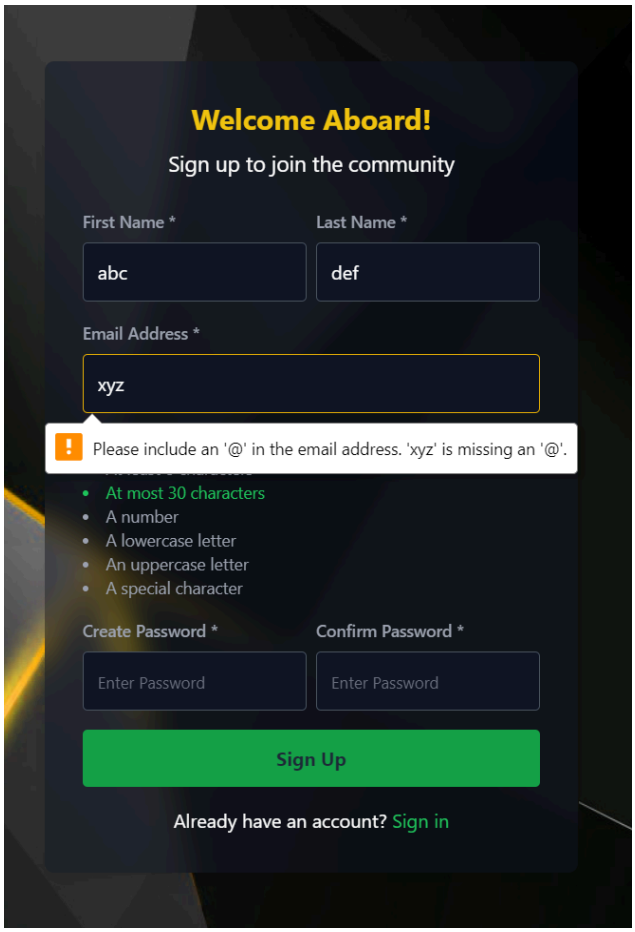
Student Email	**Domain**	**Valid/Invalid**	**Expected Output**	**Reason**	**Classes Covered**
student@college.edu	college.edu	Valid	Success	All constraints satisfied	E1, E8
student@gmail.com	college.edu	Invalid	Fail	domain mismatch	E9
student@college	college.edu	Invalid	Fail	domain missing ".edu"	E9
@college.edu	college.edu	Invalid	Fail	Email missing before "@"	E5

student@college.edu	college.edu	Valid	Success	Email already verified	E7
(Empty String)	college.edu	Invalid	Fail	Email cannot be empty	E6

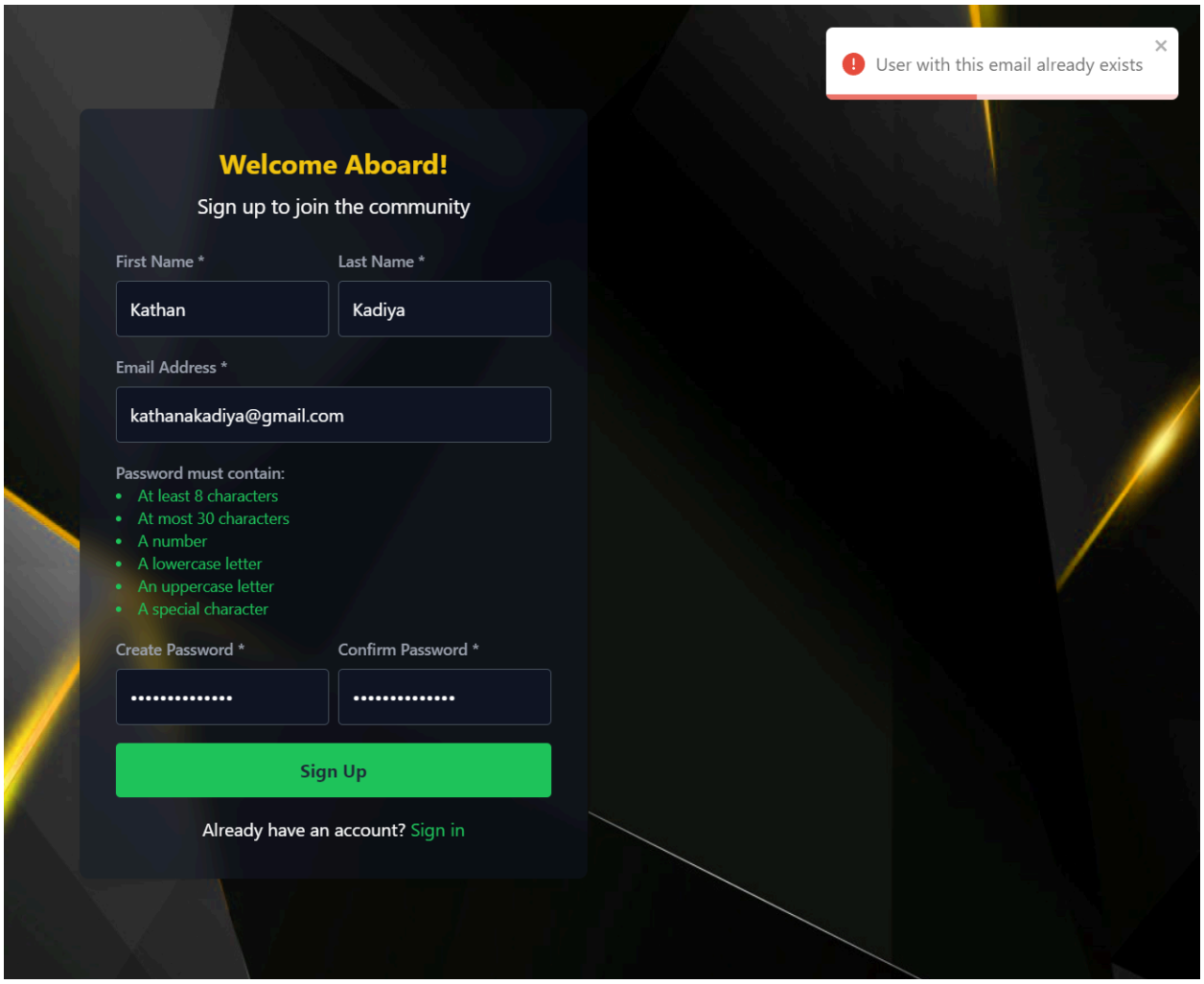
Acceptance Testing

1. Student Sign up :

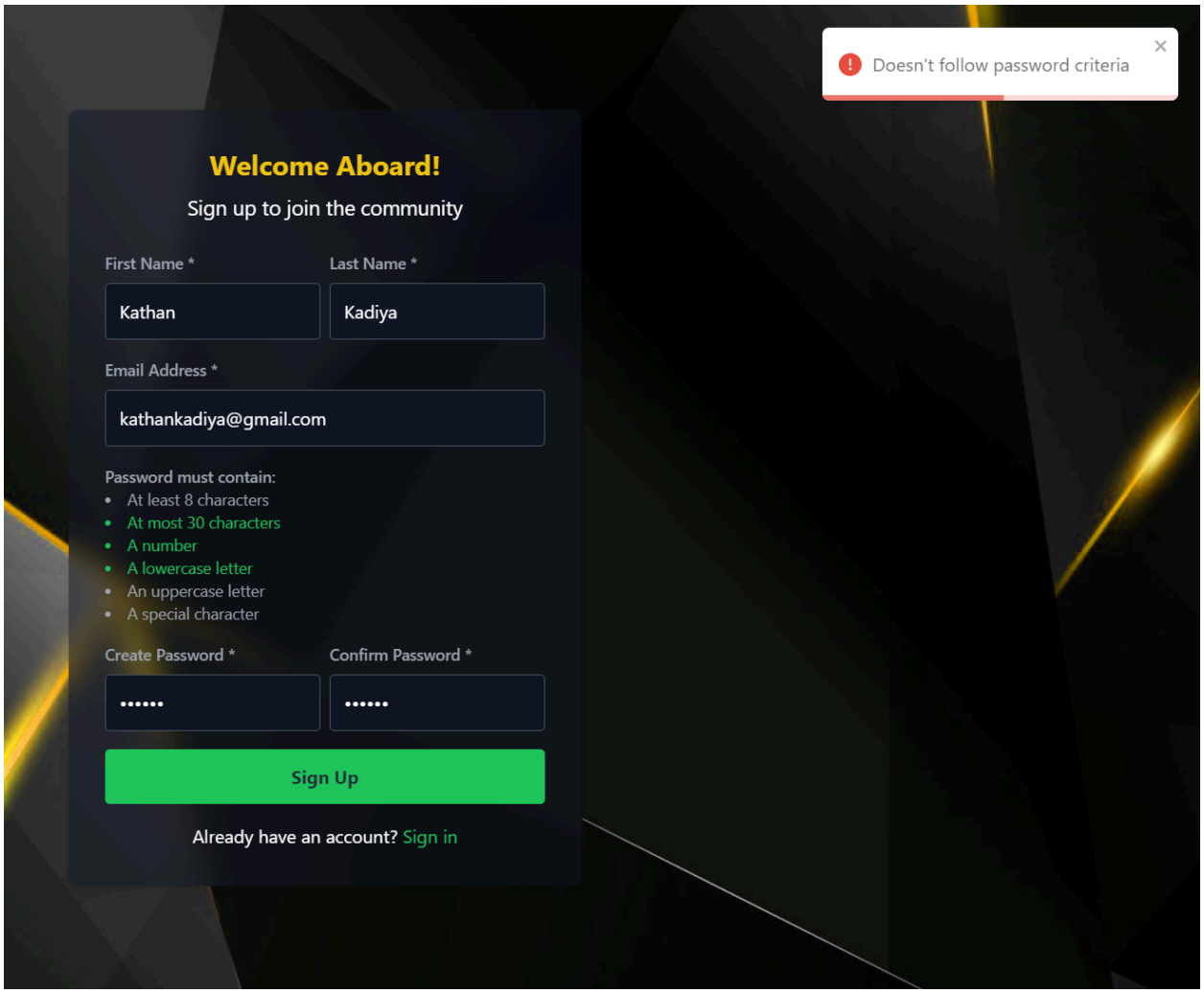
Test : 1
First Name : abc
Last Name : def
Email Address : xyz
Password : empty
Confirm Password : empty
Output : Invalid



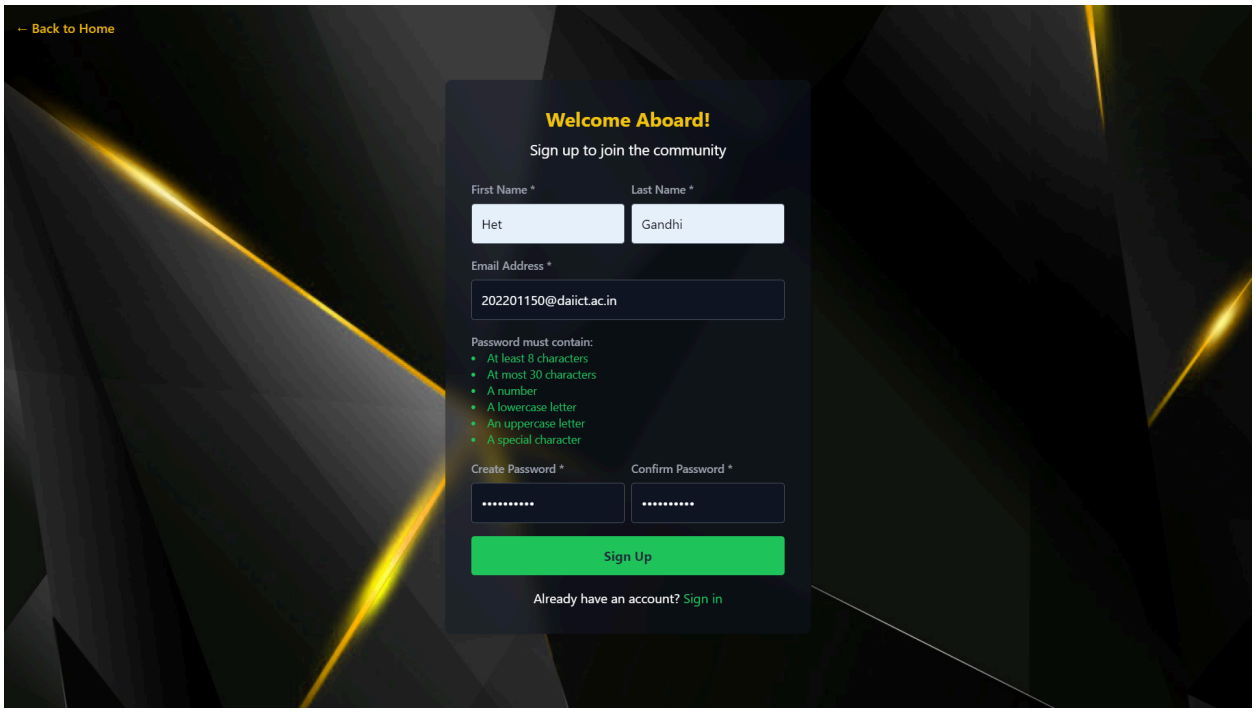
Test : 2
First Name : Kathan
Last Name : Kadiya
Email Address : kathanakadiya@gmail.com
Password : Kathan@daiict5
Confirm Password : Kathan@daiict5
Output : Invalid

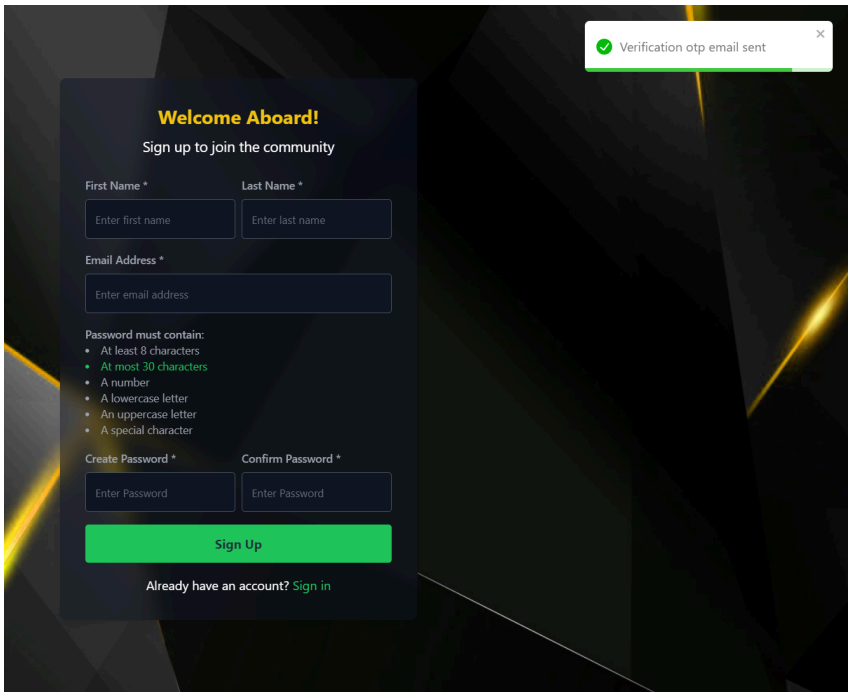


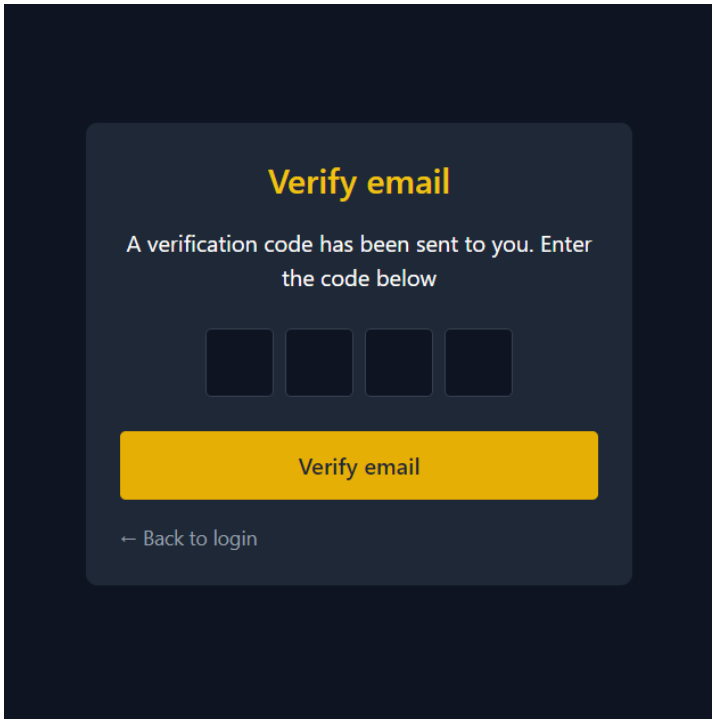
Test : 3
First Name : Kathan
Last Name : Kadiya
Email Address : kathankadiya@gmail.com
Password : 123abc
Confirm Password : 123abc
Output : Invalid



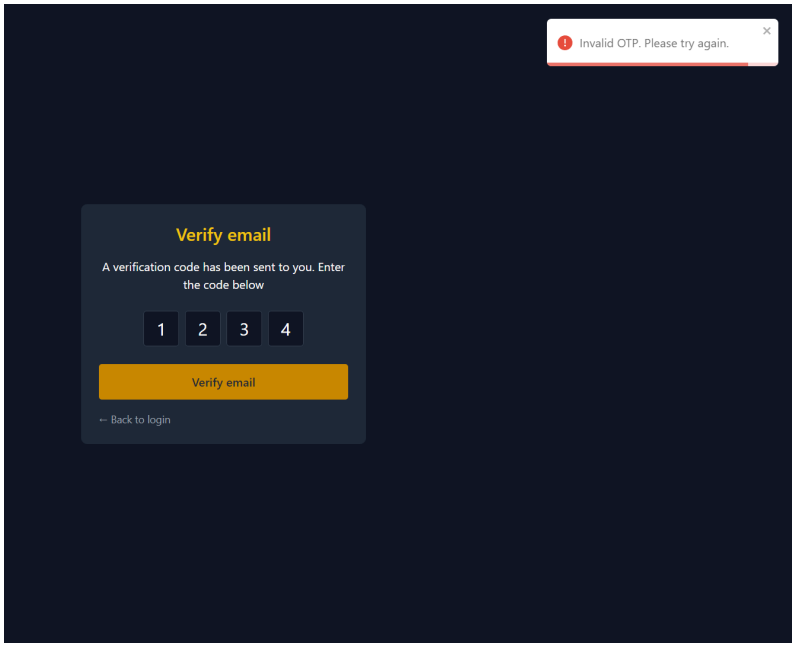
Test : 4
First Name : Het
Last Name : Gandhi
Email Address : 202201150@daiict.ac.in
Password : ABC@abc123
Confirm Password : ABC@abc123
Output : Valid



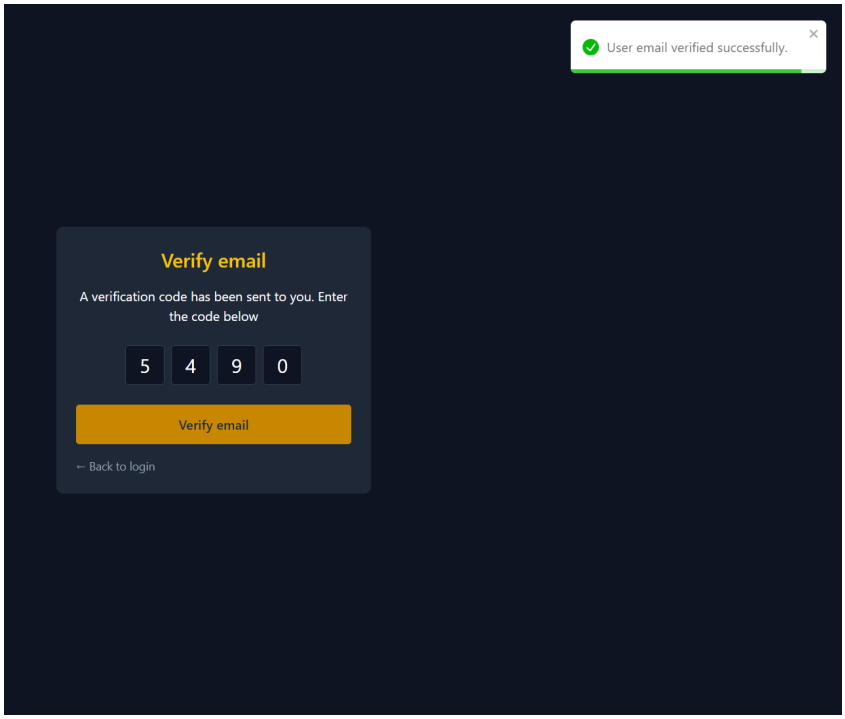

Verification otp email sent
Welcome Aboard!
Sign up to join the community
First Name *
Last Name *
Enter first name
Enter last name
Email Address *
Enter email address
Password must contain:
At least 8 characters
At most 30 characters
A number
A lowercase letter
An uppercase letter
A special character
Create Password *
Confirm Password *
Enter Password
Enter Password
Sign Up
Already have an account? Sign in


Verify email
A verification code has been sent to you. Enter the code below
Verify email
← Back to login

Incorrect OTP is entered by user

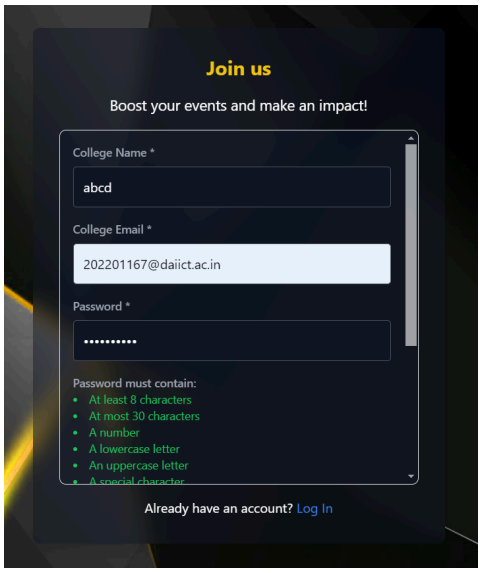


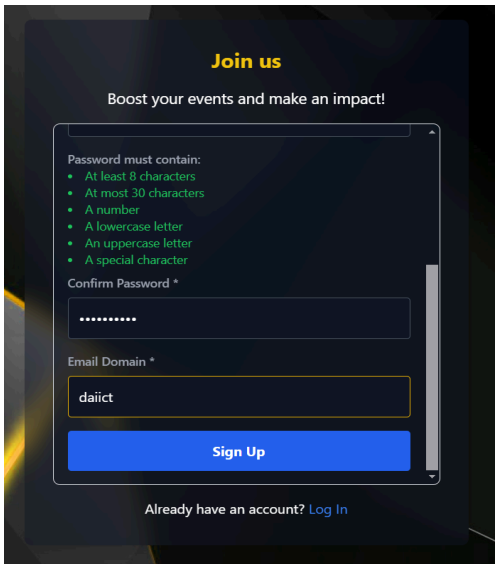
correct OTP is entered by user

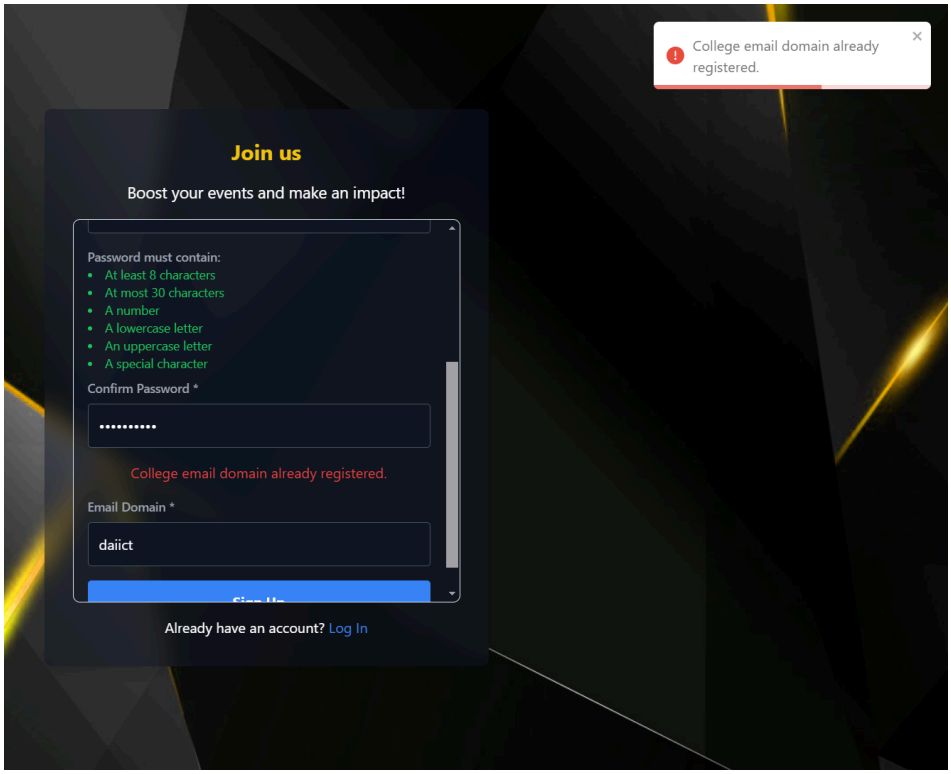


2. College Sign up :

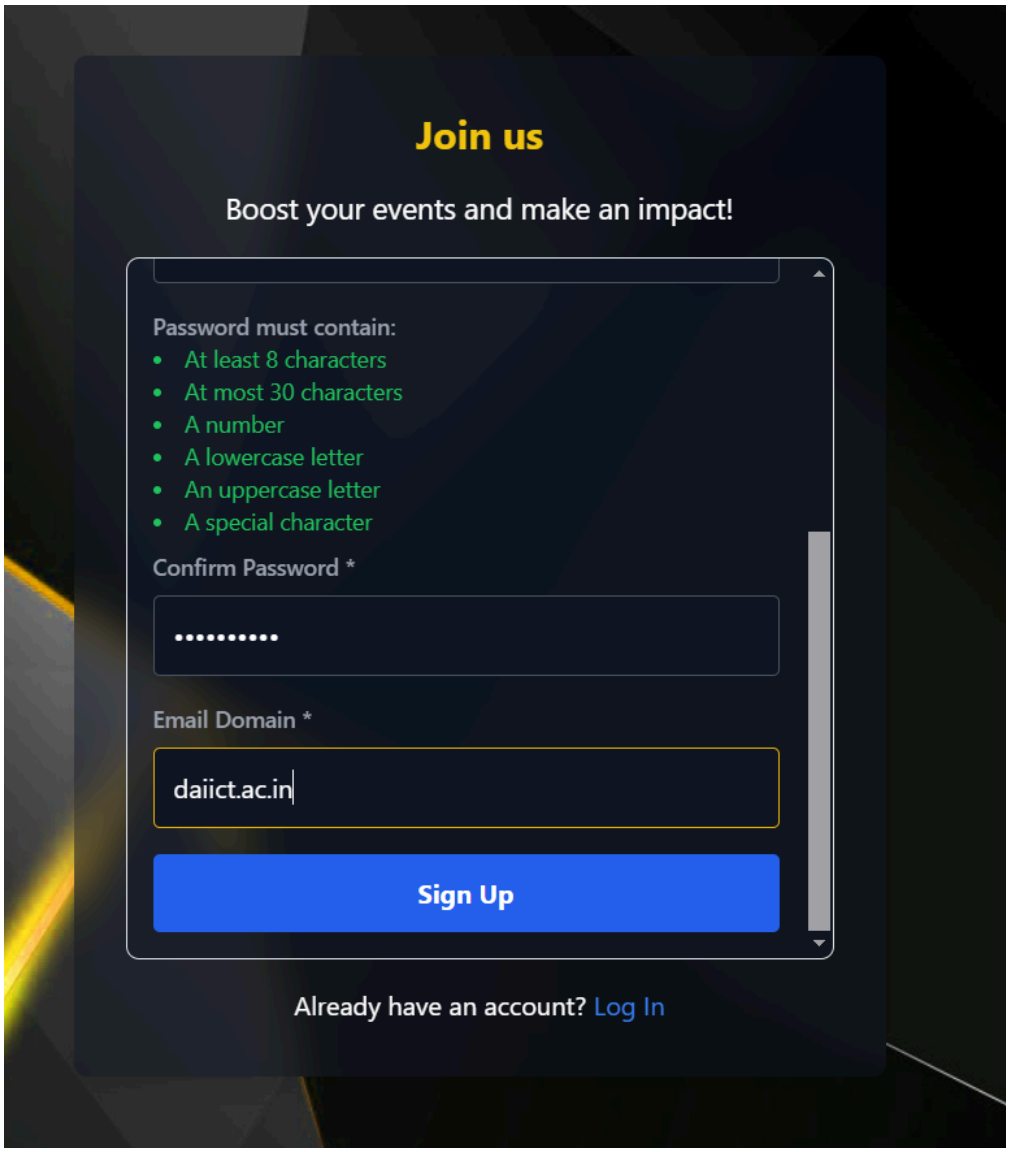
Test : 1
College Name : abcd
Email Address : 202201167@daiict.ac.in
Password : ABC@abc123
Confirm Password : ABC@abc123
Email Domain : daiict
Output : Invalid

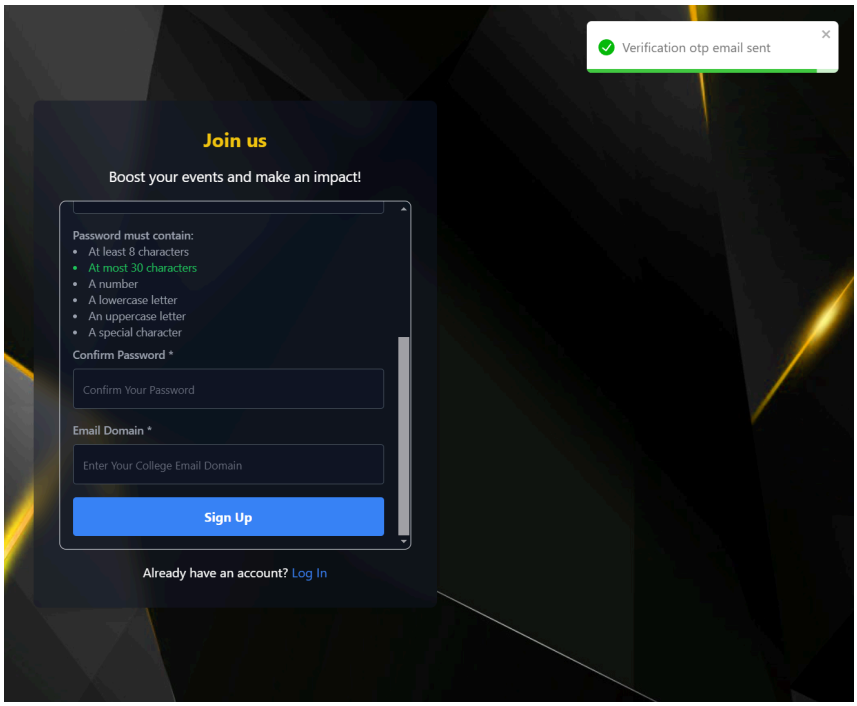


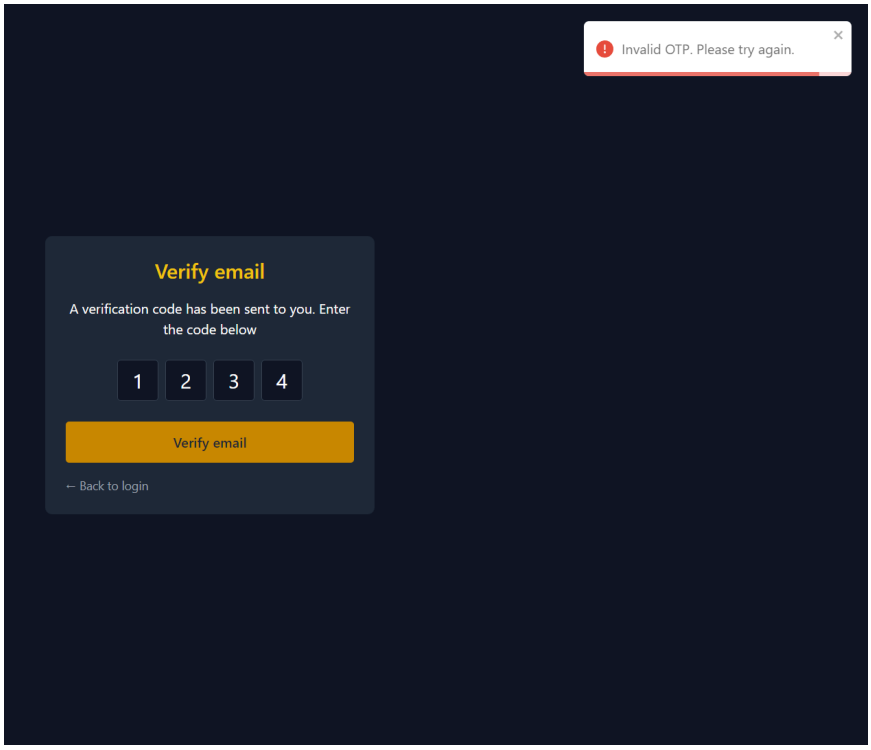



College email domain already registered.
Join us
Boost your events and make an impact!
Password must contain:
At least 8 characters
At most 30 characters
A number
A lowercase letter
An uppercase letter
A special character
Confirm Password *
College email domain already registered.
Email Domain *
daiict
Already have an account? Log In

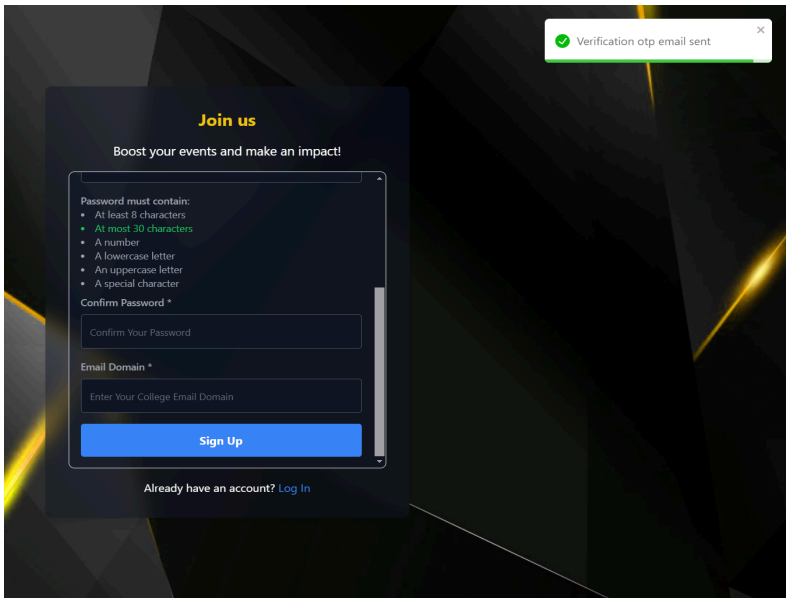
Test : 2
College Name : abcd
Email Address : 202201150@daiict.ac.in
Password : ABC@abc123
Confirm Password : ABC@abc123
Email Domain : daiict.ac
Output : Invalid (OTP is wrong)

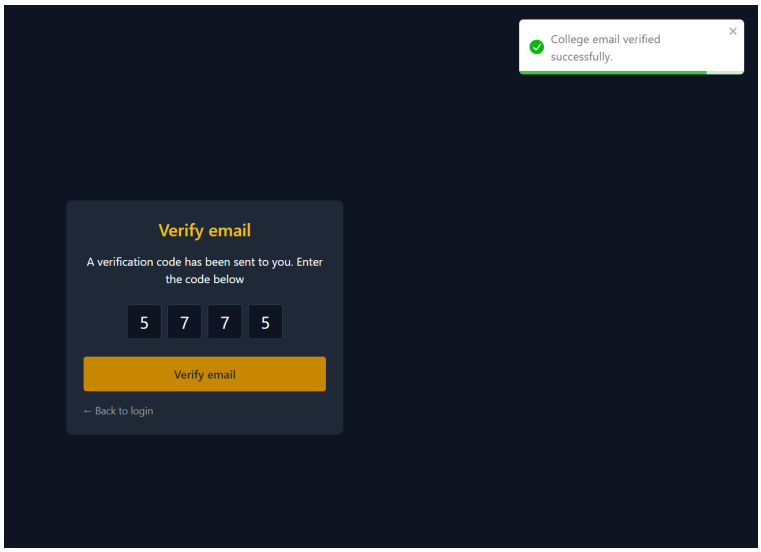



Verification otp email sent
Join us
Boost your events and make an impact!
Password must contain:
At least 8 characters
At most 30 characters
A number
A lowercase letter
An uppercase letter
A special character
Confirm Password *
Confirm Your Password
Email Domain *
Enter Your College Email Domain
Sign Up
Already have an account? Log In


Invalid OTP. Please try again.
Verify email
A verification code has been sent to you. Enter the code below
1
2
3
4
Verify email
← Back to login

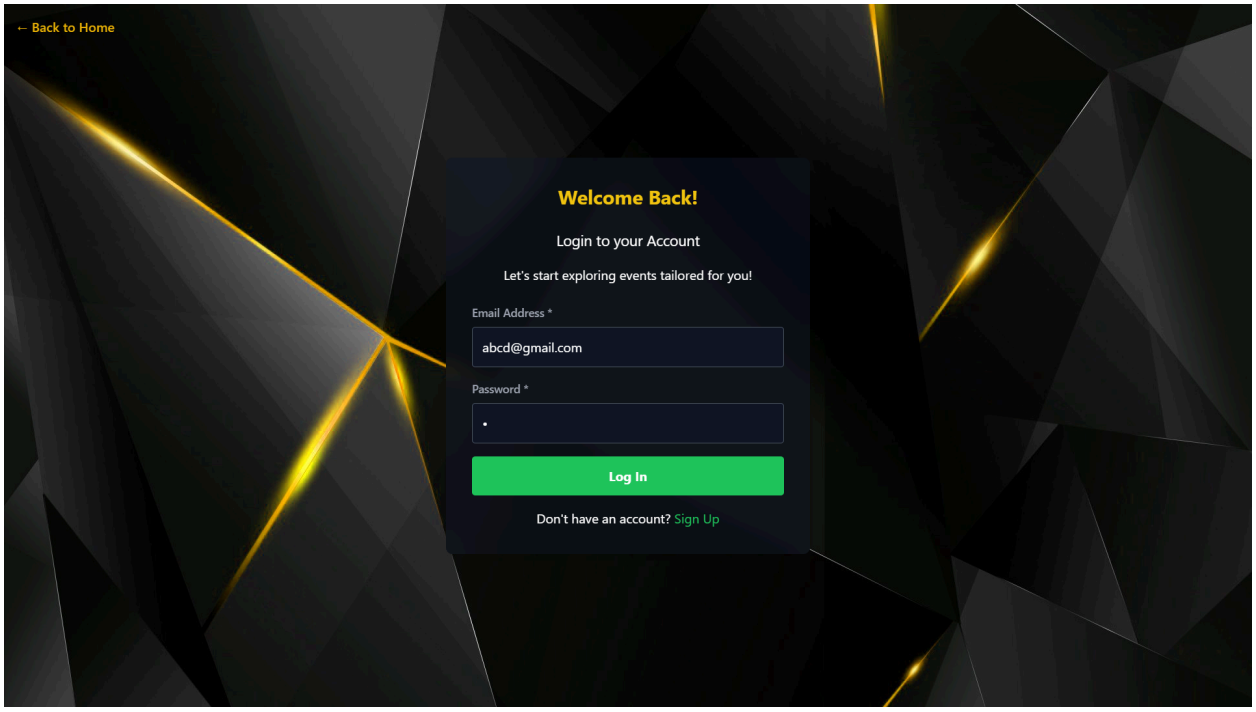
Test : 3
College Name : abcd
Email Address : 202201150@daiict.ac.in
Password : ABC@abc123
Confirm Password : ABC@abc123
Email Domain : daiict.ac
Output : Valid



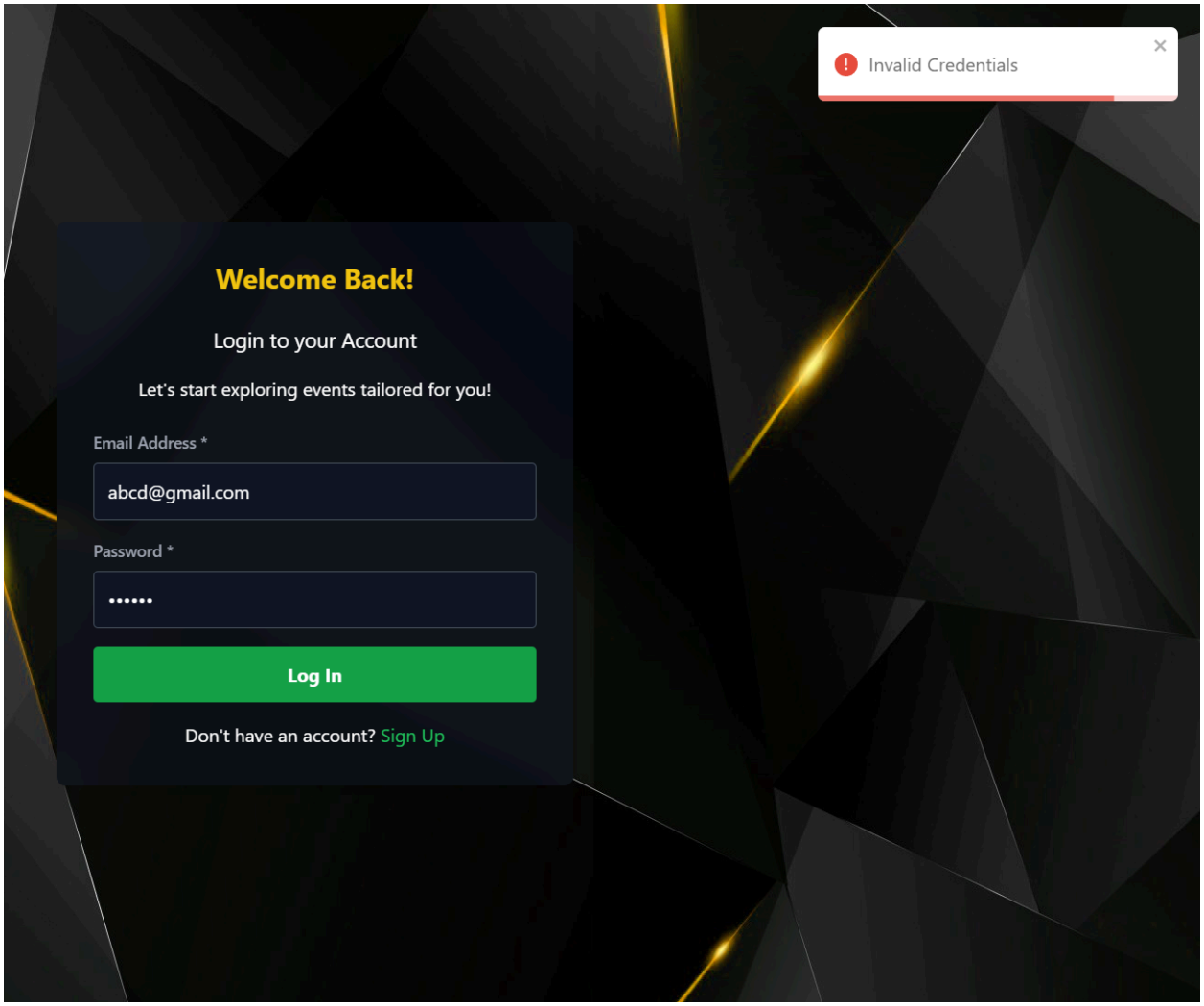


3. Log in

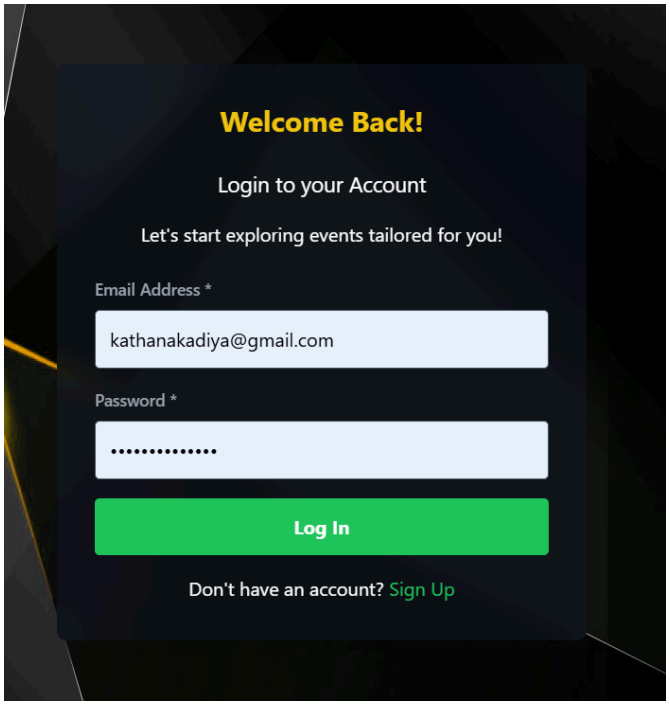
Test : 1
Email Address : abcd@gmail.com
Password : A
Output : Invalid

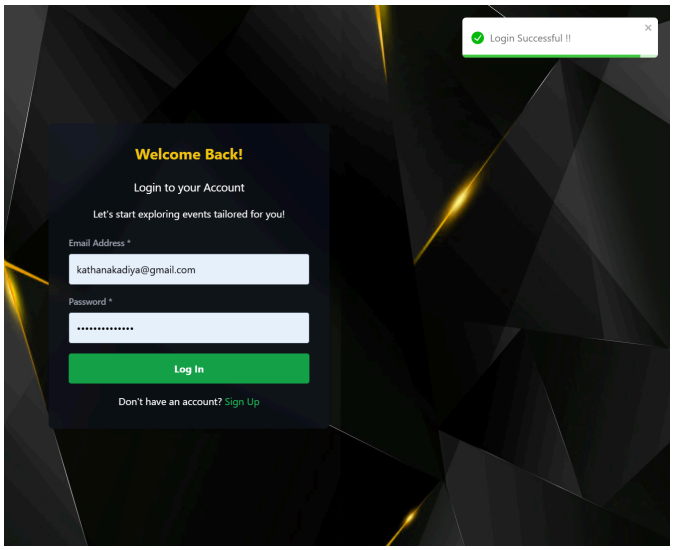


Test : 2
Email Address : abcd@gmail.com
Password : Abc123
Output : Invalid



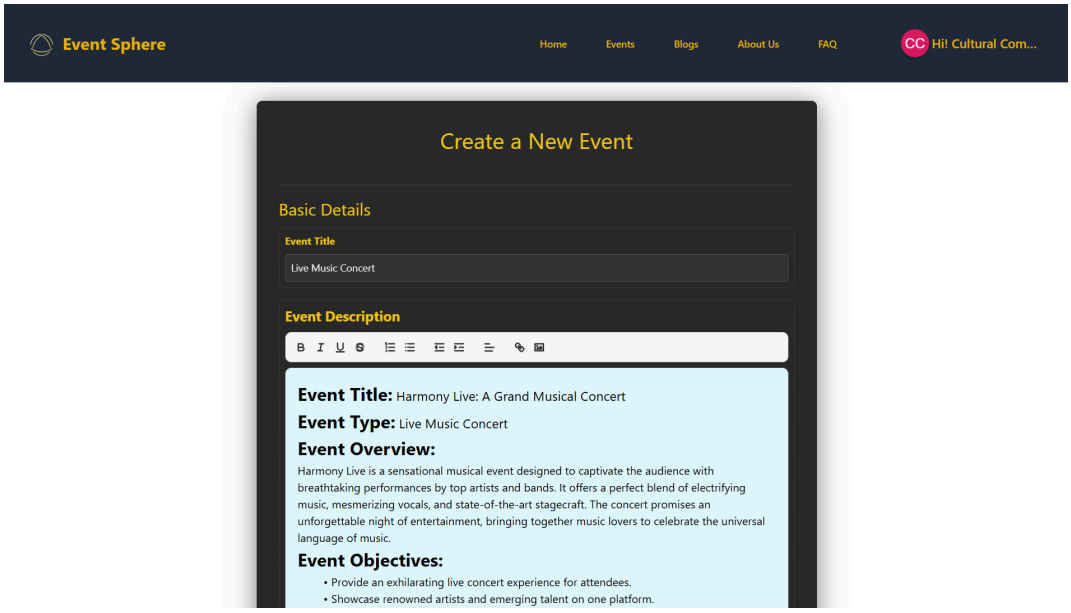
Test : 3
Email Address : kathanakadiya@gmail.com
Password : Kathan@daiict5
Output : Valid

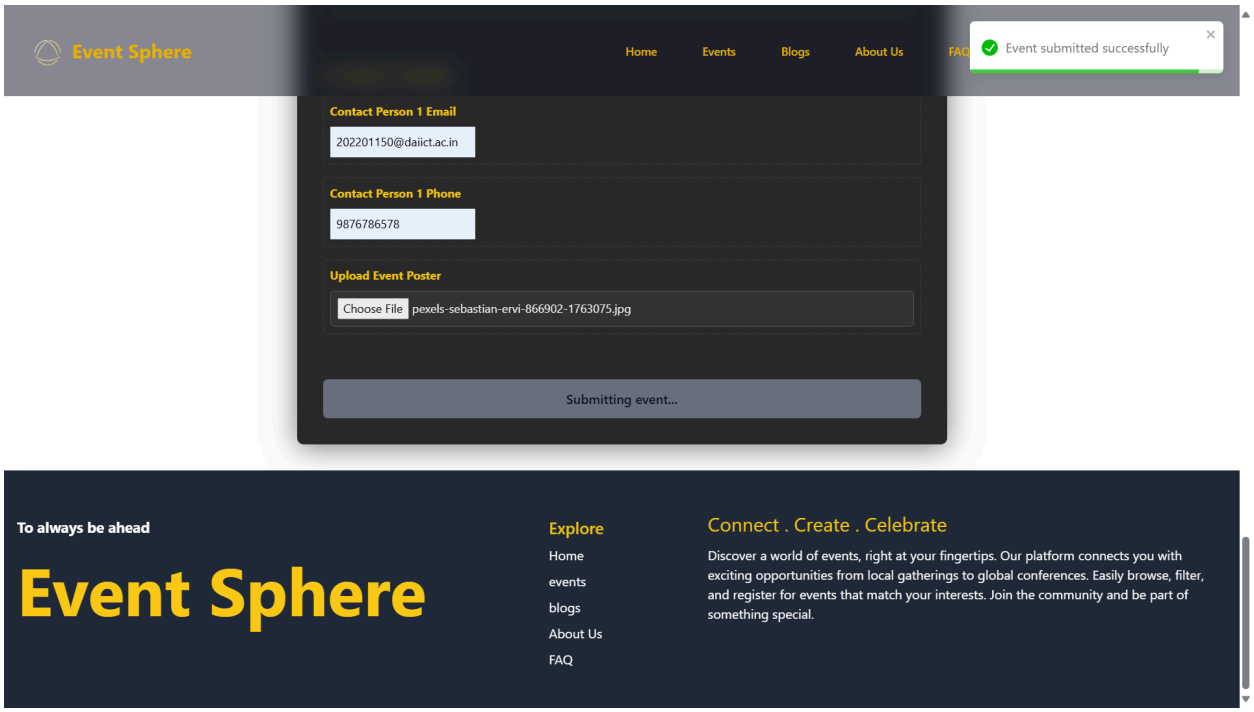




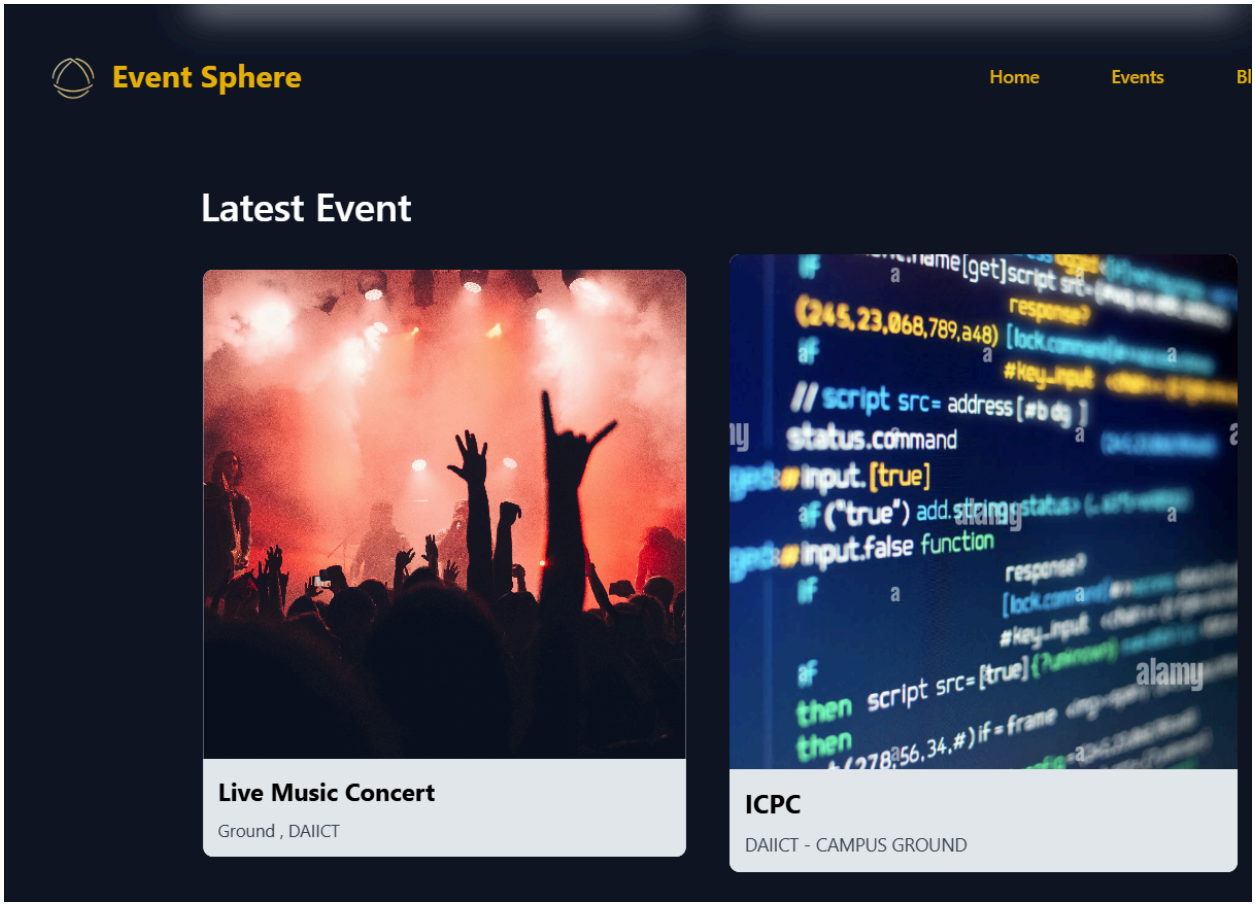
4. Add Event :

Test : 1
Event Title: Harmony Live: A Grand Musical Concert
Event Description: A live music concert featuring renowned artists and bands, offering an electrifying blend of performances and visual extravaganzas.
Price: ₹500
Registration Start Date: 01 - February
Registration End Date: 10 - February
Registration Start Time: 10:00 AM
Registration End Time: 6:00 PM
Event Type: Music Concert
Event Venue: DAIICT Amphitheater
Tags: Music, Concert, Live Performance, Entertainment
Mode Of Event: Offline
Created By: Cult
Contact Person 1 Email: 202201150@daiict.ac.in
Contact Person 1 Phone: +91 9876543210
Upload Event Poster: [Uploaded Image File]
Output: Valid

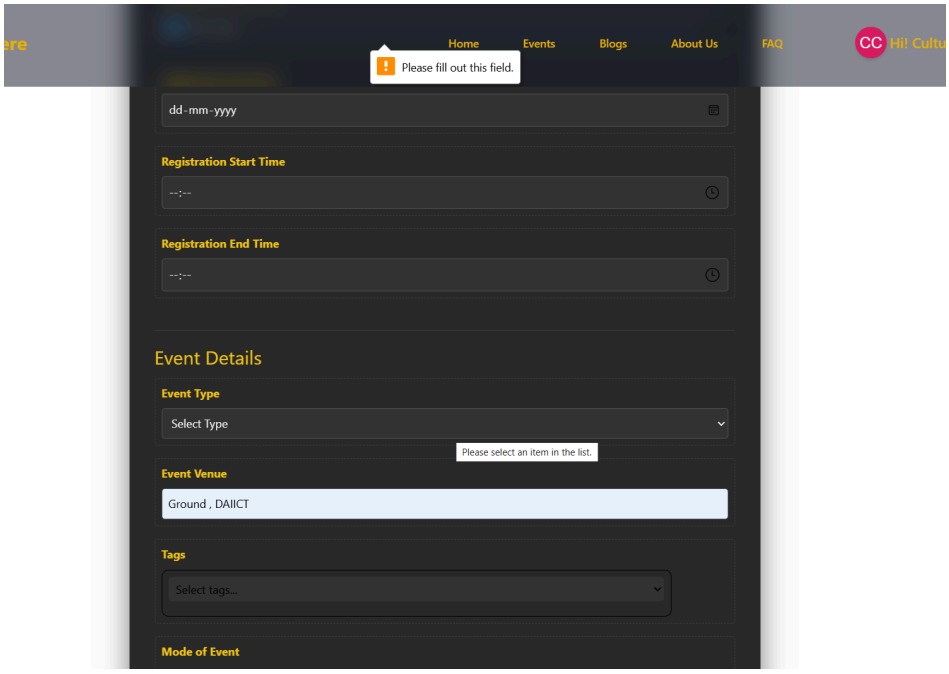

Event Sphere
Home
Events
Blogs
About Us
FAQ
CC
Hi! Cultural Com...
Create a New Event
Basic Details
Event Title
Live Music Concert
Event Description
Event Title: Harmony Live: A Grand Musical Concert
Event Type: Live Music Concert
Event Overview:
Harmony Live is a sensational musical event designed to captivate the audience with breathtaking performances by top artists and bands. It offers a perfect blend of electrifying music, mesmerizing vocals, and state-of-the-art stagecraft. The concert promises an unforgettable night of entertainment, bringing together music lovers to celebrate the universal language of music.
Event Objectives:
• Provide an exhilarating live concert experience for attendees.
• Showcase renowned artists and emerging talent on one platform.


Event Sphere
Home
Events
Blogs
About Us
FAQ
Event submitted successfully
Contact Person 1 Email
202201150@daiict.ac.in
Contact Person 1 Phone
9876786578
Upload Event Poster
Choose File
pexels-sebastian-ervi-866902-1763075.jpg
Submitting event...

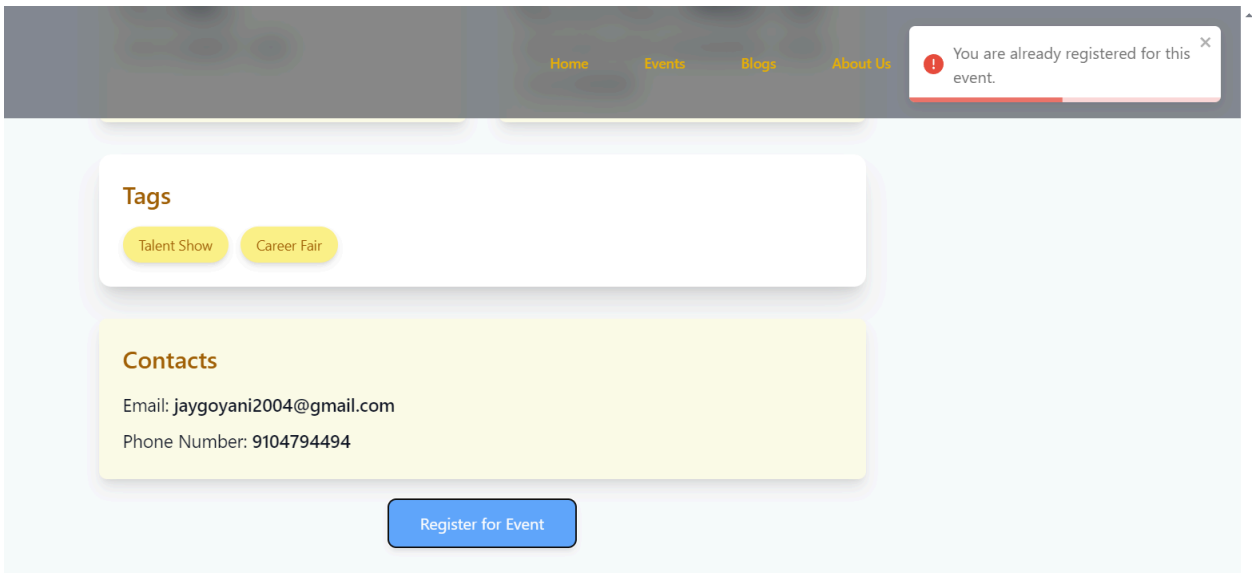
To always be ahead
Event Sphere
Explore
Home
events
blogs
About Us
FAQ
Connect . Create . Celebrate
Discover a world of events, right at your fingertips. Our platform connects you with exciting opportunities from local gatherings to global conferences. Easily browse, filter, and register for events that match your interests. Join the community and be part of something special.

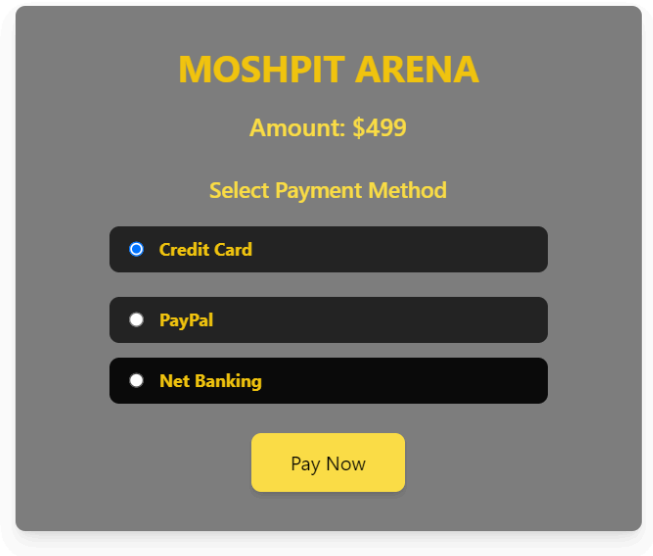

Event Sphere
Home
Events
Latest Event
Live Music Concert
Ground , DAIICT
ICPC
DAIICT - CAMPUS GROUND

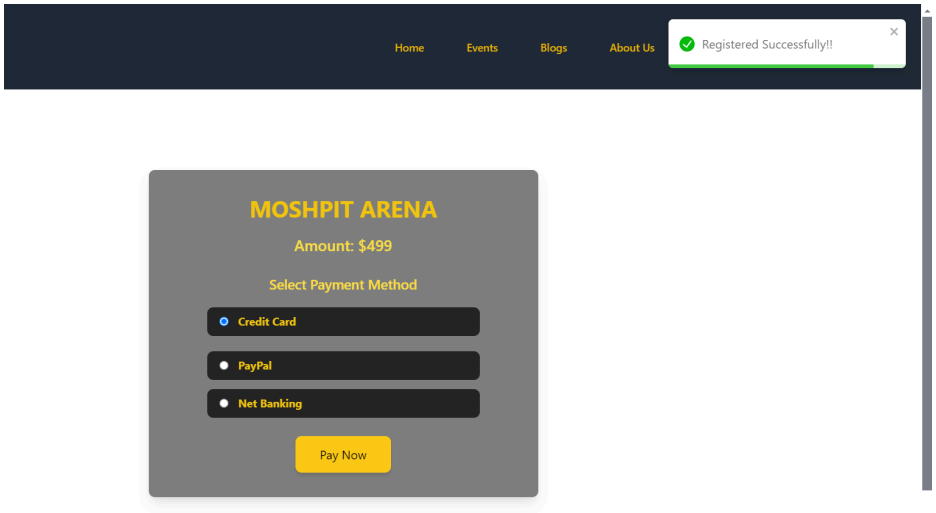
Test : 2
Event Title: Harmony Live: A Grand Musical Concert
Event Description: A live music concert featuring renowned artists and bands, offering an electrifying blend of performances and visual extravaganzas.
Price: Empty
Registration Start Date : Empty
Registration End Date : Empty
Registration Start Time : Empty
Registration End Time : Empty
Event Type : Empty
Event Venue : Empty
Tags : Empty
Mode Of Event : Empty
Created By: Cult : Empty
Contact Person 1 Email: 202201150@daiict.ac.in
Contact Person 1 Phone: +91 9876543210
Upload Event Poster: [Uploaded Image File]
Output: Invalid



5. Event Registration Test :

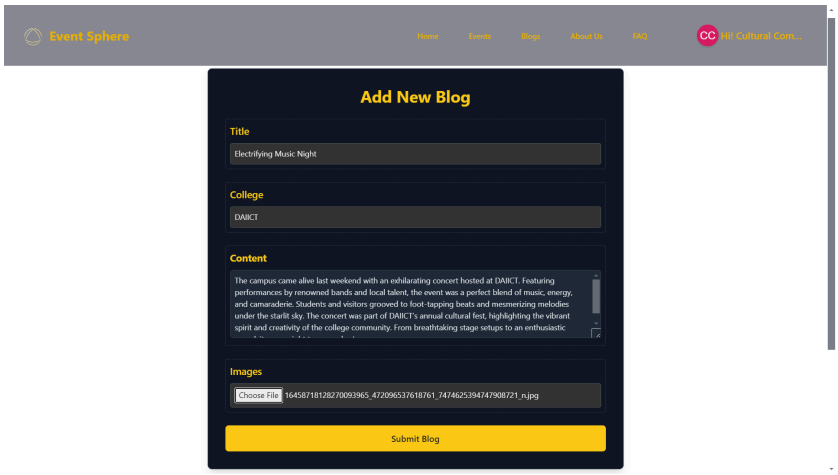


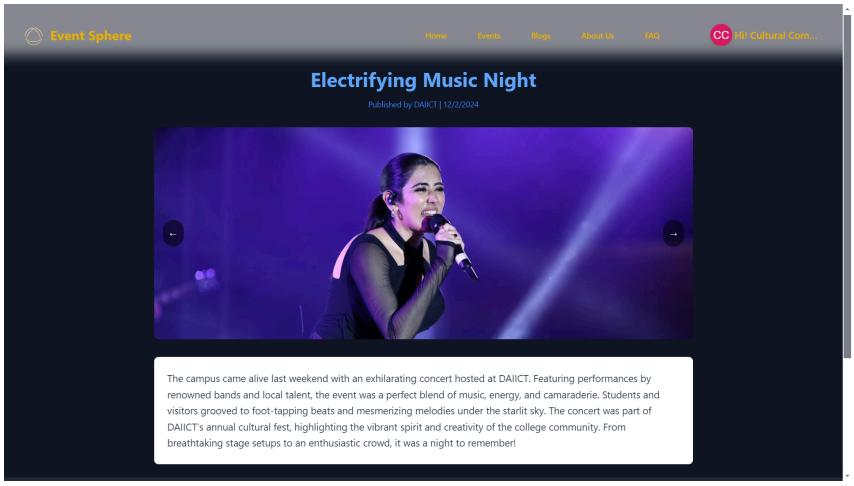



Home
Events
Blogs
About Us
Registered Successfully!!
MOSHPIT ARENA
Amount: $499
Select Payment Method
Credit Card
PayPal
Net Banking
Pay Now

6. Add Blog Test :

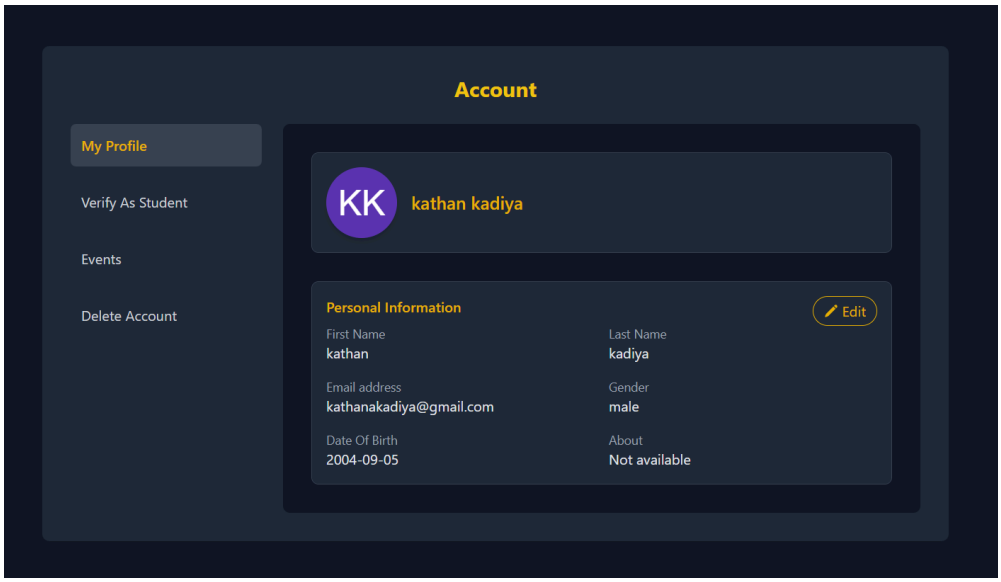
Test : 1
Title : Electrifying Music Night
College : DAIICT
Content : The campus came alive last weekend with an exhilarating concert hosted at DAIICT.....
Images : Uploaded
Output : Valid

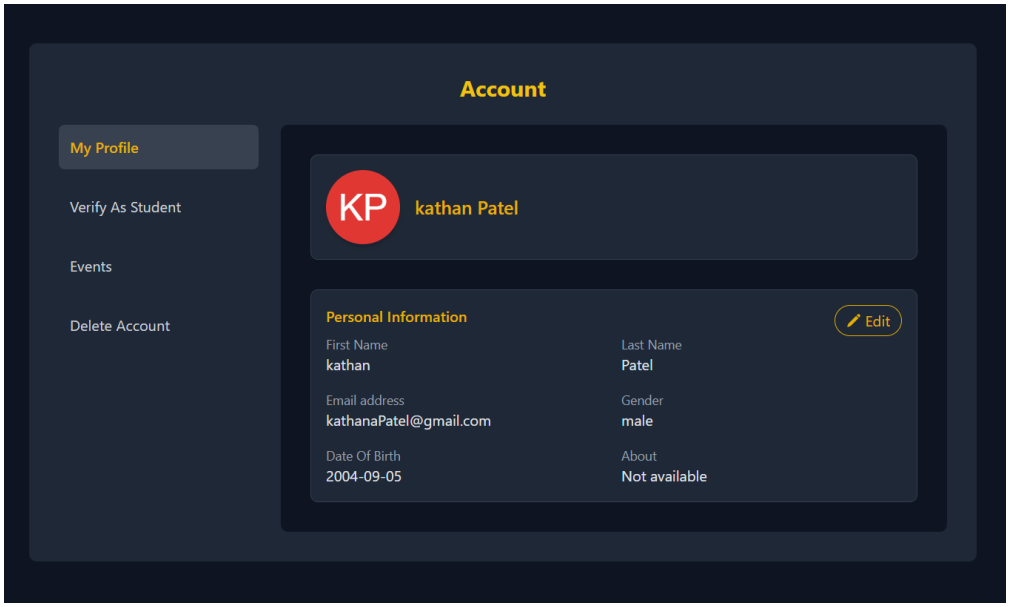
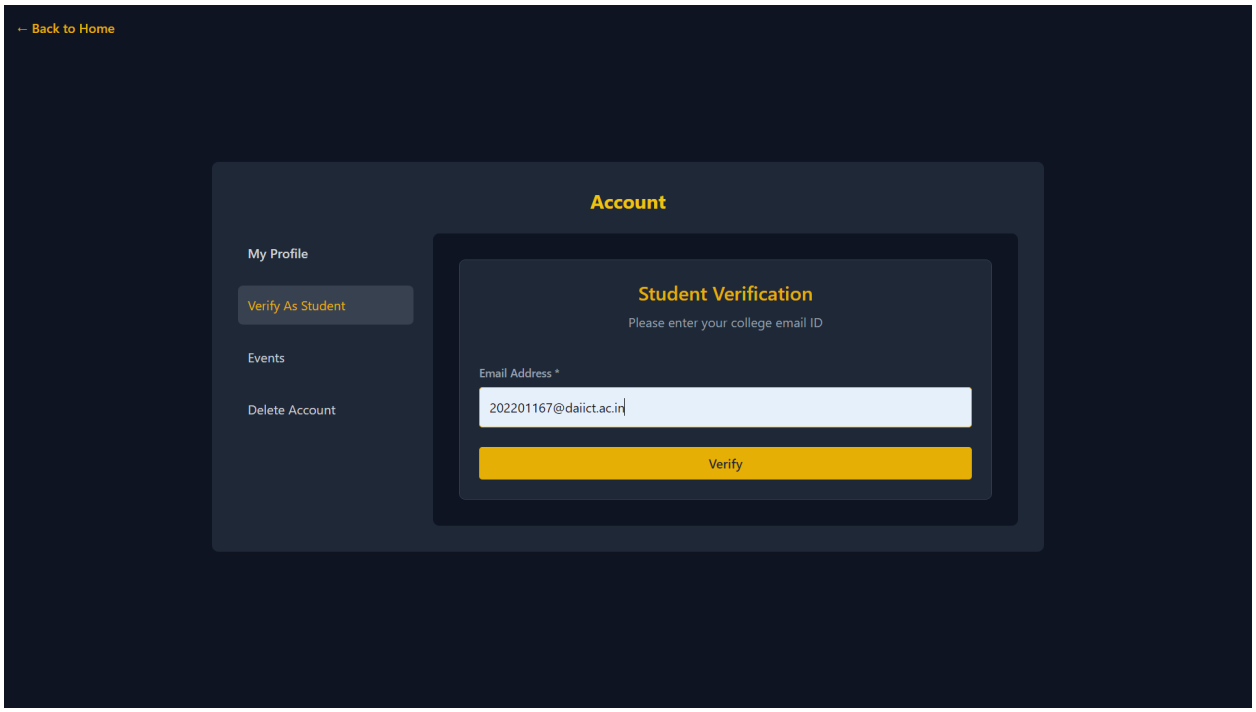
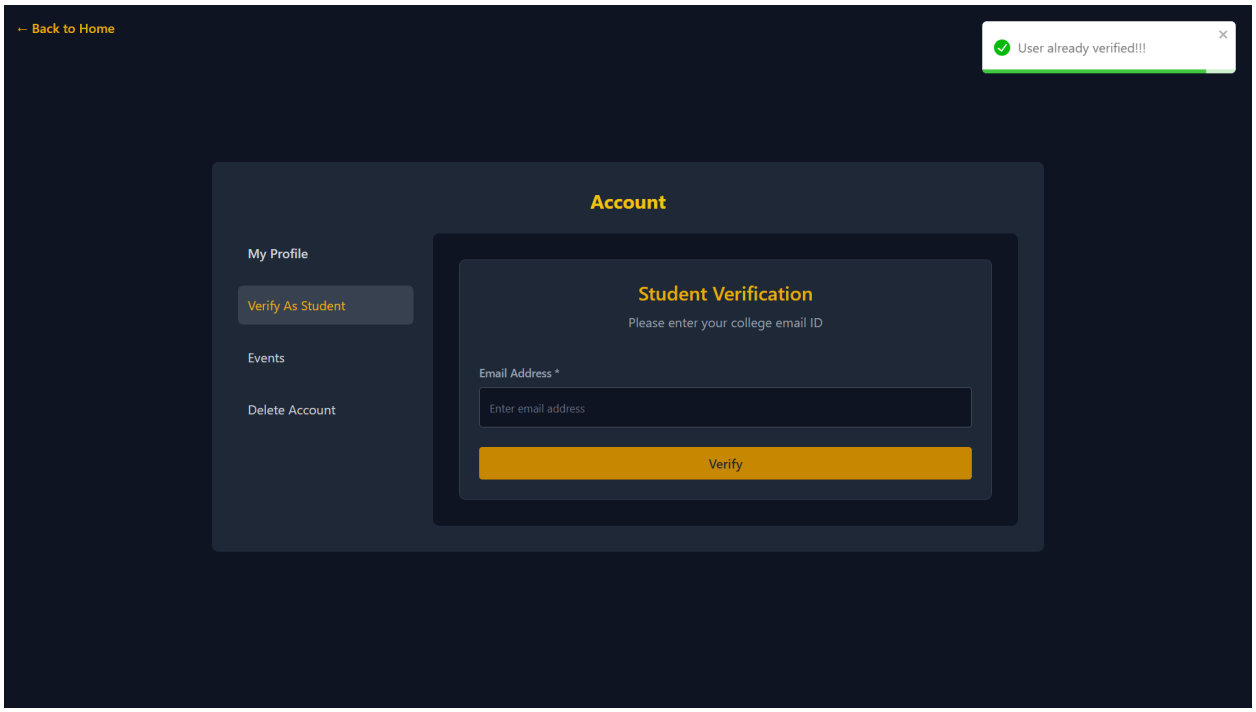




Test : 2
Title : Electrifying Music Night
College : Empty
Content : The campus came alive last weekend with an exhilarating concert hosted at DAIICT.....
Images : Uploaded
Output : Invalid

7. Student Profile Edit :





8. Student Verification :