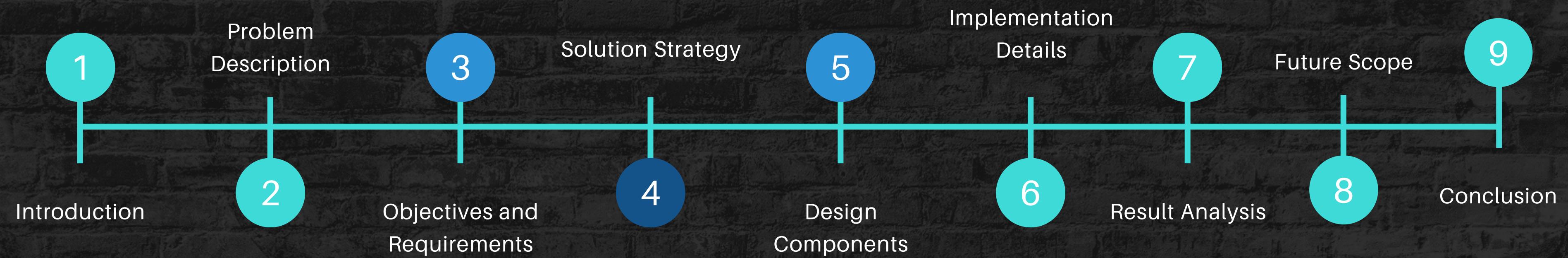


# GROUP 2 MINI PROJECT



# OVERVIEW



# INTRODUCTION

The Technology Business Incubator (TBI) cell is actively involved in providing the infrastructure and environment required for starting advanced technology business ventures through research, design, development and training activities.

# PROBLEM DESCRIPTION

# **Formal Definition of the Problem**

The TBI cell of GEC Thrissur, although actively functioning in the college since 2015, has fallen short in proper outreach and promotion of its various entrepreneurship fostering activities and skill development programs and ineffective communication channels with mentors and companies incubated in TBI.

# PROBLEM STATEMENT

The TBI presently does not have its own website. The GEC Thrissur website contains a web-page highlighting the achievements and prominent events conducted by TBI.



The major drawbacks due to absence of an official website for TBI include :

- Activities undertaken by TBI fail to reach all students in the college and outside.
- Students are unaware about events and workshops conducted by TBI.
- Currently, there are no effective means for connecting with the mentors of TBI.
- The process of applying for incubation is restricted to offline mode only.
- There is no platform to connect with the companies incubated at TBI.

# Existing Webpage for TBI

The screenshot shows the official website of Government Engineering College, Thrissur (GEC Thrissur). The top navigation bar includes links for Home, About Us, Academics, Departments, Administration, TEQIP, Alumni, Placement, Facilities, Activities, and More >. A search bar and a star icon are also present. The main content area features a large image of a modern red and grey building complex. On the left, there is a sidebar with sections for VISION and Mission, along with links to TBI, ISTE, and IEE. The main content area is titled "TBI Technology Business Incubator" and includes a sub-menu for About TBI, Companies, Products, Trainings, and Research. It details the signing of a MoU with SIDBI and lists incubations for various years.

gectcr.ac.in/links/tbi/

**Government Engineering College, Thrissur**  
Affiliated to Kerala Technological University | Approved by AICTE  
ഗവാം എഞ്ചീനീയറിംഗ് കോളേജ്, തൃശ്ശൂർ

Campussoft Login  
Spot Admission B.Tech/M.Tech

Home About Us Academics Departments Administration TEQIP Alumni Placement Facilities Activities More >

**VISION**  
To be a Premier Institution of Excellence in Engineering Education and Research for Sustainable Development.

**Mission**

- i. Provide Quality Education in Engineering and Technology
- ii. Foster Passion for Research
- iii. Transform the Students into Committed Technical Personnel for the Social and Economic Wellbeing of the Nation

**Additional Links**

TBI  
ISTE  
IEE

**TBI Technology Business Incubator**

About TBI Companies Products Trainings Research

Signed MoU with SIDBI

Government Engineering College Thrissur has signed a Memorandum of Understanding (MoU) with Small Industries Development Bank of India (SIDBI) for providing handholding support and to promote entrepreneurship in the region. As per the MoU, the college will set up a Swavalamban Chair for MSME Solutions under the project SAHAS (SIDBI Assistance for Harnessing Aspiring Swavalambis) under Technology Business Incubator Cell. This is the first time in India that SIDBI is signing an MoU with a college to promote entrepreneurship under this scheme.

Incubations:

**2018-2019**

- 1. Emptyspace Technologies Pvt Ltd
- 2. Quarous Technologies Private Limited

**2020-2021**

- 1. Estro Tech Robotics and Innovation Pvt. Ltd.
- 2. DezVault

**2021-2022**

Currently, TBI has a dedicated webpage within the GEC Thrissur official website.

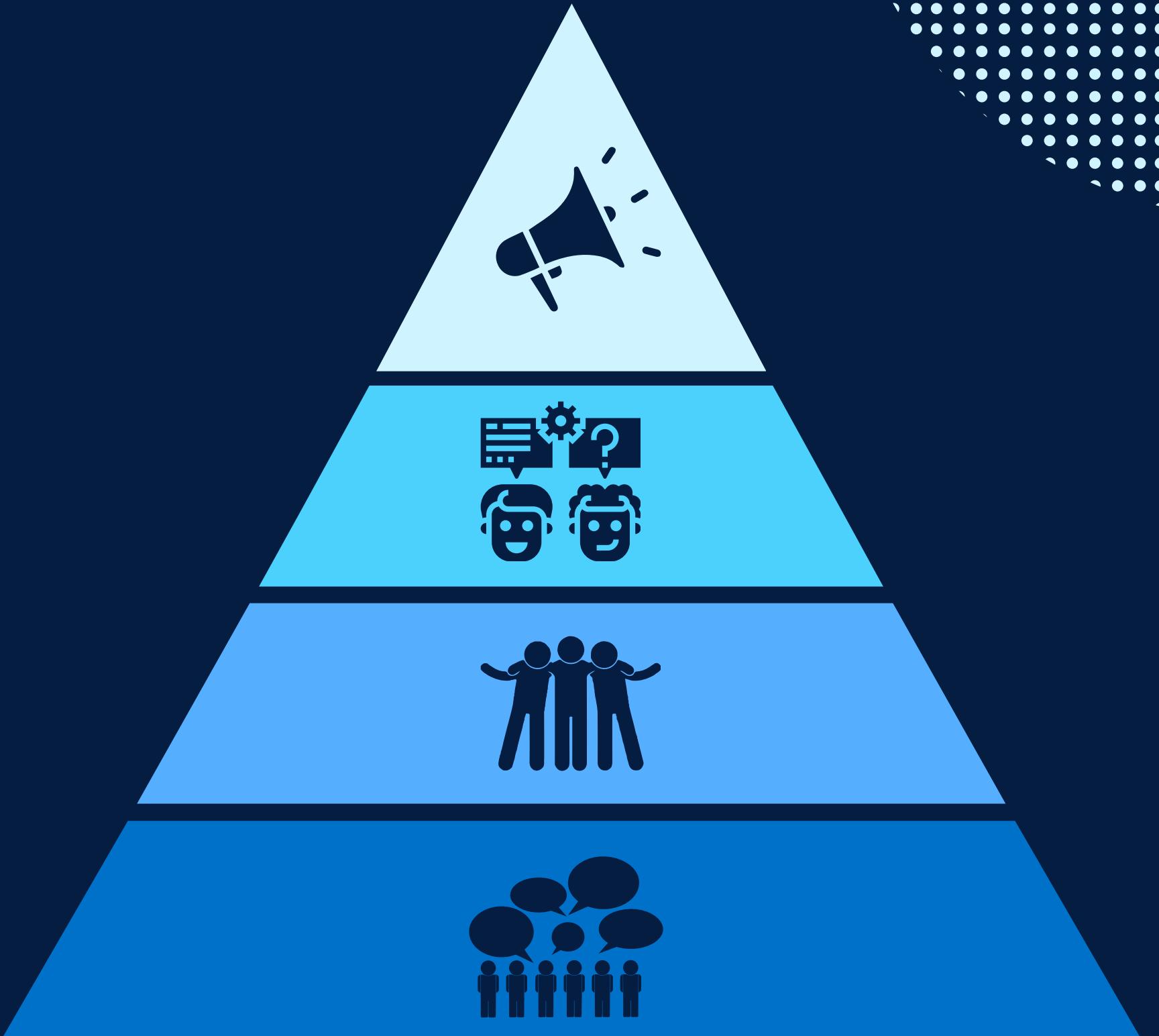
# OBJECTIVES AND REQUIREMENTS

# OBJECTIVES OF THE PROJECT

- Outreach of activities undertaken by TBI to all students in the college and outside.
- Awareness about events and workshops conducted by TBI.
- Effective means for connecting with the mentors of TBI.
- Describe the process of applying for incubation and online application.
- A platform to connect with the companies incubated at TBI.

# REQUIREMENTS

- O1** Create a simple website which is easy to update in future
- O2** It should show the latest announcements, upcoming events, startups and companies
- O3** A learning page and mentor networking
- O4** Registration and application process for incubation within TBI and registration details made available online through the website



# SOLUTION STRATEGY

# SOLUTION STRATEGY



## Scope of the Project

The website aims to address the lack of proper outreach and promotion of TBI's entrepreneurship fostering activities and skill development programs. It will provide a platform to showcase achievements, announce events, connect with mentors and companies, and facilitate the incubation application process online.

# The Idea

To create an official website for TBI which fulfills all the objectives and requirements specified.

The website must serve as a standalone system dedicated to representing TBI's activities and services. It integrates with existing platforms, such as social media, for enhanced outreach.

## Strategy and Planning

- Requirement Specification
- Identification of product functions
- Listing out the objectives and constraints
- Design and prototype implementation





# EXPECTED USERS



**Students of GEC Thrissur**



**Registered companies and  
entrepreneurs incubated at TBI**



**Mentors and expert committee of  
TBI**



**Business ventures and MSMEs associated  
with TBI**

# Intended Product Functions

- Showcase entrepreneurship endeavours and achievements.
- Display latest announcements and upcoming events.
- Provide information on startups and companies incubated at TBI.
- Facilitate mentor networking and access to resources.
- Describe the incubation application process and enable online applications.
- Enable learning through a Startup School to train aspiring entrepreneurs.
- Dedicated section for blogs related to the incubated companies and the latest technological advancements.

# DESIGN COMPONENTS

# Design Components

The screenshot shows the TBI website's header with navigation links: Home, Startup School, Events, Mentor, Blog, Companies, and INCUBATE. Below the header, there is a section titled "ANNOUNCEMENTS" containing four scrollable boxes, each with a small icon and placeholder text: "ANNOUNCEMENT FOR WORKSHOP ON STARTUP INITIATIVES". At the bottom right of this section is a dropdown arrow icon.

## ANNOUNCEMENTS

Most recent announcements are scrolled on home page. All announcements are visible by clicking on 'Announcements'

The screenshot shows the TBI website's header with navigation links: Home, Startup School, Events, Mentor, Blog, Companies, and INCUBATE. Below the header, there is a section titled "OUR START UPS COMPANIES" featuring three cards with company logos and names: "ESTRO TECH ROBOTICS PVT LTD", "Rove", and "Dezvault". Each card includes a "Description about the company ,start and all...", a "Visit Us" button, and a "Know more" button. Navigation arrows are present on either side of the cards.

## COMPANIES

Companies incubated under TBI are mentioned. 'Visit us' to visit the company website or 'know more' to read about the company.

The screenshot shows the TBI website's header with navigation links: Home, Startup School, Events, Mentor, Blog, Companies, and INCUBATE. Below the header, there is a section titled "Mentor Network" displaying profiles of mentors: Dr. Ajay James, Mr. Arif Muhammed, Person 1, Person 2, and Name of person. Each profile includes a photo, name, title, and a detailed sidebar with their expertise and work experience. A vertical sidebar on the left contains a series of blue plus signs.

## MENTOR NETWORK

A platform to connect with mentors associated with TBI. It mentions the domain, specialisation, contact details, etc. of each mentor.

The screenshot shows the TBI website's header with navigation links: Home, Startup School, Events, Mentor, Blog, Companies, and INCUBATE. Below the header, there is a section titled "BLOGS Connect with Tech" featuring three cards with blog titles: "Name of the Blog", "Name of the Blog", and "Name of the Blog". Each card includes a thumbnail image, the blog title, and a detailed sidebar with placeholder text. Navigation arrows are present on either side of the cards.

## BLOGS

Tech- related blogs and articles written by TBI mentors, the incubated companies etc. are displayed.

# Design Components

## APPLICATION FOR INCUBATION

The steps of incubation are described. Registration form for applying for incubation, which stores the details entered into the database

**PROCESS OF INCUBATION**

- PITCH YOUR IDEA
- IDENTIFY SUPPORT REQUIREMENT
- ENGAGEMENT
- EVALUATION

**APPLICATION SUBMISSION**

Submit a 12 slide presentation.

Post Screening, you will be invited to pitch your idea to a panel of the who's who in your startup's domain!

On the panel recommendation, Catalyst will begin its engagement with the startup founders to discuss the specific requirements and support needed.

After this, Catalyst will begin its engagement with required incubation support.

During this phase, your idea will very likely become a full-fledged prototype/product!

Once in Incubation Phase II, Catalyst will commit to you for one to two years, with capital support of up to INR 50 lakhs, based on a performance evaluation.

**Bring your Ideas to Life**  
**Incubate With Us!**

Name  Abstract   
Email   
Phone Number  Upload Presentations or Proposals(Optional)   
SUBMIT

**INCUBATE**

**STARTUP SCHOOL**

Learning to be the best in the business

**Video Tutorials** | **Expert Mentors** | **Study Material**

Search Courses

Courses Materials

**How to Build a Startup**  
CCF GEC THRISSUR  
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

**Introduction to Startups and Innovation**  
TBI GEC THRISSUR  
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**Startup Funding - Financial Fundamentals**  
TBI GEC THRISSUR  
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Contact us

9890000000

tbi@gectr.ac.in

follow us

in fb x

**Subscribe to our Newsletter!**

Be the first to get exclusive updates of TBI and its Activities.

Enter your email address

Subscribe Now

**TBI**  
GECT

Sitemap • Terms of Use • Privacy Policy

## FOOTER AND NEWSLETTER

The Newsletter Subscription given in the footer stores the collected details in the database.

**STARTUP SCHOOL**

The Startup School feature is created to show curated videos, materials, and information about public funds and schemes.

# Design Components

**Events**

MARCH 2024

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5

Event name

Date Time Venue

**Upcoming Events**

Name of the Event

15 March 2024 9:30am Location

Name of the Event

15 March 2024 9:30am Location

**Past Events**

Name of the Event

15 March 2024 9:30am Location

Name of the Event

15 March 2024 9:30am Location

Name of the Event

15 March 2024 9:30am Location

15 March 2024 9:30am Location

15 March 2024 9:30am Location

## EVENTS

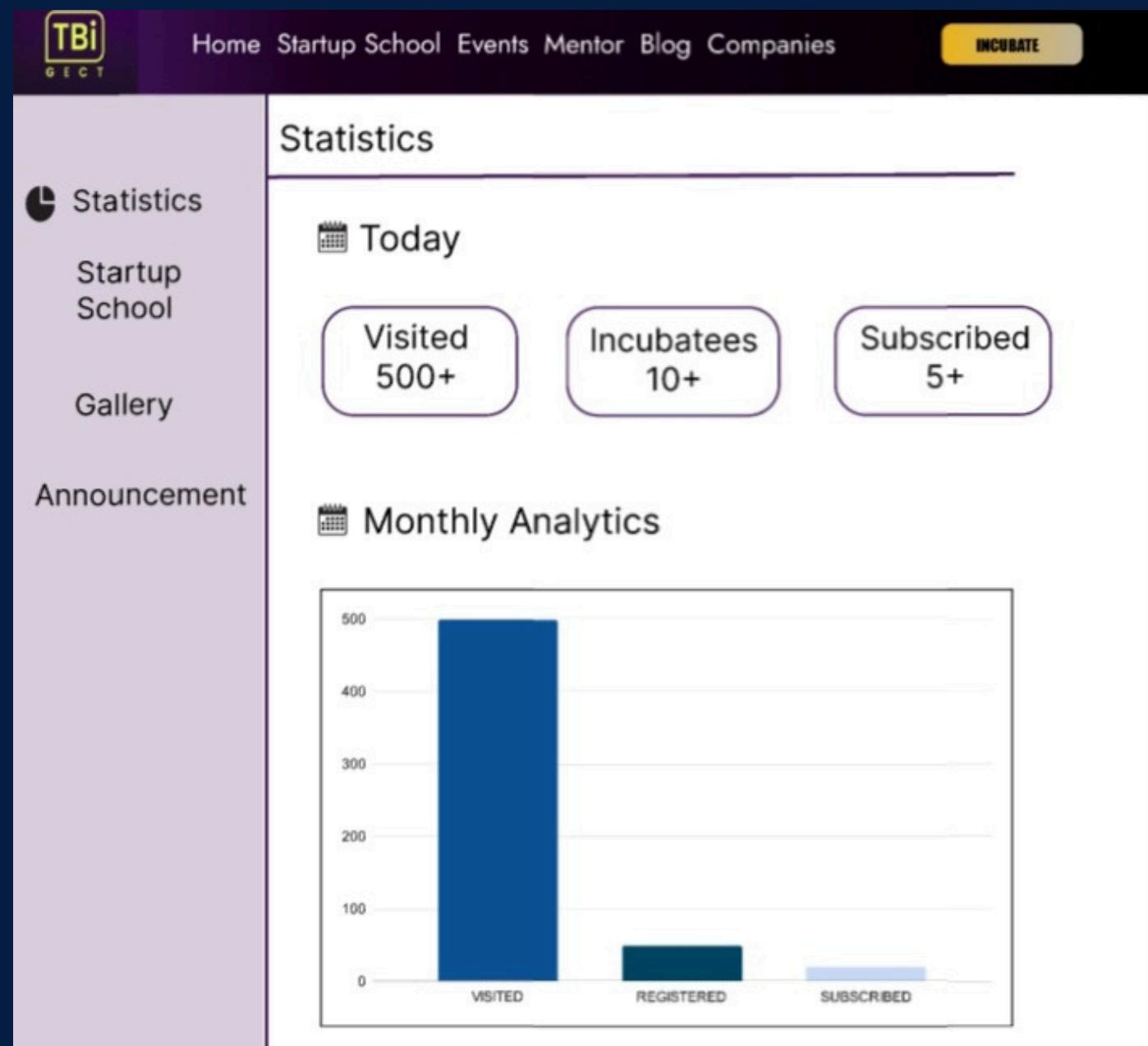
Events can be viewed by date using the calendar.

Events are sorted as Upcoming and Past Events.

The selected event is expanded and its details are visible

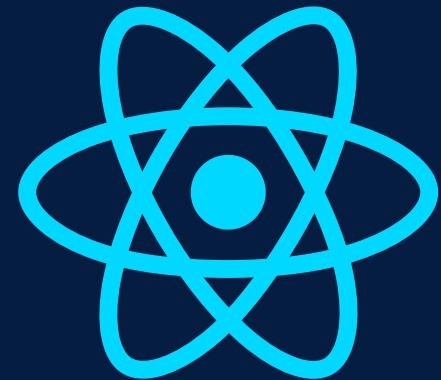
## ADMIN DASHBOARD

Admin Dashboard can be accessed on Admin Login. Admin can view Statistics, Modify (add, update, delete) details given in the Startup School, Gallery and Announcements pages. The changes are stored in the database.



# IMPLEMENTATION DETAILS

# Technology Used



React Js

**Front-end**



Firebase



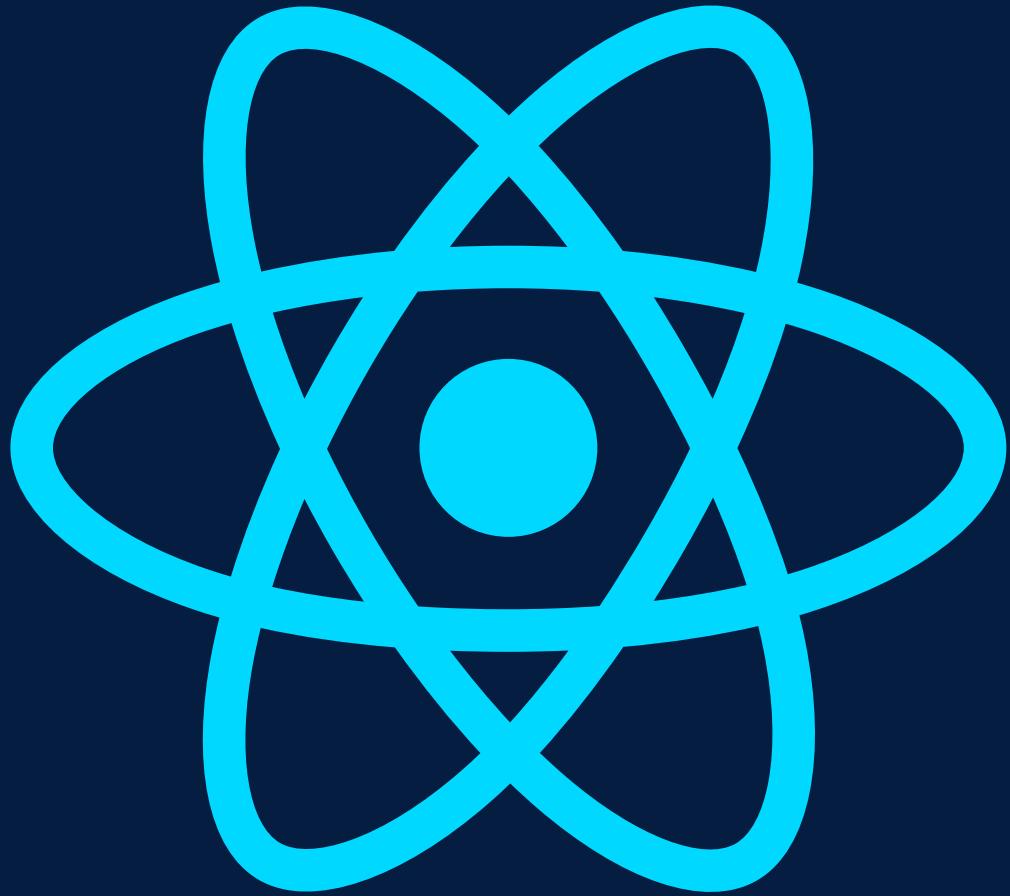
Node Js

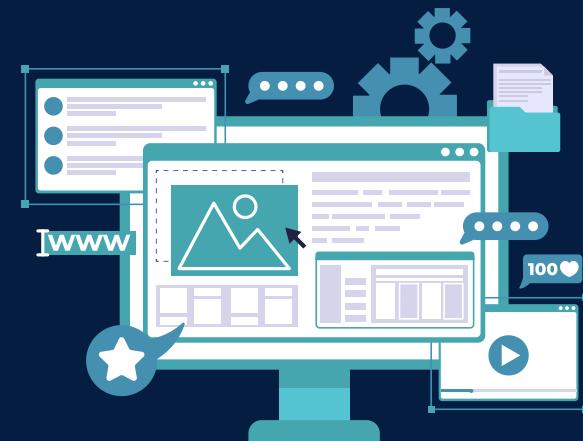
**Back-end**



# Front-end: React Js

- 1. Component-Based Architecture:** React's component-based approach enables modular development and code reusability.
- 2. Virtual DOM:** React's virtual DOM optimizes rendering performance for faster updates in dynamic applications.
- 3. Declarative Syntax:** React's declarative syntax simplifies UI logic and enhances code readability.
- 4. Community Support:** React has a vast community offering extensive documentation and libraries.
- 5. JSX Integration:** JSX allows seamless integration of UI components with application logic.

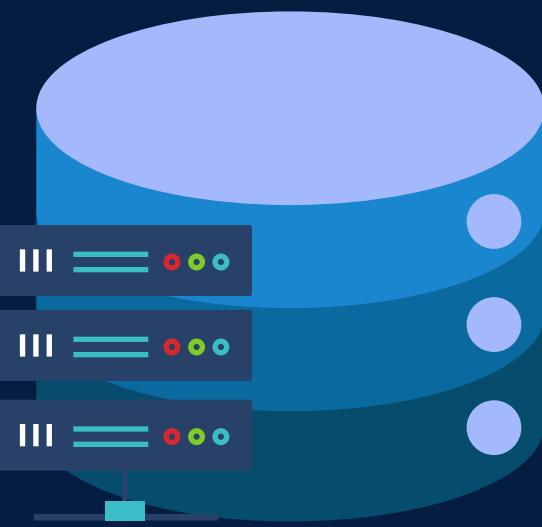




# Back-end: Node Js

- 1. JavaScript Everywhere:** Node.js enables full-stack JavaScript development, allowing code reuse between the frontend and backend.
- 2. Asynchronous I/O:** Node.js' event-driven, non-blocking I/O model ensures high scalability and performance for handling multiple concurrent requests.
- 3. NPM Ecosystem:** Node Package Manager (NPM) offers a vast ecosystem of libraries and modules, facilitating rapid development with readily available packages.
- 4. Single Language Stack:** Using Node.js for both frontend and backend reduces context switching and streamlines development workflows.
- 5. Community Support:** Node.js has a large and active community, providing extensive documentation, support, and a vibrant ecosystem of tools and frameworks.





# Database-Firebase

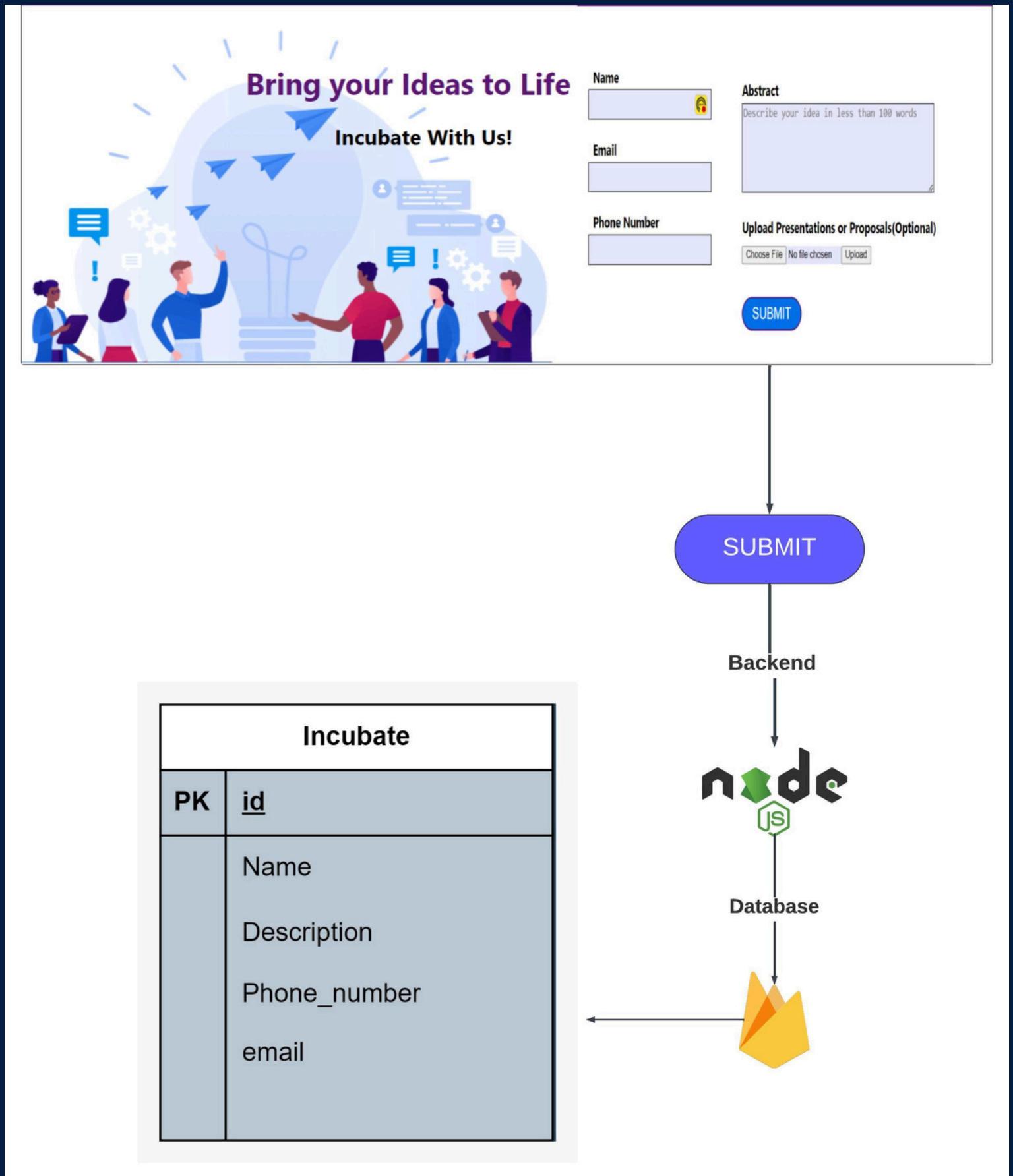
1. **Firestore:** Firebase Firestore provides scalable database functionality with real-time updates and offline support.
2. **Storage:** Firebase Storage offers secure and scalable file storage for user-generated content.
3. **Authentication:** Firebase Authentication simplifies user authentication with various methods like email/password and social logins.
4. **Cloud Functions:** Execute backend logic with Firebase Cloud Functions in response to events or HTTPS requests.
5. **Analytics:** Firebase Analytics provides insights into user behavior and app performance for optimization.
6. **Scalability:** Firebase, built on Google Cloud Platform, ensures scalability and reliability even under heavy loads.



# Architecture

## EXAMPLE : INCUBATE PAGE

- On clicking ‘INCUBATE’, the user redirects to this page.
- User enters details such as Name, Email, Phone number, Abstract (in less than 100 words) and Uploads presentation(if any).
- When user clicks ‘SUBMIT’, the data is stored in the database.
- The information in the database can then be queried and fetched when required.



# Testing

- **Unit Testing**

Validates the functionality of individual components and modules.

- **Integration Testing**

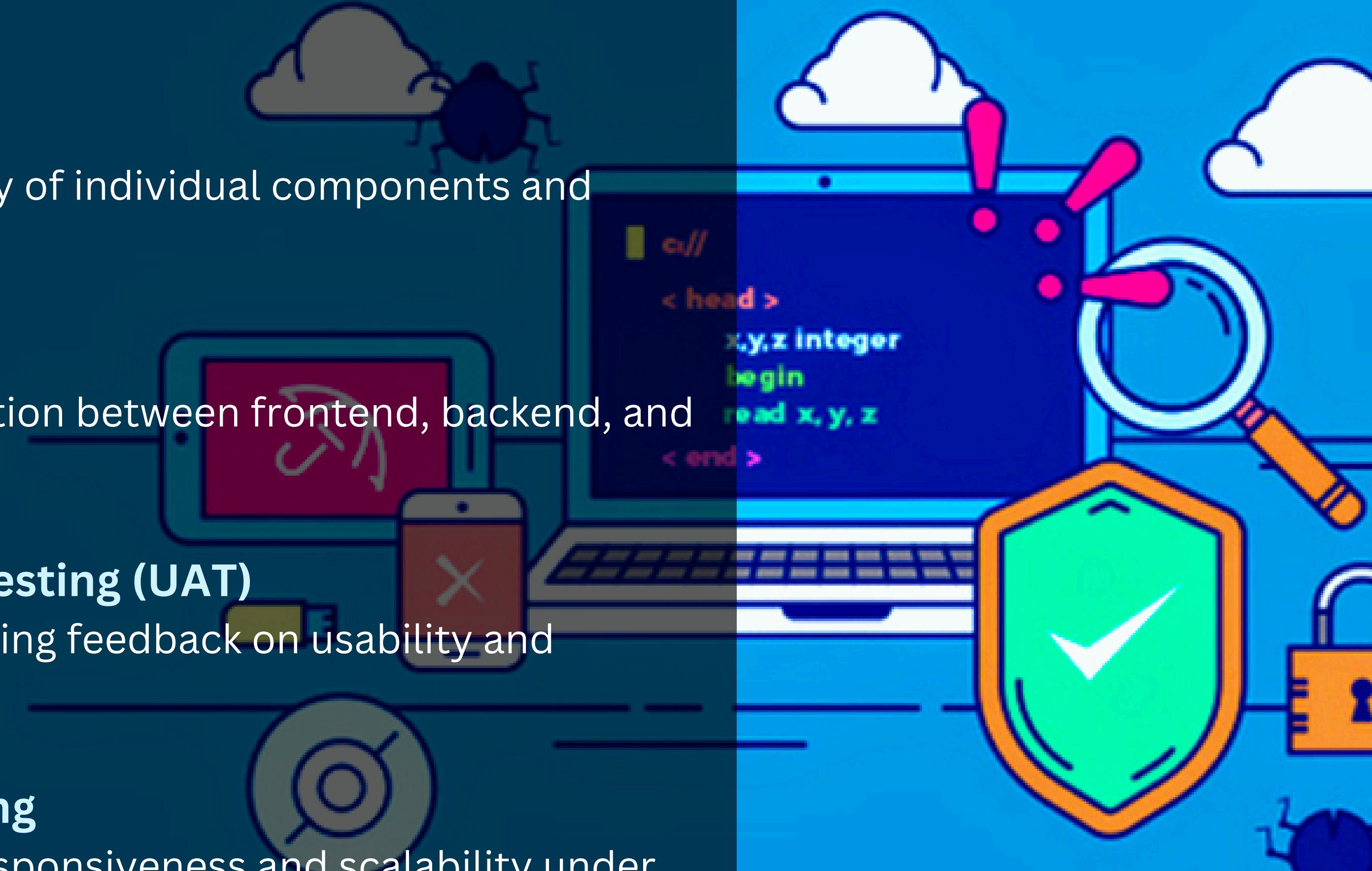
Ensures seamless interaction between frontend, backend, and database components.

- **User Acceptance Testing (UAT)**

Involves real users providing feedback on usability and functionality.

- **Performance Testing**

Assesses the website's responsiveness and scalability under varying conditions



# Results

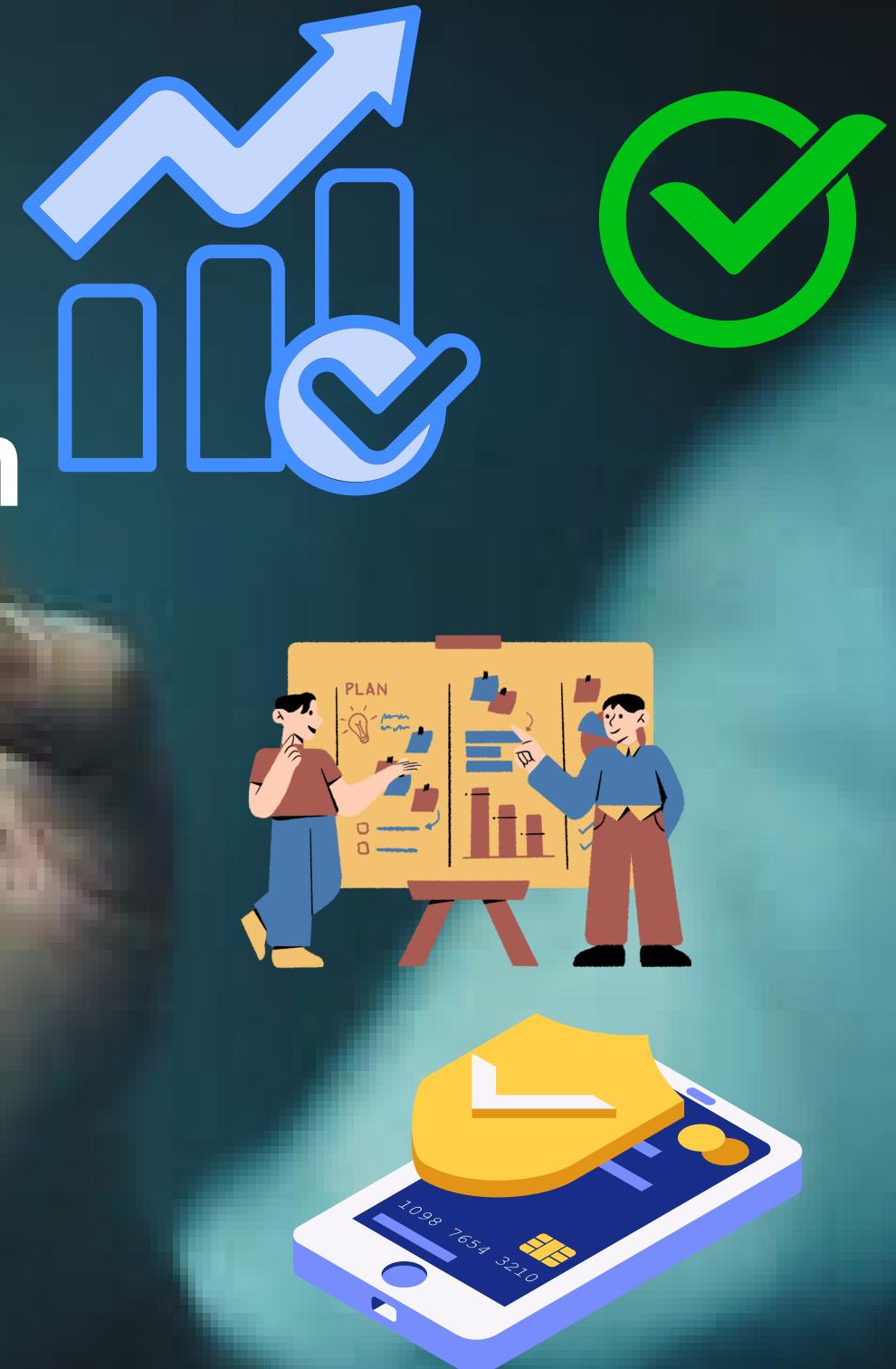
Enhanced Outreach and Visibility

Effective Networking and Collaboration

Resource Hub for Entrepreneurship

Streamlined registration and

Application Process



# Future Scope



Virtual  
Incubation  
Services



Interactive  
Community  
Forums



Enhanced  
Analytics and  
Reporting

# Conclusion

The TBI website represents a significant step towards fostering a vibrant entrepreneurial ecosystem within Government Engineering College Thrissur. Continual refinement, expansion, and innovation will be essential to realize its full potential in nurturing entrepreneurship, promoting innovation, and driving economic growth in the region.

# OUR TEAM

CHANHAL S

S6 CSE

RIMA S

S6 CSE

MEGHA  
RANJANI

S6 CSE

AISWARYA  
SATHEESH

S6 CSE

Thank You For  
Watching