

# MySpace – A Socio-academic site for Students

## FINAL PROJECT REPORT

April 20, 2022

Version 1.0



विश्वजीवनामृतं ज्ञानम्

Instructor: Dr. Santosh Singh Rathore

### Group 3 Members: -

Abhisekh Yadav	2020BCS-003
Aditya Kumar Singh	2020BCS-004
Anamika Mallick	2020BCS-075

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## Contributions

- Abhisekh Yadav (2020BCS-003)
  - Designed and implemented the backend part of the website.
  - Contributed in feasibility study, software requirement and analysis phase, project management and design phase.
  - Deployed and Tested the website.
- Aditya Kumar Singh(2020BCS-004) – Project Lead
  - Designed the backend, frontend and implemented the complete frontend part of the website.
  - Wrote and maintained all the documentations viz. Feasibility study report, SRS document, Project Management report, Design report, final project report.
  - Tested the website.
- Anamika Mallick (2020BCS-075)
  - Contributed in feasibility study, software requirement and analysis phase, project management and design phase.
  - Helped in the integration of frontend and backend.
  - Tested the website.

# 1 Introduction

## 1.1 About the Project

MySpace is a socio-academic portal for the Students of ABV-IIITM Gwalior where Students can not only get organized with their class schedule, get informed with the upcoming college events organised by various clubs, access helpful resources like books, notes, previous-year papers, etc., but also ask their academic, technical or career related doubts and get clarified by their seniors. Students can also read and post technical blogs.

MySpace attempts to make the life of Students simpler by organizing all of the things they need in one place.

The purpose of this document is to present a detailed description of “Myspace – A socio- academic site for Students”. It will explain the purpose and features of the System, the interfaces of the System, what the System will do, the constraints under which it must operate and how the System will react to external stimuli. This document is intended for both the stakeholders – anyone who is interested or may get affected by the outcome of the project and the developers of this project.

Main Technologies associated with MySpace

1. HTML5
2. CSS3
3. JS
4. React.js
5. Node.js
6. Express.js
7. Web API
8. Tailwind CSS

### 1.1.1 Database

1. MongoDB

## 1.2 Git Repository

Link for the GitHub Repository : <https://github.com/bcsabhisekh/MySpace>

Link to the GitHub profiles of Group Members:

Abhishek Yadav, 2020BCS-003: <https://github.com/bcsabhisekh>

Aditya Kumar Singh, 2020BCS-004: <https://github.com/sadityakumar9211>

Anamika Mallick, 2020BCS-075: <https://github.com/anamika1804>

The git repository has been created by Abhisekh Yadav (2020BCS-003). The name of our repository is named after our project name, MySpace. Thus, the owner of MySpace repo is Abhisekh Yadav(2020BCS-003), who has given the admin access to both the team members including Aditya Kumar Singh (2020BCS-004) and Anamika Mallick (2020BCS-075).

Due to the fact that admin access is with all the team members, we can merge pull requests on our own. There is no need to ask a particular person (say owner) to merge the branches or changes during the development of a web application and writing the code for it. However for reviewing purposes we created pull requests and merged them to the main branch after verification to avoid conflicts.

## 2 Details of Implemented Modules

### 2.1 Frontend Modules

#### 2.1.1 Node Modules

This consists of various Node Modules used in the Frontend while developing MySpace Application.

#### 2.1.2 Public Modules

##### a. Images Module

This consist of required images (.png/.jpg/.jpeg/.webp) files

##### b. Other Important Files

###### i. index.html

This consists of a single page html file which is rendered when the frontend server file is loaded.

#### 2.1.3 Source Modules

##### a. Components Module

i. **about.ejs**: This component consists of information about the website and Developer team as well as information under the mentor this project has been done.

ii. **article.ejs**: This component consists list of articles with title as well as content to stored.

iii. **bcs\_01.ejs to bcs\_008.ejs**- This component consists of the semesters in BCS batch, and Semester wise resources like books, notes, past year papers etc will be stored.

iv. **imt\_01.ejs to Imt\_010.ejs**- This component consists of the semesters in IMT batch, and Semester wise resources like books, notes, past year papers etc will be stored.

v. **img\_01.ejs to Img\_010.ejs**- This component consists of the semesters in Imgbatch, and Semester wise resources like books, notes, past year papers etc will be stored.

vi. **compose.ejs**: This component consists of a compose section for posting articles if interested.

vii. **dashboard.ejs**: This component consists of a dashboard section from which Resources, QA forum, Technical articles, schedule etc are stored.

Viii. **feedback.ejs**: This component consists of user feedback and acknowledgement.

ix. **event.ejs**: This component consists of technical contest, HIQ's, sessions and other informative events that takes place in our institute.

x. **login.ejs**: This component consists of user authentication and only via institute id provided user can access the resources available.

**Xi. register.ejs:** This component consists of new users where name, year of admission, batch if BCS,IMT,IMG password in bcrypt type will be stored.

**Xii. schedule.ejs:** This component the schedule for upcoming events, and contests are stored and updated recursively.

**Xiii. qna.ejs:** This component the questions and answers of Q&A forum will be updated displayed and stored.

## 2.2 Backend Modules

### 1. Node Modules -

This consists of various Node Modules used in the Backend while developing the MySpace Application.

### 2. Source Modules

a. app.js: dashboard

### 3. Routes Module:

```
/api/functions:get route  
/api/article: get route  
/api/compose: get route  
/api/compose: get post  
/api/feedback: get post  
/api/deletepost: get post  
/api/deleteqna: get post  
/api/about: get route  
/api/qa: get route  
/api/posts/:postId: get route  
/api/composeq: get route  
/api/composeq: get Post  
/api/composea: get route  
/api/getindex: get post  
/api/composea: get post  
/api/login: get route  
/api/logout: get route  
/api/register: get route  
/api/login: get post  
/api/register: get post  
/api/bcs1: get route  
/api/bcs2: get route  
/api/bcs3: get route  
/api/bcs4: get route  
/api/bcs5: get route  
/api/bcs6: get route  
/api/bcs7: get route  
/api/bcs7: get route  
/api/bcs8: get route  
/api/imt1: get route  
/api/imt2: get route  
/api/imt3: get route
```

```
/api/imt4: get route  
/api/imt5: get route  
/api/imt6: get route  
/api/imt7: get route  
/api/imt8: get route  
/api/imt9: get route  
/api/imt10: get route  
/api/img1: get route  
/api/img2: get route  
/api/img3: get route  
/api/img4: get route  
/api/img5: get route  
/api/img6: get route  
/api/img7: get route  
/api/img8: get route  
/api/img9: get route  
/api/img10: get route
```

### 3 Other dependencies used:

```
require('dotenv').config();
const express = require("express");
const bodyParser = require("body-parser");
const _ = require("lodash");
const ejs = require("ejs");
const mongoose = require("mongoose");
const session = require("express-session");
const passport = require("passport");
const passportLocalMongoose = require("passport-local-mongoose");
```

### 4 Terminal Commands Used

- (i) npm run server : for running the backend server localhost: 5000
- (ii) npm run client: for running the frontend server: localhost: 5000
- (iii) npm run dev: for running both frontend and backend server simultaneously
- (iv) npm run data:import: for importing data to MongoDB Account
- (v) npm run data:destroy: for destroying the data from the MongoDB Account

## 5 Testing Report

### 5.1 Unit Test Cases Information

#### 5.1.1 Backend Unit Test Cases

Unit Test Category	Unit Test Name	Unit Test Status
Backend database Modules	Users Model is valid and not throwing any error	Pass
Backend database Modules	Dashboard Model is valid and not throwing any error	Pass
Backend database Modules	Blogs Model is valid not throwing any error	Pass
Backend database Modules	Compose model is valid and not throwing any error	Pass
Backend database Modules	Schedule model is valid and not throwing any error	Pass
Backend Authorization Services	Creating User does not throw any error	Pass
Backend Authorization Services	Logging in User does not throw any error	Pass
Backend Authorization Services	Creating Password does not throw any error	Pass
Backend Authorization Services	Matching Password does not throw any error	Pass
Backend Authorization Services	Correct password validate the request	Pass
Backend Authorization Services	Wrong password invalidate the request	Pass
Backend controller	Submitting Blogs does not throw errors	Pass
Backend controller	Posting blogs does not throw any error	Pass
Backend Controller	Posting Q&A does not throw any error	Pass
Backend Controller	Posting Feedbacks does not throw any error	Pass

### 5.1.2 Frontend Unit Test Cases

Unit Test Category	Unit Test Name	Unit Test Status
Frontend Screen Module	Loading Home Screen does not throw any error	Pass
Frontend Screen Module	Loading About Screen does not throw any error	Pass
Frontend Screen Module	Loading Dashboard screen does not throw any error	Pass
Frontend Screen Module	Loading Schedule Screen does not throw any error	Pass
Frontend Screen Module	Loading Event Screen does not throw any error	Pass
Frontend Screen Module	Loading Compose Screen does not throw any error	Pass
Frontend Screen Module	Loading Q&A Screen does not throw any error	Pass
Frontend Screen Module	Loading Q&A Detail Screen does not throw any error	Pass
Frontend Screen Module	Loading Blogs Screen does not throw any error	Pass
Frontend Screen Module	Loading Blogs Details Screen does not throw any error	Pass
Frontend Screen Module	Loading Contact Us Screen does not throw any error	Pass
Frontend Screen Module	Loading New User Register Screen does not throw any error	Pass
Frontend Screen Module	Loading User Login Screen does not throw any error	Pass
Frontend Screen Module	Loading Write Blog Screen does not throw any error	Pass
Frontend Screen Module	Loading Resources Component does not throw any error	Pass
Frontend Screen Module	Loading Blog Component does not throw any error	Pass

<b>Frontend Screen Module</b>	Loading Message Component does not throw any error	<b>Pass</b>
<b>Frontend Screen Module</b>	Loading Loader Component does not throw any error	<b>Pass</b>
<b>Frontend Screen Module</b>	Loading Logout Component does not throw any error	<b>Pass</b>
<b>Frontend Screen Module</b>	Loading Header Component does not throw any error	<b>Pass</b>
<b>Frontend Screen Module</b>	Loading Footer Component does not throw any error	<b>Pass</b>

## 5.2 Testing Coverage

### 1. Backend Testing Coverage

In order to ensure the testing backend of our software engineering we tend to use the “Coverage Based Testing”. The methodology used is maximum “Statement & Branch Coverage Methodology” which has been chosen to cover all the files used in the backend implementation of MySpace.

### 2. Frontend Testing Coverage

In order to ensure the testing frontend of our software engineering we tend to use the “Coverage Based Testing”. The methodology used is maximum “Statement & Branch Coverage Methodology” which has been chosen to cover all the files used in the frontend implementation of MySpace.

## 6 Screenshots of Final Web Application

Landing Page :-

The screenshot shows the landing page of the MySpace website. At the top, there is a navigation bar with links for "MySpace", "Resources", "QA Forum", "Technical Articles", "Schedule", "Events", and "About". On the far right of the navigation bar are "Sign Up" and "Sign In" buttons. Below the navigation bar is a large image of a library aisle with bookshelves and hanging light fixtures. To the right of the image, the word "MySpace" is displayed in a large, bold font, followed by the subtitle "A socio-academic site for Students". A brief description follows, stating that MySpace is a socio-academic site for students of ABV-IIITM Gwalior, providing resources, forums, and event information. Below this text are two buttons: "Sign Up" and "Sign In". Further down the page, under the heading "Features & Utilities", there are six cards, each with an icon and a brief description:

- Authentication**: The Students need to Sign Up with their Institutional E-mail to access various features of the website.
- Resources**: Students after signing in to the dashboard can access valuable resources like notes, PYQ, lecture slides.
- QA Forum**: In QA Forum, students can ask and answer academic, technical and coding related questions.
- Technical Articles**: In Technical Articles section, students can post articles based to their technical interests. Others can read and upvote their articles.
- Schedule**: Here the students can view their updated class schedules after Signing In to the website.
- Events**: In this section of the website, students can view the details of upcoming events organised by various Institute clubs.

At the bottom of the page, there are "Sign Up" and "Sign In" buttons.

## Landing Page Continued...

### Our Team - Group 3

This is a Software Engineering Lab Project built under the supervision of Dr. Santosh Singh Rathore.



**Dr. Santosh Singh Rathore**  
Assistant Professor, CSE, IIITM



**Abhishek Yadav, 2020BCS-003**  
Student, IIITM

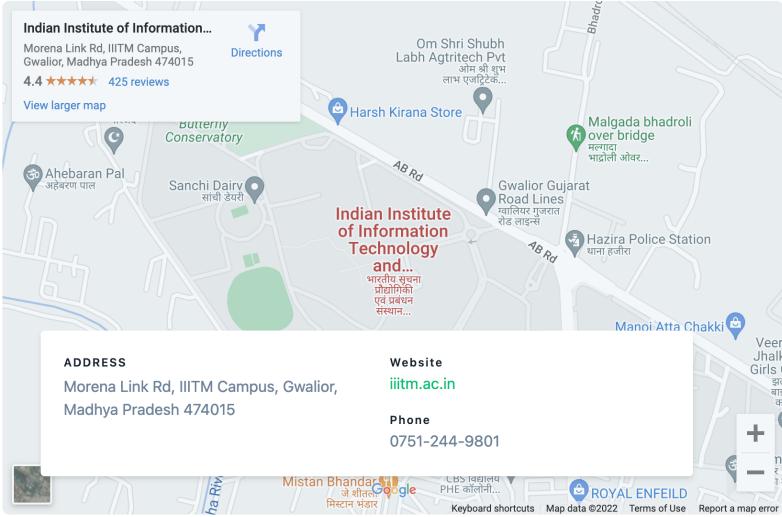


**Aditya Kumar Singh, 2020BCS-004**  
Student, IIITM



**Anamika Mallick, 2020BCS-075**  
Student, IIITM

### Contact Us



**ADDRESS**  
Morena Link Rd, IIITM Campus, Gwalior, Madhya Pradesh 474015

**Website**  
[iiitm.ac.in](http://iiitm.ac.in)

**Phone**  
0751-244-9801

**Feedback**

Name

E-mail

Message

**Submit**

Please submit your feedback or complaint here! We'll get back you by email within two days.



MySpace

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[!\[\]\(0faa8774582ac47ef5fbd6bafa9436bd\_img.jpg\)](#) [!\[\]\(75329fe282cfabfa3caefd3cdaff4799\_img.jpg\)](#) [!\[\]\(cbebdabbc2eec52a2a8acbcee2795d22\_img.jpg\)](#) [!\[\]\(be2641930427ea73e62c7a54fe6eff87\_img.jpg\)](#)

## Login Page :-

**Login to MySpace**

Institutional E-Mail  
bcs\_2020004@iitm.ac.in

Password  
\*\*\*\*\*

**Login**

OR

Not yet Registered? [Sign Up](#)

## Sign Up Page: -

Welcome to MySpace

**Resources**  
Students after signing in to the dashboard can access valuable resources like notes, PYQ, lecture slides.

**QA Forum**  
In QA Forum, students can ask and answer academic, technical and coding related questions.

**Technical Articles**  
In Technical Articles section, students can post articles based to their technical interests. Others can read and upvote their articles.

**Schedule**  
Here the students can view their updated class schedules after Signing In to the website.

**Events**  
In this section of the website, students can view the details of upcoming events organised by various Institute clubs.

**Sign Up with MySpace**

Full Name

Institutional E-Mail

Year

--Select Batch--

Password

**Create account**

OR

Already Registered? [Log In](#)

## Student Dashboard after login: -

MySpace Logout

Resources QA Forum Technical Articles Schedule Events About

Browse Resources

- Semester I >
- Semester II >
- Semester III >
- Semester IV >
- Semester V >
- Semester VI >
- Semester VII >
- Semester VIII >
- Semester IX >
- Semester X >

THIS IS YOUR MYSPACE DASHBOARD

Welcome, Aditya Kumar Singh  
bcs\_2020004@iitm.ac.in

From Dashboard you can navigate to all the sections of MySpace website. You can browse and search for resources. Below you can find your recently asked/answered questions and written articles.

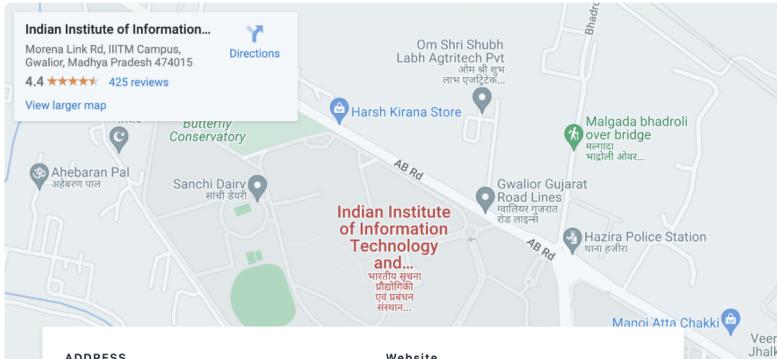
**Question-Answers**  
Click on View to see all the Questions along with their Answers that you had posted.  
[View →](#)

**Technical Articles**  
Click on View to see all the Articles that you had posted.  
[View →](#)

## Contact Us

Indian Institute of Information...  
Morena Link Rd, IITM Campus,  
Gwalior, Madhya Pradesh 474015  
4.4 ★★★★★ 425 reviews  
[View larger map](#)

Directions



**ADDRESS**  
Morena Link Rd, IITM Campus, Gwalior,  
Madhya Pradesh 474015

**Website**  
[iitm.ac.in](http://iitm.ac.in)

**Phone**  
0751-244-9801

Mistian Bhandar Google PHE कॉलाइन ROYAL ENFIELD  
Keyboard shortcuts Map data ©2022 Terms of Use Report a map error

**Feedback**

Name

E-mail

Message

**Submit**

Please submit your feedback or complaint here! We'll get back you by email within two days.

MySpace | © 2022 MySpace myspace.iitm@gmail.com f t i n

## *Q&A Homepage: -*

Hello, Aditya Kumar Singh

You can ask question clicking the Ask button

1. What is the difference between Ethereum and Bitcoin and which one's better? [Write the Answer](#)

2. What are header guards in C++ and why do we use them? [Write the Answer](#)

3. What's the average tenure of an engineer at a big tech company? [Write the Answer](#)

## *Technical Articles Homepage: -*

Hello, Aditya Kumar Singh

You too can write and Post Technical articles using the Write button!!

1. C++ Library Functions

Implementations Unix-like systems typically have a C library in shared library form, but the header ...[Read More](#)

2. Header files in C and C++

In C++ and other similar languages, the names of program elements such as variables, functions, clas ...[Read More](#)

*About Page: -*

The screenshot shows a website for a Software Engineering Lab Project. At the top, there is a navigation bar with links: MySpace, Resources, QA Forum, Technical Articles, Schedule, Events, and About. The 'About' link is underlined, indicating it is the current page. Below the navigation bar, the title 'OUR TEAM - Group 3' is displayed. A brief description follows: 'This is a Software Engineering Lab Project built under the supervision of Dr. Santosh Singh Rathore, Assistant Professor, CSE, IIITM.' Three team members are listed with their profile pictures, names, and student IDs:

- Abhisekh Yadav**  
Student, 2020BCS-003
- Aditya Kumar Singh**  
Student, 2020BCS-004
- Anamika Mallick**  
Student, 2020BCS-075

Below the team section, there is a heading 'Project Documents' followed by five document links, each with a green checkmark icon:

- Software Feasibility Report
- Software Requirements & Specification Document
- Software Project Management Report
- Software Design Document
- Final Project Report

At the bottom of the page, there is a footer with the MySpace logo, the copyright notice '© 2022 MySpace myspace.iiitm@gmail.com', and social media icons for Facebook, Twitter, Instagram, and LinkedIn.

## 7 Results and Challenges

This website is at the moment have some core features and functionalities but due to the constraint of time and unforeseen risks(technical and project) some ambitious features like “searching resources” and “Google Sign In” could not be implemented successfully on time. However, even with this limited functionality the website still be used by the students.

### 7.1 Challenges

- Making the website responsive for all devices was a huge challenge. Although we have tried to make the website responsive there might still be some imperfection.
- Learning new technologies and frameworks like TinyMCE, Tailwind CSS, node.js and MongoDB.

## 8 Conclusions

MySpace is a socio-academic portal designed for the Students of ABV-IIITM Gwalior where Students can not only get organized with their class schedule, get informed with the upcoming college events organised by various clubs, access helpful resources like books, notes, previous-year papers, etc., but also ask their academic, technical or career related doubts and get clarified by their seniors. Students can also read and post technical blogs.

### 8.1 Limitations

There is no measures taken to ensure that the student registering has used his/her institute allotted email Id or if it is a valid email Id or not. The details of author is not shown in the Q&A section and Technical Articles section. At the present moment, the website doesn't contain much resources and schedule for many batches.

### 8.2 Scope for Future Work

The following things can be implemented in the future:-

- Google Sign In (using Google OAuth 2.0)
- Add search functionality in the resources section.
- Upvote and Downvote functionality
- Displaying the name and other details of author for a specific post
- Adding the delete functionality for a post.