



Project Report

ON

“MMC Blog and Notice System”

Submitted To

Department of Computer Science and Application

Mechi Multiple Campus

In partial fulfillment of the requirements of Project III (CACS 452)

Of

Bachelors of Computer Application

Submitted By

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6-2-0002-0004-2017

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Tribhuvan University

Faculty of Humanities and Social Sciences

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Supervisor's Recommendation

A project entitled “MMC Blog and Notice System” has been submitted by Ashish Neupane and Pramisa Poudel in the partial fulfillment of the requirements for the degree of Bachelor in Computer Application (BCA) of Tribhuvan University.

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Letter of Approval

This is to certify that this project report prepared by **Mrs. Pramisa Poudel and Mr. Ashish Neupane** in partial fulfillment of the requirements for the degree of Bachelor of Computer Application has been evaluated. In our opinion, it is excellent, and is satisfactory in the scope and quality as an internship report for the required degree.

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ABSTRACT

Most educational institutions manually create their notices by using paper based system and human resources to work on it. All institutions create notices manually and stores at notice board which may not be accessed the students. It means student don't know when the notices are created. Unfortunately, there is no such generic system at all for creating and maintaining class notices which can be used by the educational institutions. The main problem that occurred during the project is to create and maintain the databases of different entities involved in this process. The database contains the information about notices, images, articles, blog, tag, users etc.

The MMC Blog and Notice System for colleges that can be accessed by the organization and students. Teachers and other staffs can be accessed information with login. MMC Blog and Notice System helps to get notices regarding public holidays, vacations, exam routines, leaves, results, any extracurricular activities and ongoing activities which are conducted in our college. Students can get notices easily whenever they needed.

MMC Blog and Notice System is such a system that provides services for an educational institution to make efficient and effective access of notices related to institution. Easy Notice Management, Easy Exam Routine and Result Process.

In a MMC Blog and Notice System, we can post and view any information related to the college. The system also allows general users to get information through the android app. The information is made using the latest technologies and helps to make decision making a lot faster, more effective, and easier than ever before. Also helps to improve the overall quality of education of the institution.

Keywords: Blog, Notice, College Management System, Web Application, Mobile Application.

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We would like to express our gratitude to Tribhuvan University for providing us a great opportunity of collecting. Lastly, we want to thank our parents and friends and all known unknown individuals who helped us in various way during our project period. With this project, we got a chance to collect real world work experience as a software developer. we are thankful to them for all their support, helps guidance, motivation, and corrections.

We have tried to mention and give credit to everyone who helped us in this project, along with the sources from where we collected the required data and information which supported this project. Yet, there may be some unintended errors and some sources or individuals may have been missed to mention. We shall feel obligated if they are brought to our notice.

2022/06/30

Ashish Neupane

6-2-0002-0004-2017

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6-2-0002-0023-2017

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List of Abbreviations

MVC: Model View Controller

CSS: Cascading Style Sheet

HTML: Hyper Text Markup Language

C#: C Sharp

MySQL: My Structured Query Language

Chapter 1 Introduction

1.1 Introduction to MMC Blog and Notice System

Every educational institution in Nepal has various notices regarding to the colleges and other activities related to college. The MMC Blog and Notice System is a system that manages notices and blog of the college. In a MMC Blog and Notice System, we can post and view any information related to the college. The system also allows general users to get information through the android app. Blog contains the information about various things related to Technology, Education, News, Articles, Sports, Entertainment and ongoing college activities. Students can gather various information from the system as well as give their feedback and post the information related to the education. Students can post their views and thoughts and analyze themselves. The students are kept updated each time with this system for college is uploaded based on their preferences with respect to the department through this system. This system helps to create notices about leave, routines of the exam, results, vacations, public holidays, other extra-curricular activities etc. which are conducted by the college. This System is one of the application to improve the usage of notice and blog of the college by making it available online. Users can access the notifications and articles quickly not only in the particular premises, also wherever and whenever they need to know.

1.2 Problem Statement

Most educational institutions manually create their notices by using paper based system and human resources to work on it. All institutions create notices manually and stores at notice board which may not be accessed the students. It means student don't know when the notices are created. Unfortunately, there is no such generic system at all for creating and maintaining class notices which can be used by the educational institutions. The main problem that occurred during the project is to create and maintain the databases of different entities involved in this process. The database contains the information about notices, images, articles, blog, tag, users etc. The android app is aimed to solve the problem of unfeasibility of the notices. So maintain all these things is a challenge for us. And another challenge is that the user can post unnecessary information. So we make the admin approval to post notice or any information in blog.

The MMC Blog and Notice system will help educational institutions to create and maintain the notices in a more effective and efficient way. This system will help to provide information to students in only one site which means blog. It helps people to access important information about the information with ease.

1.3 Objectives

The objectives of our project are given below:

1. To develop a web based system and mobile application that allows users to create, view and maintain the notices of the college.
2. To develop the blog of the college, where we can post anything related to college.

1.4 Scope and Limitation

Scope of MMC Blog and Notice System:

MMC Blog and Notice System involves a number of tasks such as:

- Producing notices.
- Collect, transmit, process, storage, maintenance and update the information etc.
- Manage the information about notices and blog created within the structure of our college.
- Responding to inquiries.

The purpose of our project is to work towards satisfying the information needs of everyone in the collages. It means providing the relevant information to those who need it.

Limitation of MMC Blog and Notice System

Some of the limitation of MMC Blog and Notice System is given below:

- Connection to the internet is mandatory,
- It requires computer and mobile literate personal,
- Only teachers, students and other staff are allowed to login to the system.
- It requires smart phones.

1.5 Development Methodology

We have chosen Incremental Method for developing our system. Incremental Model is a process of software development where requirements divided into multiple standalone modules of the software development cycle. In this model, each module goes through the requirements, design, implementation and testing phases.

The idea behind choosing this development method are:

- To develop prioritized requirements first.
- Our project has a lengthy development schedule. So to improve gradually, incremental model is best.
- Easier to manage risk.
- Lowers initial delivery cost.
- Generates working software quickly during software life cycle.
- It is easier to test and debug during a smaller iteration.

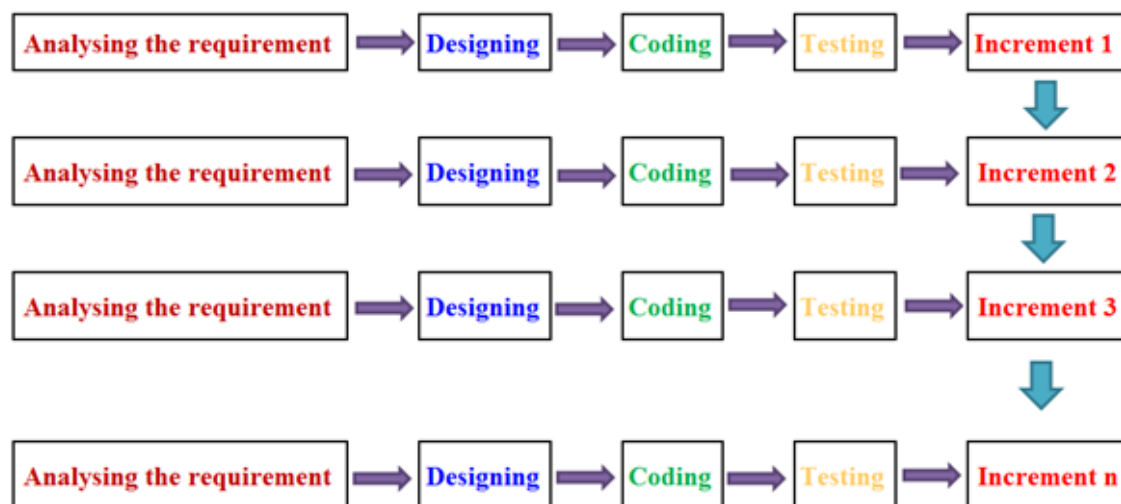


Figure 1 Development Model Diagram

1.6 Member Roles

Both of members are devoted to complete this project. Both of us are involved in building the project and also in preparing the documentation work.

Work Division in our project:

Table 1 Member Roles

Front End		Back End	
Views App	Plugins	Controller Services Api Documentation	Database Tests Repository Documentation
Ashish Neupane	Ashish Neupane	Ashish Neupane	Pramisa Poudel

1.7 Report Organization

This document contains 5 chapter which are described below:

Chapter 1 deals about general introduction of the system. It answers “what the system is?”, “What this system does?” It also states problem of statement what existing problem lacks. Objective of the project, scope and limitation of the project and project features in detail.

Chapter 2 contains two sections: Background Study and Literature Review of the project. It describes the fundamental theories of the project, the idea behind the project, general concept and terminologies related to the project. The second section has reviews related to similar projects, their theories and research done by the project researchers.

Chapter 3 is system analysis. It shows how the system is built, which system development model is used. Requirement is specified, both functional and nonfunctional. It also discusses about feasibility study of the project. It consists system design. It consists of heart of this project. Different diagrammatic representation of the system like system architecture, context diagram and data flow diagram, use case diagram, sequence diagram, state diagram, class diagram, database design, UI mechanism are drawn here.

Chapter 4 is System development and implementation. How the system is developed? Front end tool backend tool is mentioned here. Operating environment and hardware requirement is mentioned here. Built product is tested, implemented and result is analyzed.

Chapter 5 is about lesson learnt, conclusion and future enhancement consist of what the project member concluded and future enhancement consists of additional features in upcoming days.

Chapter 2 Background Study and Literature Review

2.1 Background Study

Today everything is based on computer system. This is the document of the project for developing a Notice and Blog system for colleges. It consists of the current background of the college and problem having due to present system and now we are going to overcome those matters through this proposed system.

After gathering requirements, we have found that the teachers and students are using a manual and traditional file-based system for their college related work. They are keeping a huge number of files to handle notices about leaves, exam's routines, holidays, extra activities, results etc. Search for a record in the file system is really harsh. Although they are not well secured there is a probability of getting damaged due to fire or any kind of physical harm.

Pros of Traditional Method

Only one advantage of this traditional method is that it is less expensive since it does not require any computer system.

Cons of Traditional Method

Since there are many cons in that traditional system, here some of them are mentioned:

- Possibility of damage of data.
- Potential less quality of readability.
- If store faced any accident, all the data will be lost. (No Possible Backup option).
- Time consuming.
- Possibility of redundancy of data.
- Impossible to highlight or comment on previous records.

The project aimed to build a fully functional system in order to achieve the efficiency in the daily colleges activities. The overall mission of the system development is to manages the notices and blog of the college where any user can get the college information easily and also post the important information there quickly. The user can get the notification about any update.

2.2 Literature Review

College blog and notice system is a widely explored system. There have been numerous creations of systems such as this within campuses. As [1] Describes, there are multiple benefits of a blog system. Specially in colleges. There have been multiple projects submitted in Tribhuvan University such as [2]. However, we could not find any system that had both blogging and notice board feature. Implementation of notice board system is essential to a campus. [3] describes the importance of notice board system. It explains the benefits of installing real time notice board system such as : “Space Constraints” and “Waste of sanitary”. As quoted in [3], notices should be available in short period of time to serve their purpose. A real time notice system achieves that. Real time notice board systems may include “Email notifications”, “Push notifications” and “Sms services”.

College blogging system may be a rare setup in colleges. It was hard to find any colleges/projects which allowed students to use a campus blog directly. As [4] describes the benefits of students to blog, it becomes clear to us that a blogging system may not be just a essential for college staffs. [4] Quotes “*Blogging broadens students’ perspectives and connects them to the world.*” A college blogging system also allows students to develop a habit of writing. [4] Also mentions that there are bad sites, pornography and inappropriate contents in a blog.

[5] is more of a technological standpoint of this research. It explains the methodologies, programming languages and another tools that should or could be used for such systems. They mention usage of markup and stylesheet languages and backend language and frameworks for such systems. They include:

- Python
- Django
- CSS
- Html
- JavaScript

[5] also mentions essential pages for a blogging system such as:

- Home page
- Login/Signup page
- Post
- Blogs

[1] <http://desarrolloweb.dlsi.ua.es/blogs/benefits-of-blogs>, "benifits of blogs," [Online].

[2] A. Agarwal, A. Acharya and M. Sharma, 2069. [Online]. Available: <https://pdfcoffee.com/project-proposal-on-online-notice-board-pdf-free.html>.

[3] Edecofy. [Online]. Available: <https://www.edecofy.com/blog/benefits-of-real-time-institute-notice-management/>.

[4] D. Susan, "Why I want my students to blog," 22 October 2012. [Online]. Available: <https://www.gettingsmart.com/2012/10/22/10-reasons-why-i-want-my-students-blog/>. [Accessed 2022].

Chapter 3 System Analysis and Design

3.1 System Analysis

3.1.1 Requirement Analysis

i) Functional Requirement

- System should be able to keep records of notices which are posted by teachers.
- The users can post notices or important information regarding college.
- Users can search notices or any information at any time.
- Notices can be updated and deleted.
- Users can get articles about college.

Function Requirement Using Use Case Diagram:

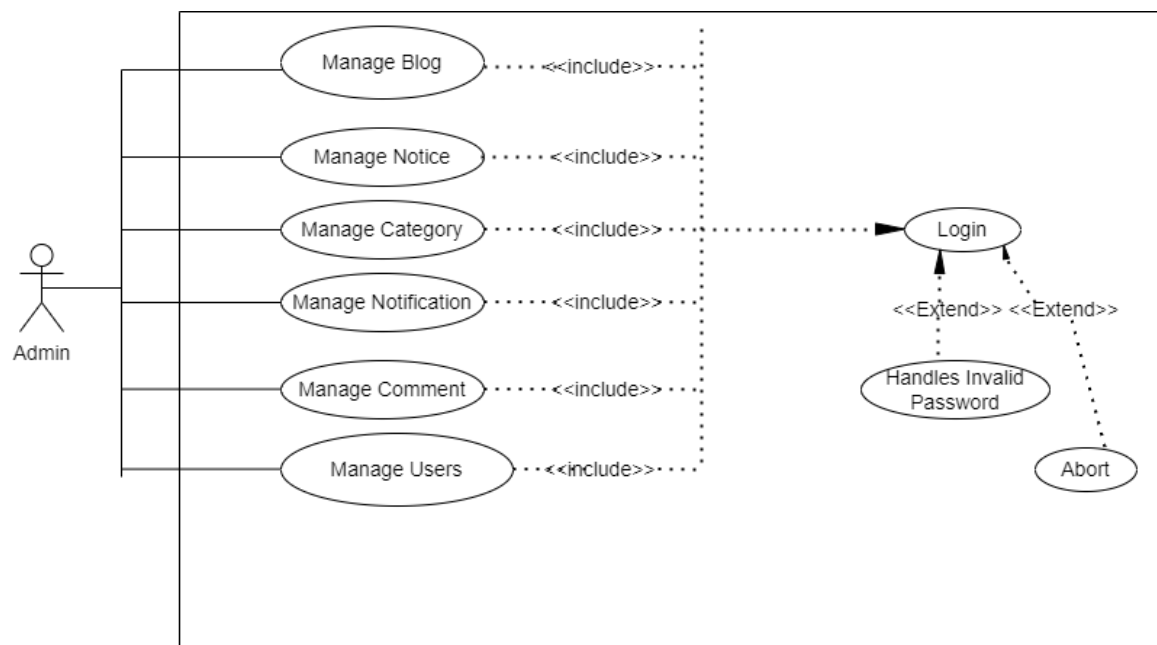


Figure 2 Use Case Diagram of Super Admin

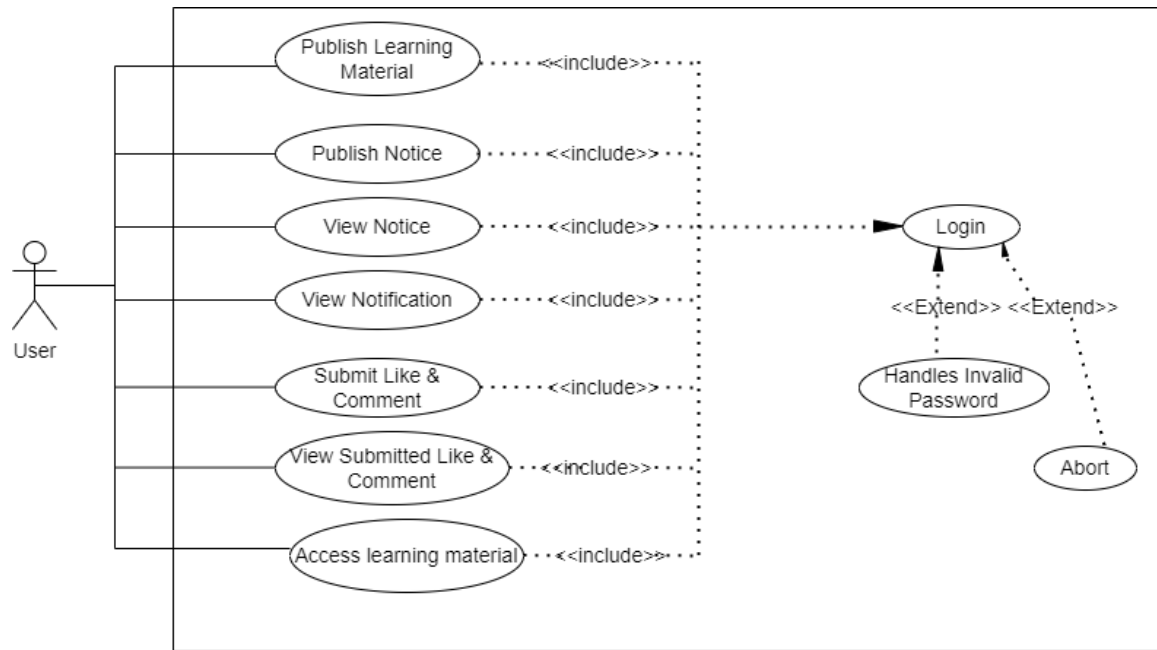


Figure 3 Use Case of User

ii) Non Functional Requirement

- Availability.
Even if the system unexpectedly gets crashed data of the system will not be lost.
- Security
Unauthorized access in the departmental store management system is restricted.
- Reliability
Simple user interface and help function makes this system less training time to use.
- Standards Compliance.

3.1.2 Feasibility Study

i) Technical Feasibility Study

System is technically feasible as the requirement for development of system easily accessible. Necessary hardware and software required for development is available. The system will be easy to maintain the technical staff. So, the system is technically feasible.

- Can the work for the project be done with current equipment existing software technology & available personnel?
- Can the system be upgraded if developed?
- If new technology is needed, then what can be developed? This is concerned with specifying equipment and software that will successfully satisfy the users requirement.

The technical needs of the system may include:

Front-end and Back end selection

An important issue for the development of a project is the selection of suitable front-end and back-end. When we decided to develop the project we went through an extensive study to determine the most suitable platform that suits the needs of the organization as well as helps in the development of the project. The aspects of our study included the following factors.

Front end selection

- Scalability and extensibility.
- Feasibility.
- Robustness.
- It must have a graphical user interface that assists employees that are not from an IT background.
- According to the organization& requirements and the culture.
- Must provide excellent reporting features with good printing support.
- Platform independent.
- Easy to debug and maintain.
- Easy to debug and maintain.
- Event-driven programming facility.
- Front end must support some popular back end like Oracle 10g.

According to the above-stated features we selected ASP.NET core MVC, HTML, CSS bootstrap, and jQuery as the front-end for developing our project.

Back end selection

- Multiple user support.
- Efficient data handling.
- Provide inherent features for security.
- Efficient data retrieval and maintenance
- Stored procedures
- Popularity.
- Operating System compatible.
- Easy to install.
- Various drivers must be available.
- Easy to implant with the Front-end.

According to the above-stated features, we selected MySQL and C# as the backend.

Technical feasibility is frequently the most difficult area encountered at this stage. It is essential that the process of analysis and definition be conducted in parallel with an assessment of technical feasibility. It centers on the existing the computer system (hardware, software, etc.) and to what extent it can support the proposed system.

ii) Operational Feasibility Study

A proposed system is beneficial only if it can be turned into an information system that will meet the operational requirement of an organization. The whole purpose of computerizing is to handle the work much more accurately and efficiently with less time consuming. Another important fact to be regarded is the security control, which is handled by the proposed system. The points to be considered are:

- What changes will be brought with the system?
- What organization structures are disturbed?
- What new skills will be required? Do the existing staff members have these skills? If not, can they be trained in due course of time?

iii) Economic Feasibility Study

The system is economically feasible and cost effective. A computerized system work equivalent to multiple manual workers and the system secures the personal transaction and reduces the cost also. The financial and the economic questions during the preliminary investigation are verified to estimate the following:

- The cost to conduct a full system investigation.
- The cost of hardware and software for the class of application being considered.
- The benefits in the form of reduced cost.
- The proposed system will give the minute information; as a result, the performance is improved which in turn may be expected to provide increased profits.
- This feasibility checks whether the system can be developed with the available funds.

iv) Schedule Feasibility Study

This assessment is the most important for project success; after all, a project will fail if not completed on time. In this chart it will estimates how much time the project will take to complete.

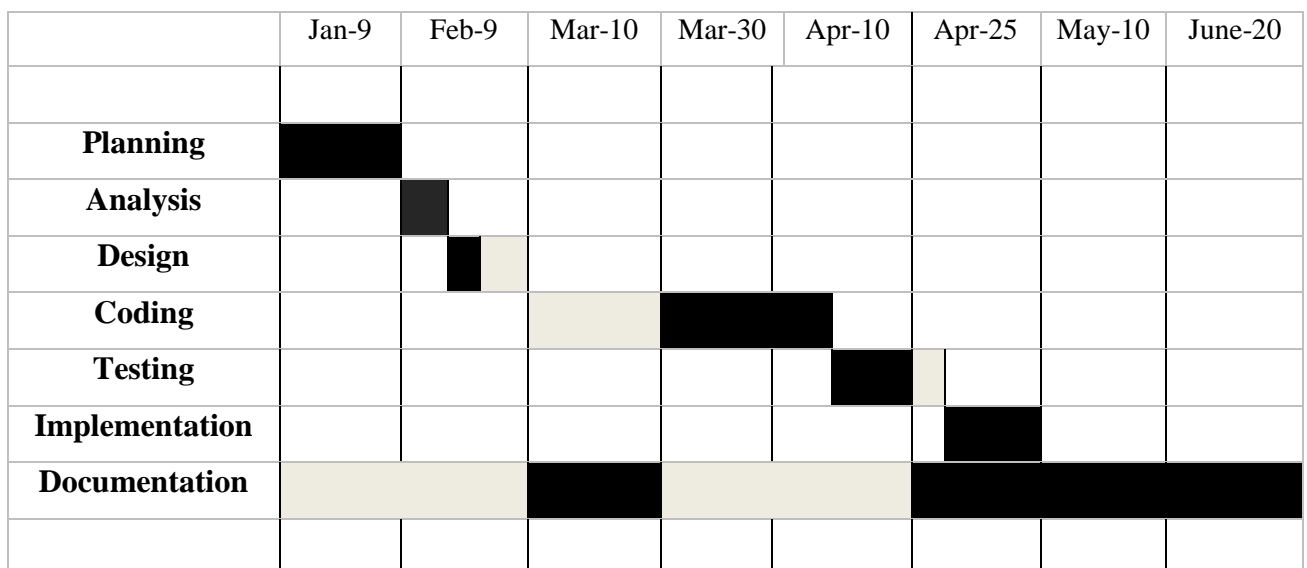


Figure: Gantt Chart of Ashish Neupane

	Jan-9	Feb-9	Mar-10	Mar-30	Apr-10	Apr-25	May-10	Jun-20
Planning								
Analysis								
Design								
Coding								
Testing								
Implementation								
Documentation								

Figure: Gantt Chart of Pramisa Poudel

3.1.3 Object Modelling using Class Diagrams

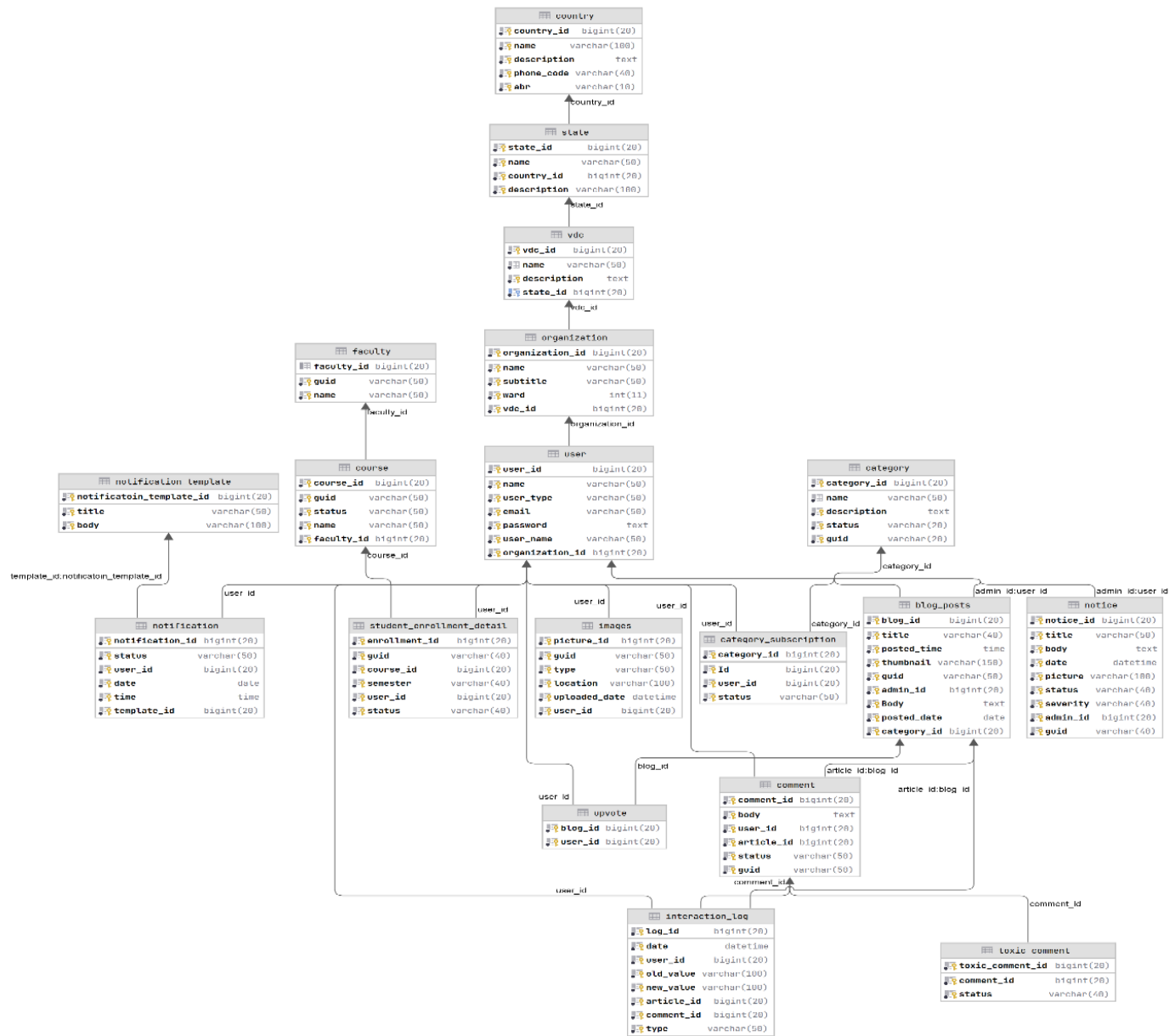


Figure 4 Object Modeling Class Diagram

3.1.4 Dynamic Modelling using State and Sequence Diagrams

i. State Diagram of MMC Blog and Notice System

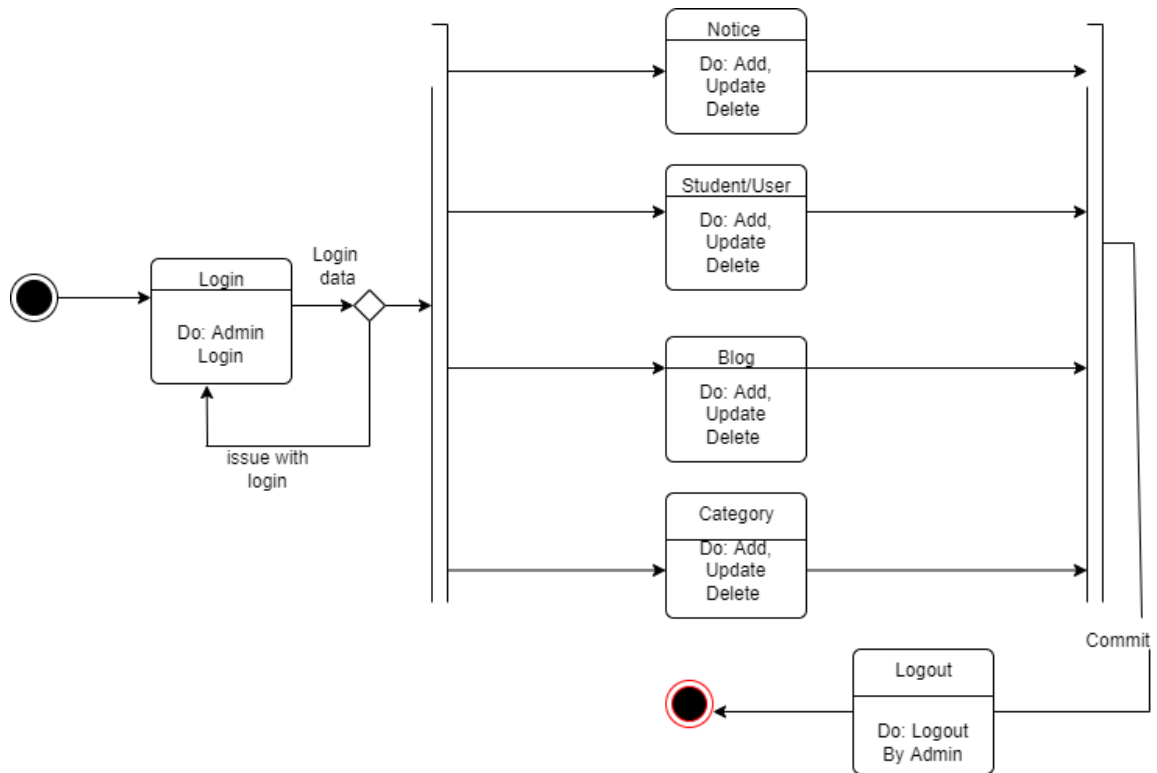


Figure 5 State Diagram of Admin

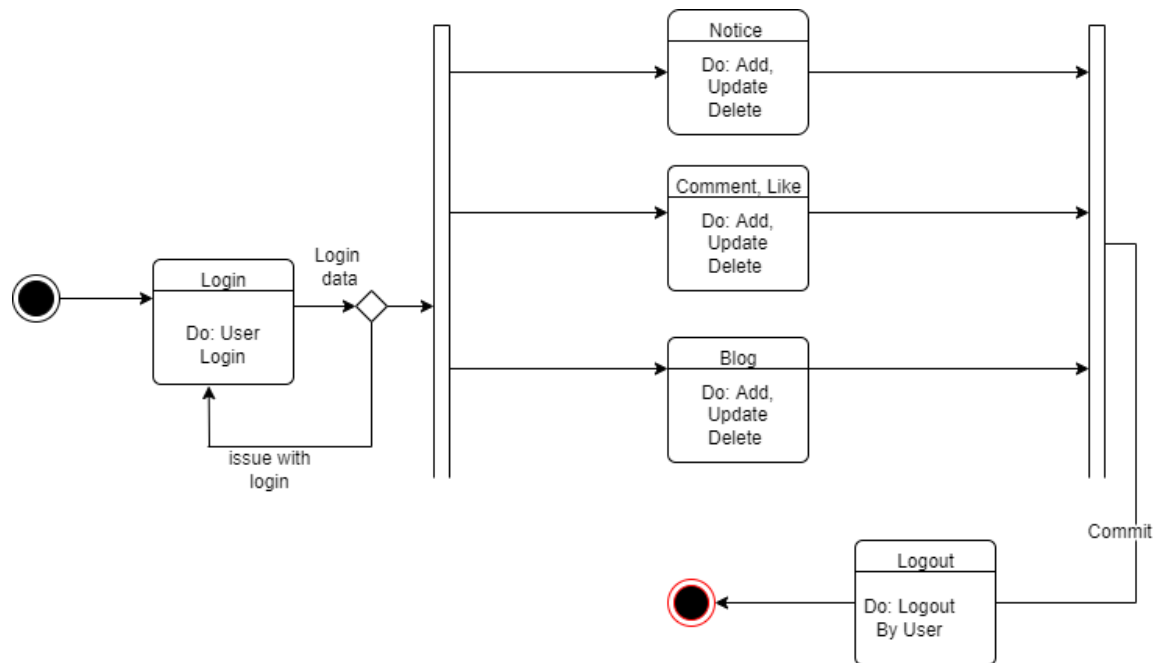


Figure 6 State Diagram of User

ii. Sequence Diagram pf MMC Blog and Notice System

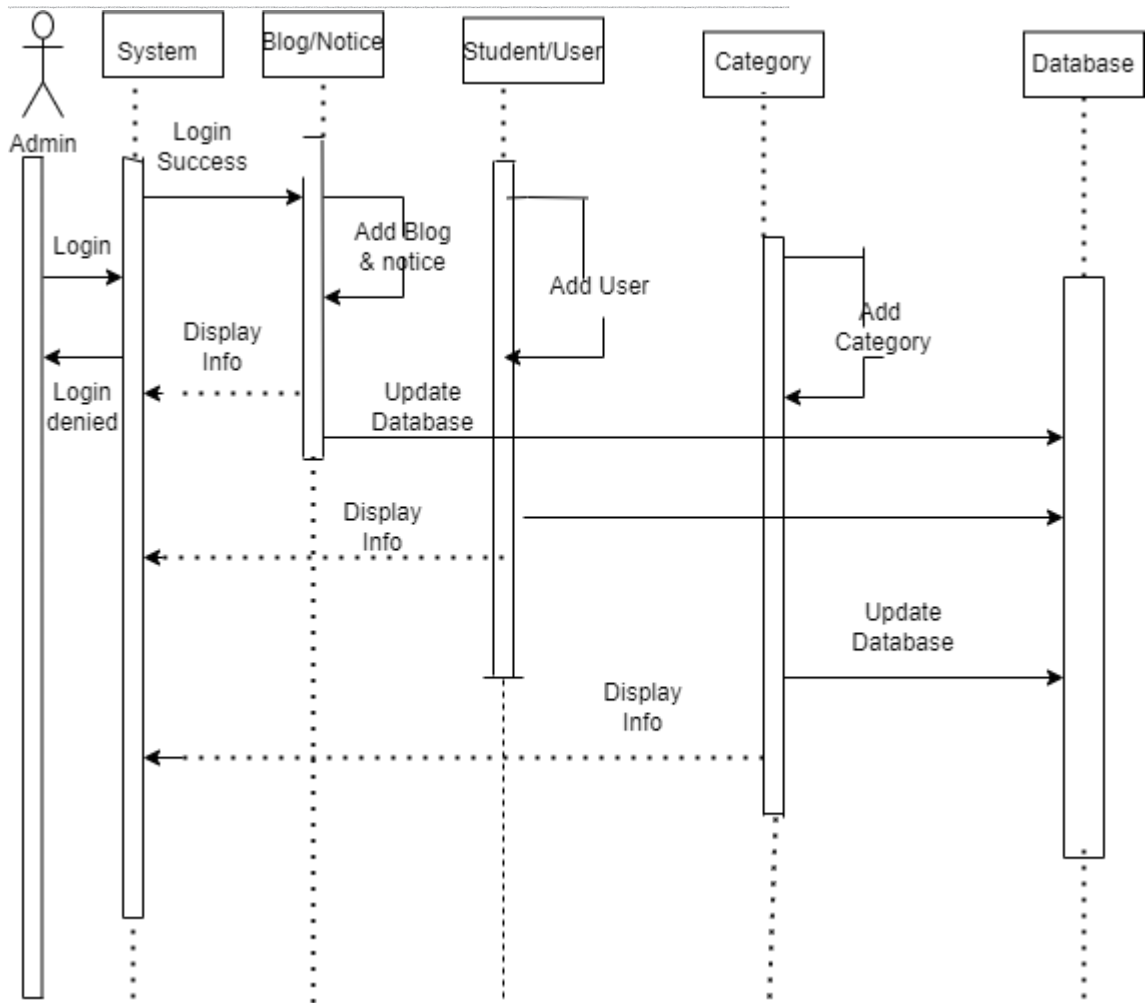


Figure 7 Sequence Diagram of Admin

3.2 System Design

3.2.1 Activity Diagram

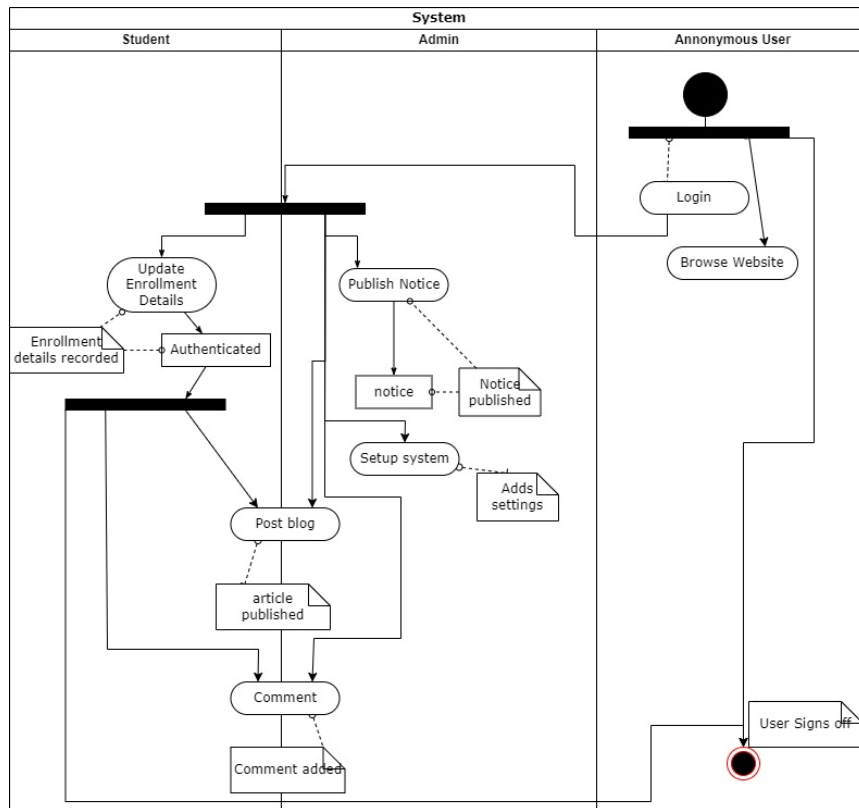


Figure 9 Activity Diagram of MMC Blog and Notice System

3.2.2 Component Diagram

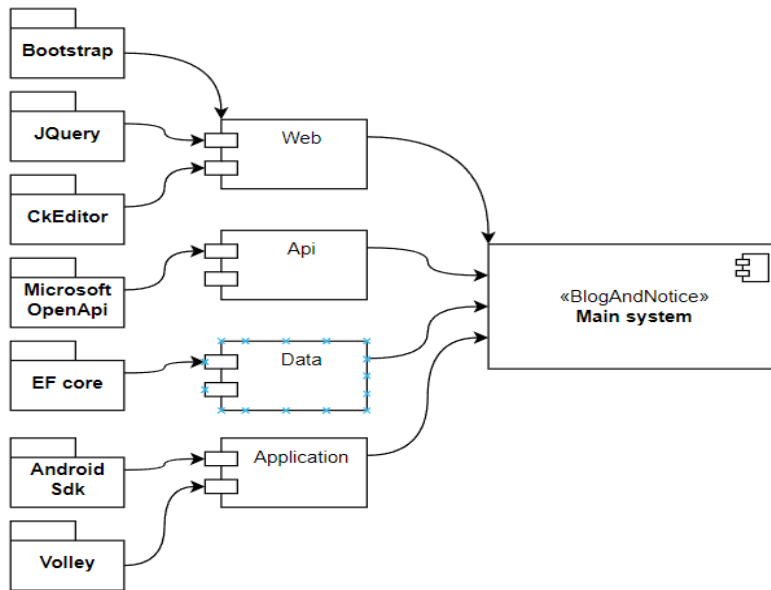


Figure 10 Component Diagram of MMC Blog and Notice System

3.2.3 Deployment Diagram

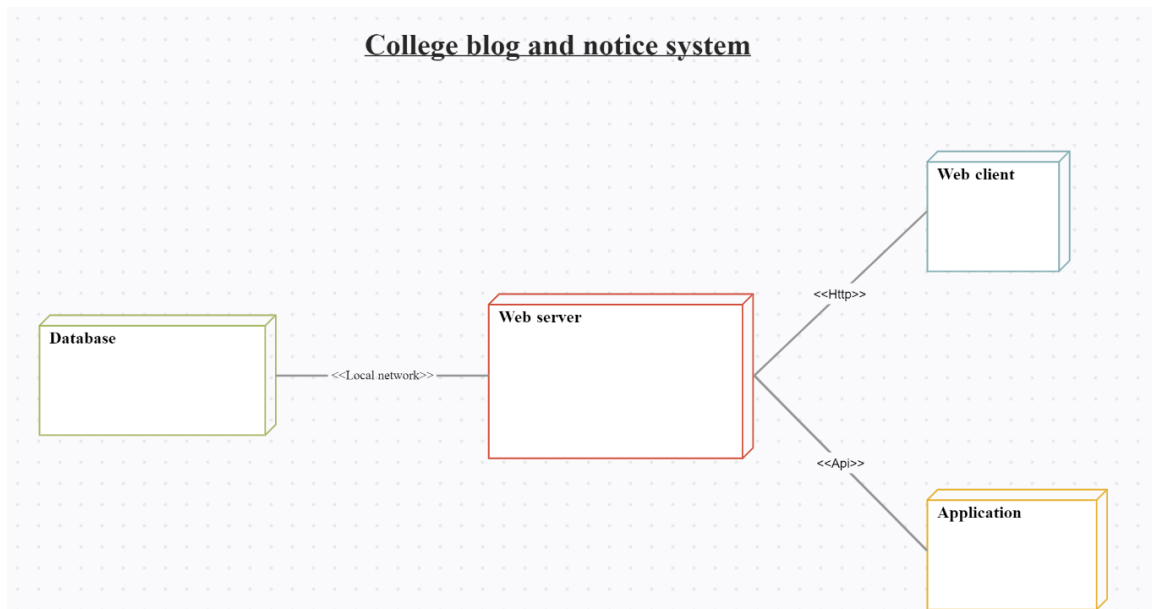


Figure 11 Deployment Diagram of MMC Blog and Notice System

3.2.4 Class Diagram

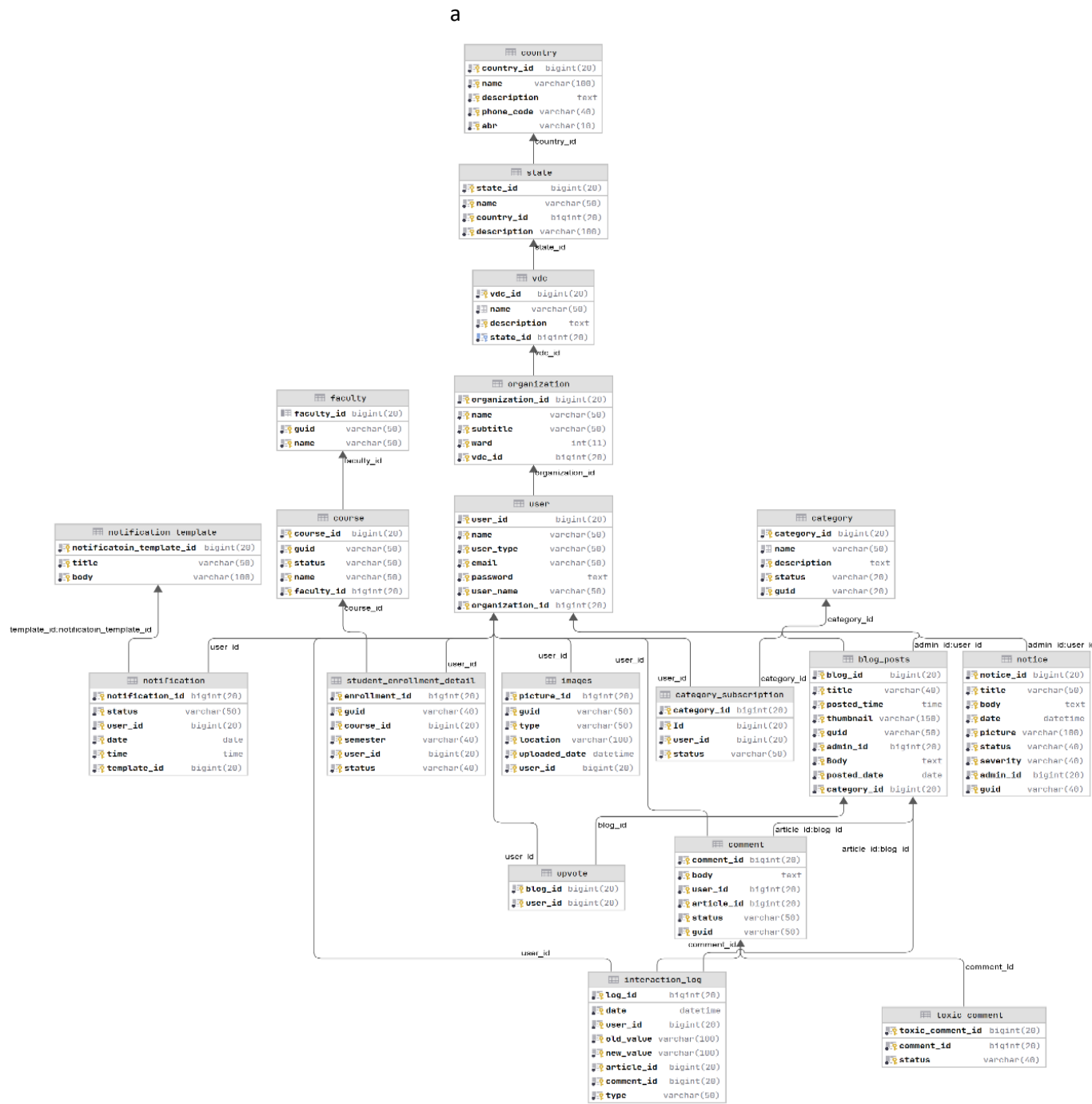


Figure 12 Class Diagram of MMC Blog and Notice System

3.2.5 State Diagram

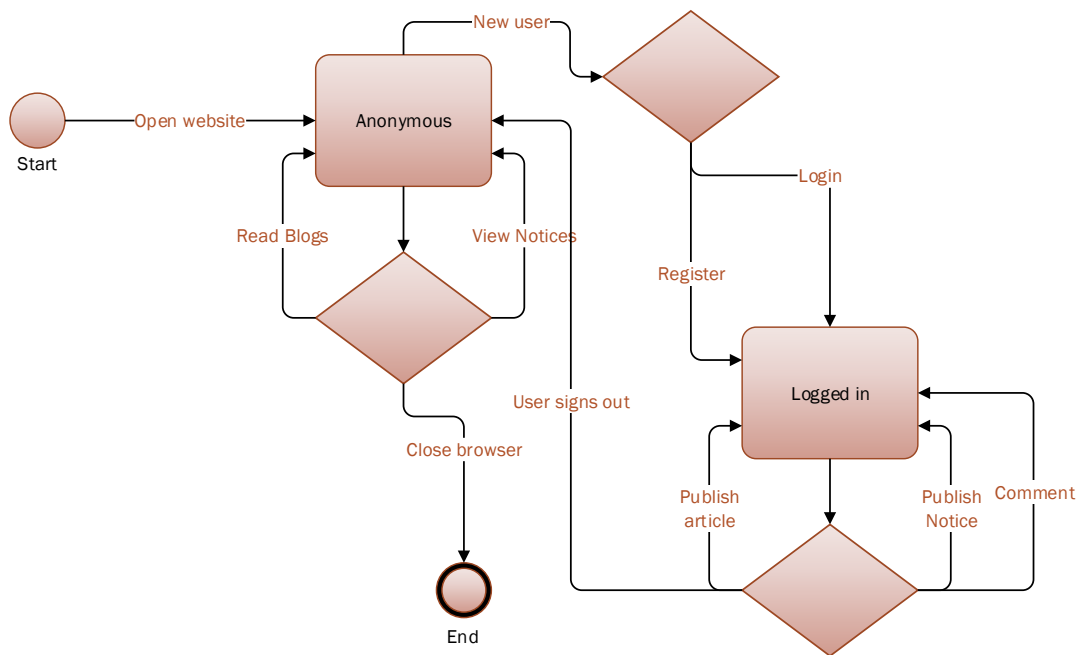


Figure 13 State Diagram of MMC Blog and Notice System

3.3 Algorithm

Classification Algorithm:

In our project “MMC Blog and Notice System” we used Machine Learning Algorithm. Under this we used classification algorithm for predicting appropriation of comments. We are using eager learner classification algorithm for studying the classes and objects of our project. This algorithm is based on a training dataset before receiving a test dataset. The algorithm is executed while submitting the comment. When someone try to comment down anything. At that time our algorithm checks whether that comment is appropriate or not.

Steps of algorithm which are used in our project are given below:

- a) We provide training dataset for the system. In our system we provide 1million of binary data for the training.
- b) With the help of training dataset, the model tests the data. It means when someone tries to comment out, then the system detects that and if comment is appropriate, then only it is submitted.

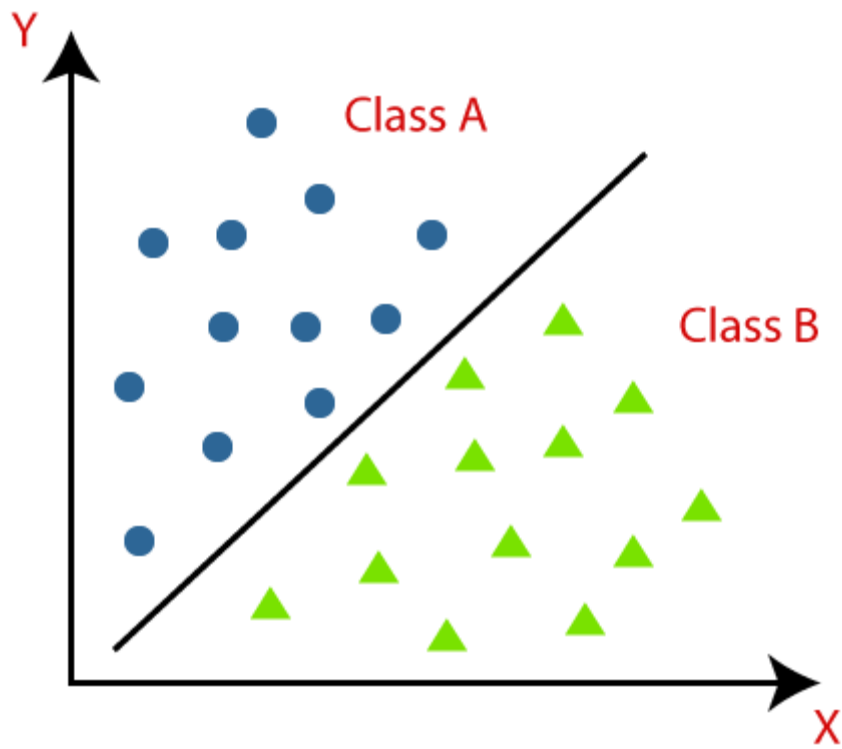


Figure 14 Classification of Data

Chapter 4 Implementation and Testing

4.1 Tools Used

Front End Tools:

Front end of this application is designed using ASP.NET Core HTML, CSS, JavaScript, JQuery and Bootstrap Framework. Utilizing the most popular combination of web technologies to develop the MMC Blog and Notice System for users, ASP.NET Core is a cross-platform, high performance, open-source framework for building the system.

Bootstrap is a framework to help us to design websites faster and easier. It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, models etc. It also supports for JavaScript plugins.

Back End Tools:

The MYSQL storage backend is used in this system. The MYSQL storage backend supports high availability and it is easy to use. Language: C#

Framework: .Net Core, Entity Framework

Programming Languages:

Developing the application architecture involves network technologies and making decisions on how the system' data, processes and interfaces are to be distributed. To do this, the data and process models that were created during the requirement analysis were analyzed. Management Information System is based on the MVC architecture which is made up of Model, View and Controller. We have used ASP dot net core Framework for developing out MIS system using C# as a programming language. The Model-View-Controller (MVC) is an architectural pattern that separates an application into three main logical components: the model, the view, and the controller.

Model: The Model component corresponds to all the data-related logic that the user works with. This can represent either the data that is being transferred between the View and Controller components or any other business logic-related data.

View: The View component is used for all the UI logic of the application. For example, the Student view will include all the UI components such as

text boxes, dropdowns, etc. that the final user interacts with. HTML, CSS, JavaScript were used to create view/user interface.

Controller: Controllers act as an interface between Model and View components to process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output. For example, the Notice controller will handle all the interactions and inputs from the Notice View and update the database using the Notice Model. The same controller will be used to view the Blog data.

Front End Tools:

Front-end web development, also called client-side development, is the process of creating HTML, CSS, JavaScript, JQuery, Ajax and many other tool for a website or Web application so that a user can see and interact with it directly. The difficulty with front end development is that the methods and techniques used to design the front end of a website change all the time, possibly requiring the developer's continual awareness of how the field evolves. An individual typically learns HTML, CSS, and JavaScript, which run in a web browser but can also run in a headless browser, Web View, or as compilation input for a native runtime environment.

Front end of this application is designed in ASP.NET Core using HTML, CSS, JavaScript, JQuery and Bootstrap Framework. Utilizing the most popular combination of web technologies to develop the Management Information System for users, ASP.NET Core is a cross-platform, high performance, open-source framework for building the system.

Bootstrap is a framework to help us to design websites faster and easier. It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, models etc. It also supports for JavaScript plugins.

Database:

The primary goal of creating a database is to provide an environment that will be convenient and efficient to use in retrieving and storing information.

- ✓ **Purpose of the Database:** the main purpose of this database is to store and retrieve information of the users and to create an environment that will enable the student/teacher/other user to easily access data from this system.
- ✓ The MySQL storage backend is used in this system. The MySQL storage backend supports high availability and it is easy to use in C#.

Testing Tools:

The project uses unit testing in both web application and android studio. We aimed to cover most of our project with tests to ensure a reliable software development. The tests have produced a good result in overall software development by helping identify bugs quickly.

Packages used: Xunit (Dotnet), NUnit(Java)

4.1.2 Implementation Details of Module

Every system constitutes numerous small functional parts called modules. So does this system have? Yes. One or more independently developed modules when attached form this project. The modules which are included in this project are given below: -

Admin Section:

- Login Module
- Users/Students Management Module
- Blog Management Module
- Notice Management Module
- Comment Management Module
- Category Management Module

User Section:

- Login Module
- Comment Module
- Learning Material Module
- Blog and Notice View Module
- Category View Module

4.2 Testing

4.2.1 Unit Testing

We are using nugget packages: dotnet-test and XUnit for unit testing. We conducted tests on independent modules and passed all of the tests.

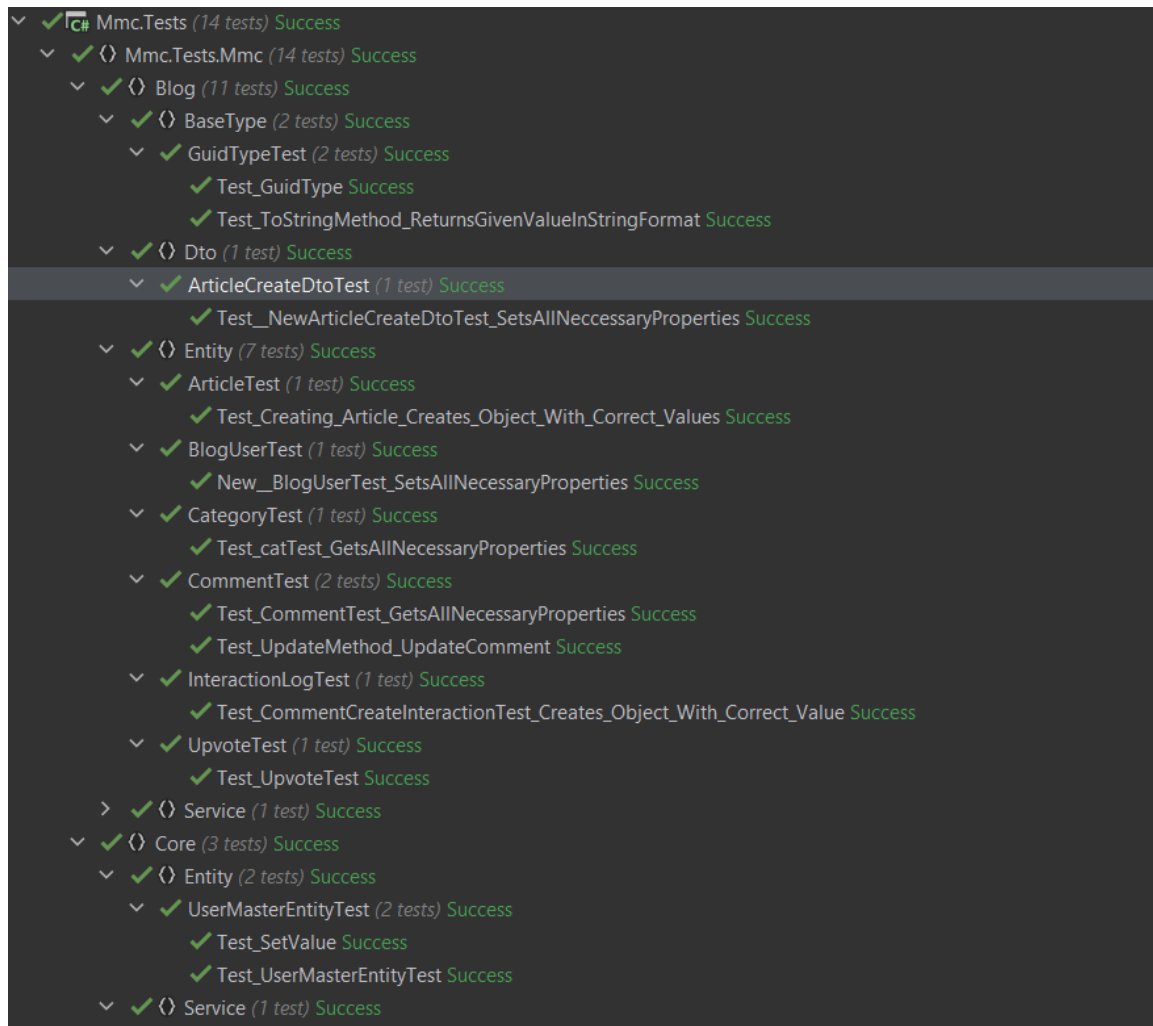


Figure 15 Testing

```

[Fact]
Pramisa123
public void Test_UpdateMethod_UpdateComment()
{
    var _comment = new Comment();
    const string body = "test";
    _comment.Update(body);
    Assert.Equal(body, _comment.Body);
}

```

Figure 16 Testing of Comment Module

4.2.2 System Testing

The system testing is a part of testing methodology involves testing the entire system for errors and bugs. This test is carried out by interfacing the hardware and software components of entire system, and then testing it as a whole.

Table 2 Test case for full system testing

S.N.	Input Test Data	Expected Result	Actual Result	Remarks
1	Enter application URL on any browser	Open Webpage with dashboard	System Executed with its page	Pass
2	Invalid Login Credential	Show Error	Shows error	Pass
3	Valid Login Credential	Show Admin/User Dashboard	Dashboard displayed	Pass
4	Manage User Information	User Added/Updated/Deleted Successfully	Data showed in table	Pass
5	Manage Blog/Notice of Campus	View/Create and sent to users	Notified to Users	Pass
6	Manage Like & Comment	View/Create	Notified to Users	Pass
7	Manage Category	View/Create and sent to Users	Notified to Users	Pass

4.3 Result Analysis

So, after testing and implementing this newly developed MMC Blog and Notice System it is clear that:

It can manage all type of school and college.

It will be easy for those who are based on paperwork in today's days to record notices.

It will be helpful for those who want blog, notice modules in one product.

Chapter 5 Conclusion and Learning Outcomes

5.1 Conclusion

The Project in Mechi Multiple Campus is an opportunity to develop and enhance technical knowledge for the growth of a career. The real-world implementation and challenges are known and the technical implementations are no more jargons to those who utilize the internship period as a good platform and opportunity.

The project at Mechi Multiple Campus has been a wonderful platform to enhance the skills related to time management, working in a team, meetings and feedback from each members of the organization who has even helped to improve the communication skills. The project has provided a new experience to work with the team from every corner of the world. The knowledge on development sector as per the context of modern technology on the uses on development fields creating websites as well as mobile applications are the aspects of improvement from the internship program. The developed system can provide basic information regarding the organization which generates more useful methods on the basis of giving the newly updates information provided by the organization.

5.2 Learning Outcomes

The success of the system is based on the overall adaptation of the institution. The project can be useful for any institution which requires to communicate with its students frequently. The product is useful in sense that it removes the need to students having to constantly check for new notices. The implementation of the system will save troubles for both campus management and the users. The system is supposed to:

1. Allow campus staffs to login
2. Allow logged in users to post notices and comment
3. Display notification on application user's devices as soon as a notice is posted
4. Allows logged in users to post blogs
5. Allow web users to post articles in the blog
6. Allow users to perform above task through mobile device

5.3 Future Recommendations

The current project is near to completion. It is safe to assume that there could be numerous improvements in the system. Due to time limit and technological limitations, we did not implement all the features one could expect from a college blogging and real time notice system. Here are some of such features which may be added to future for the sake of software quality:

- Course details
- Blog notifications
- Category subscriptions
- Desktop application

5.4 Appendix

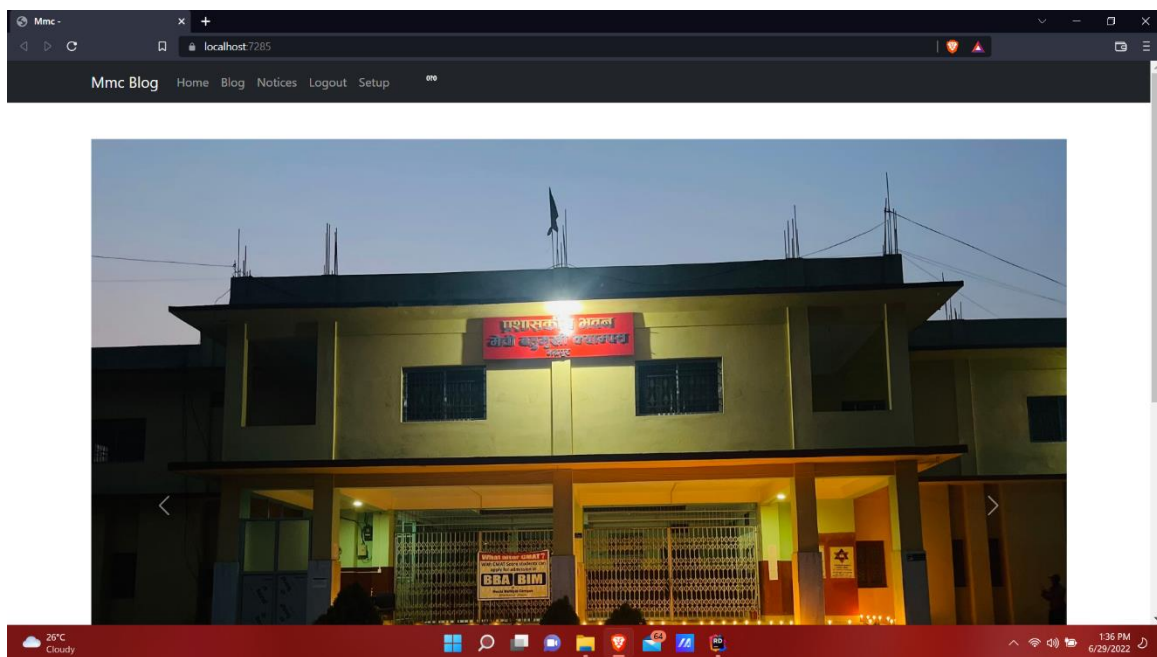


Figure 17 Homepage-Logged in

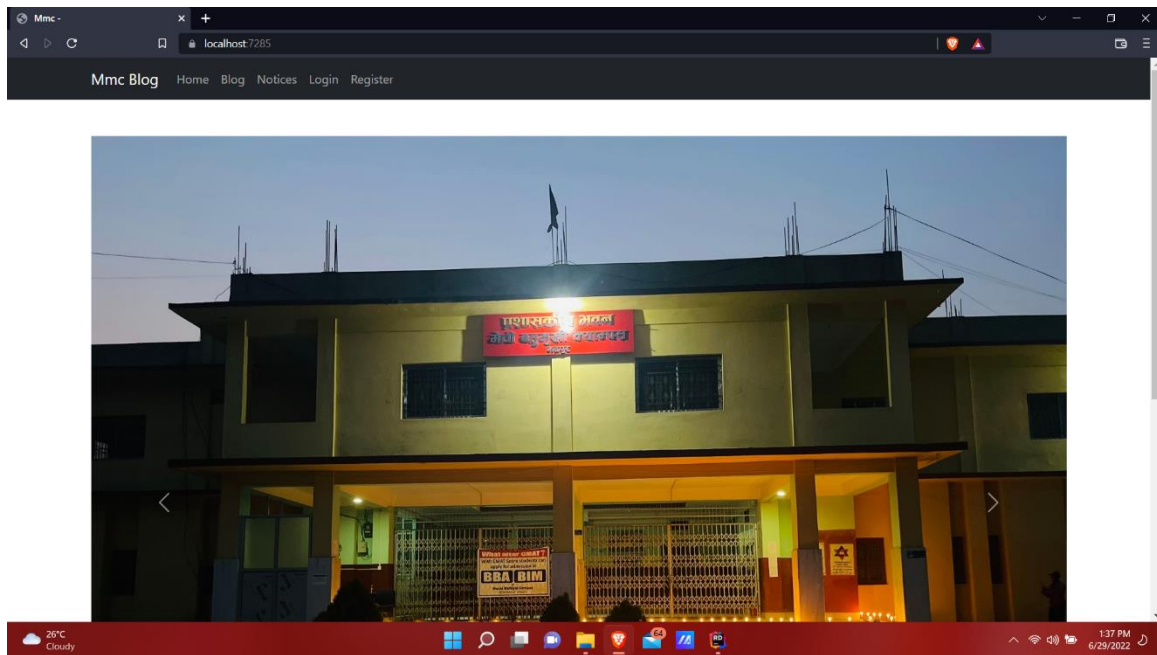


Figure 18 Homepage

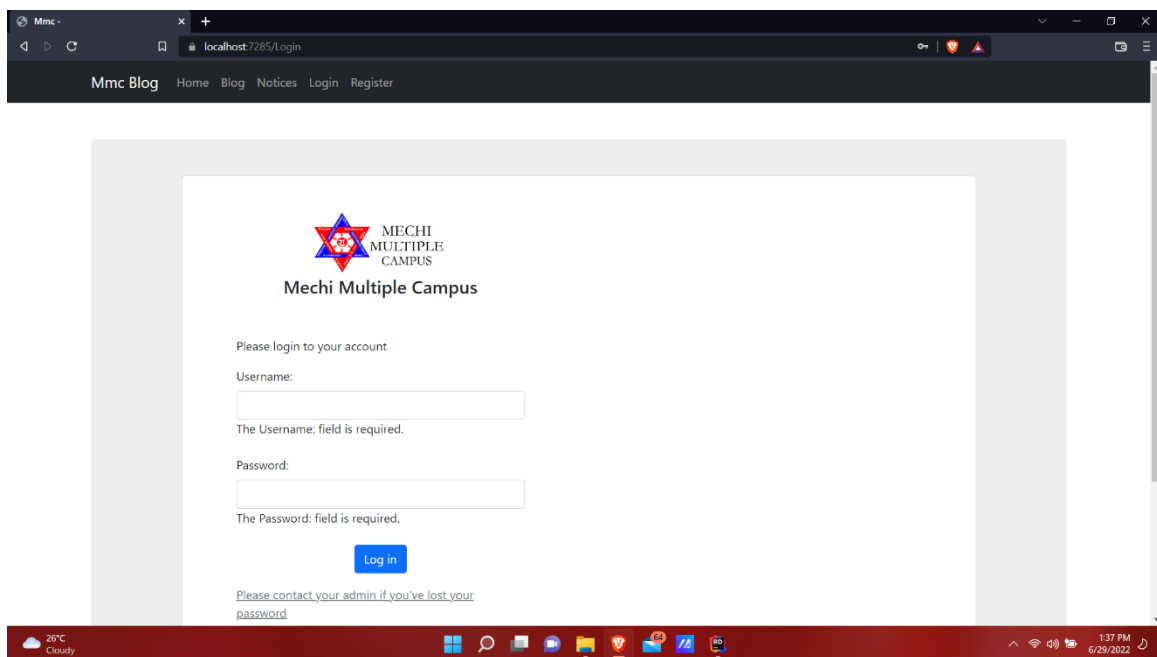


Figure 19 Login Page

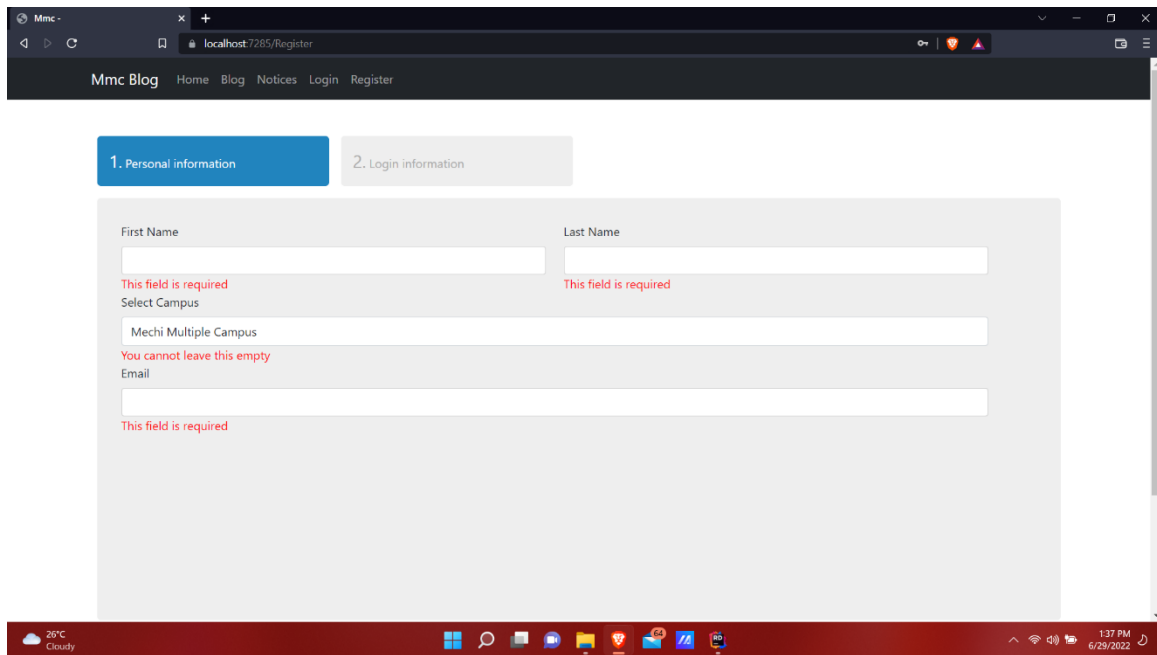


Figure 20 Register Page

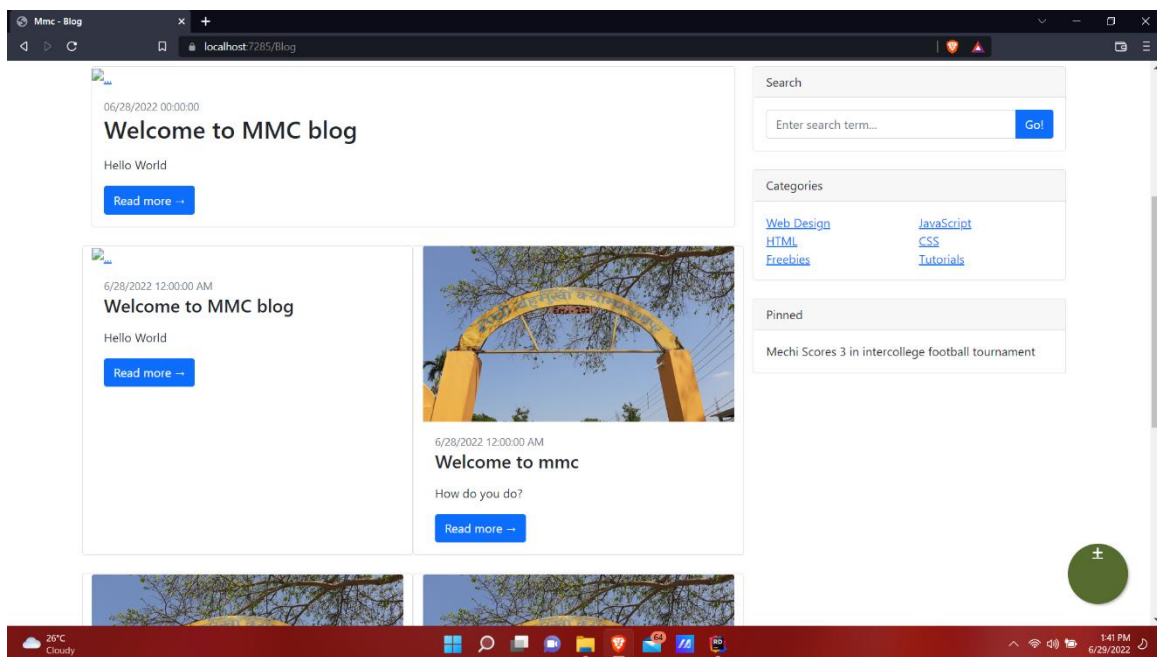


Figure 21 Blog Main Page

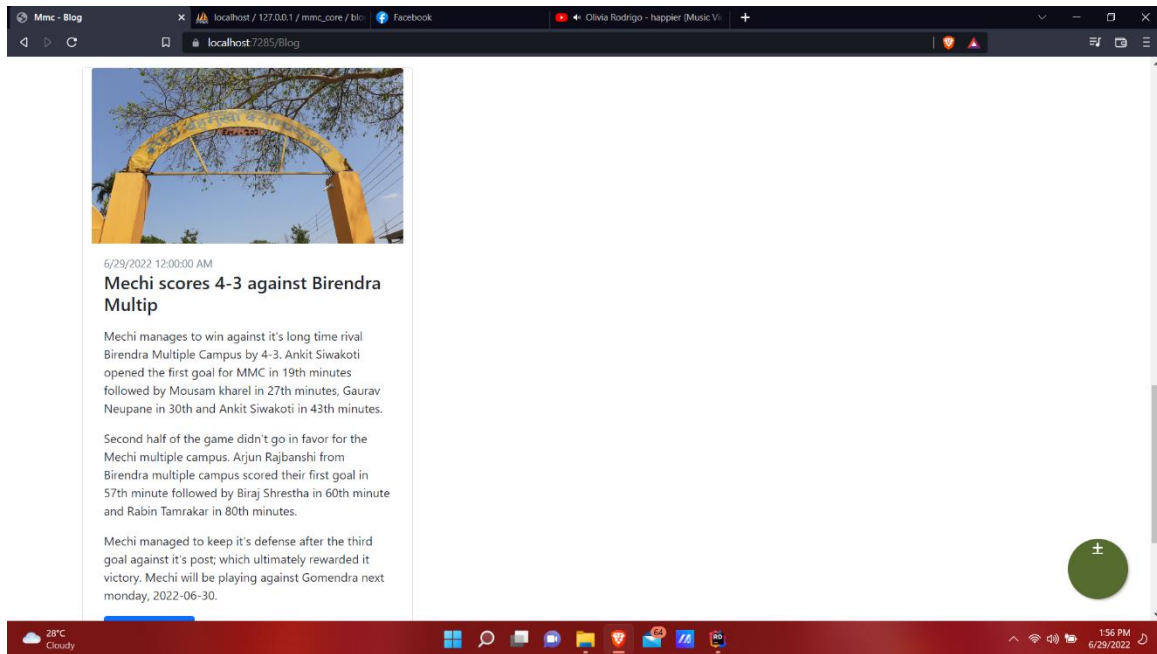


Figure 22 Blog Main Page

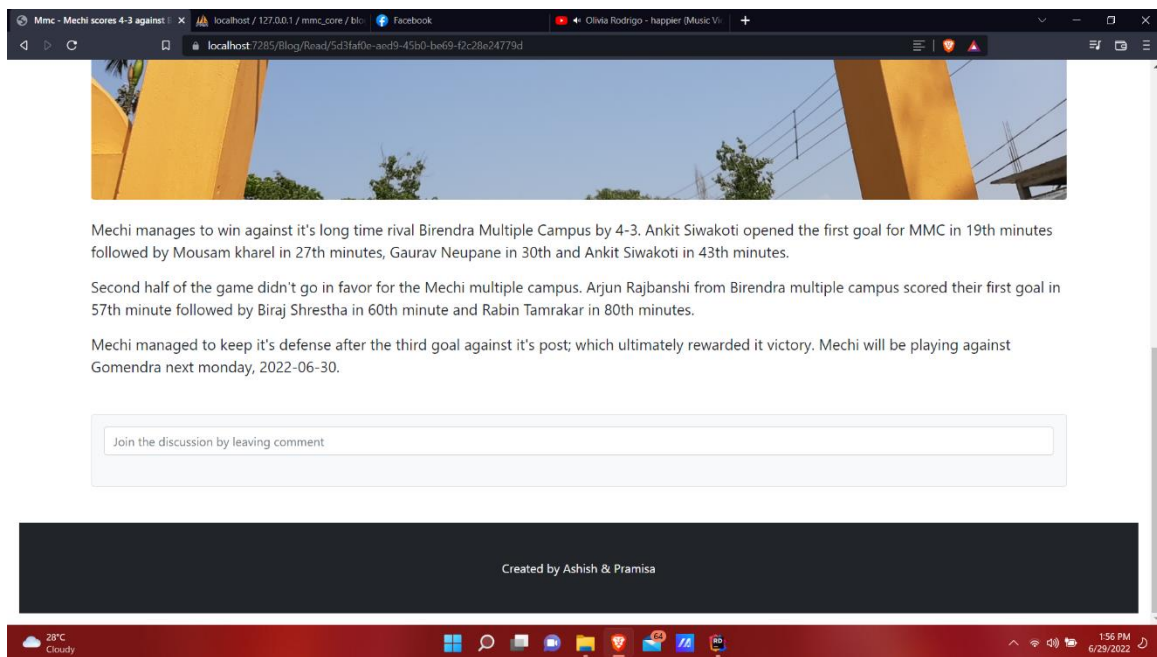


Figure 23 Blog Read Mode

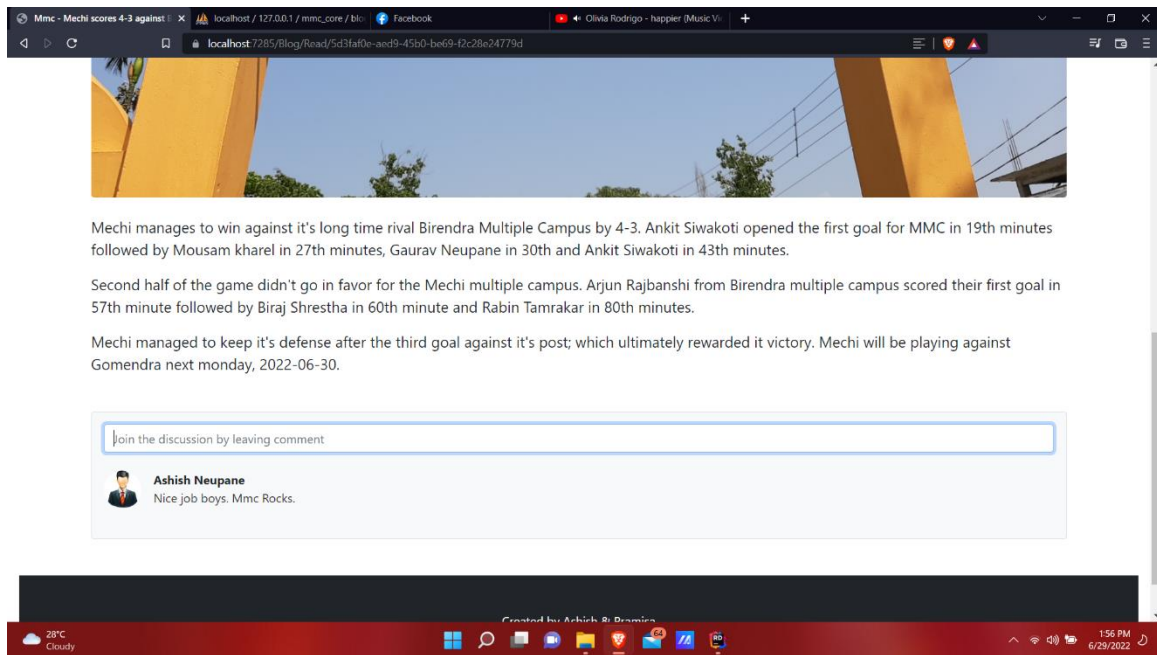


Figure 24 Blog Read Mode

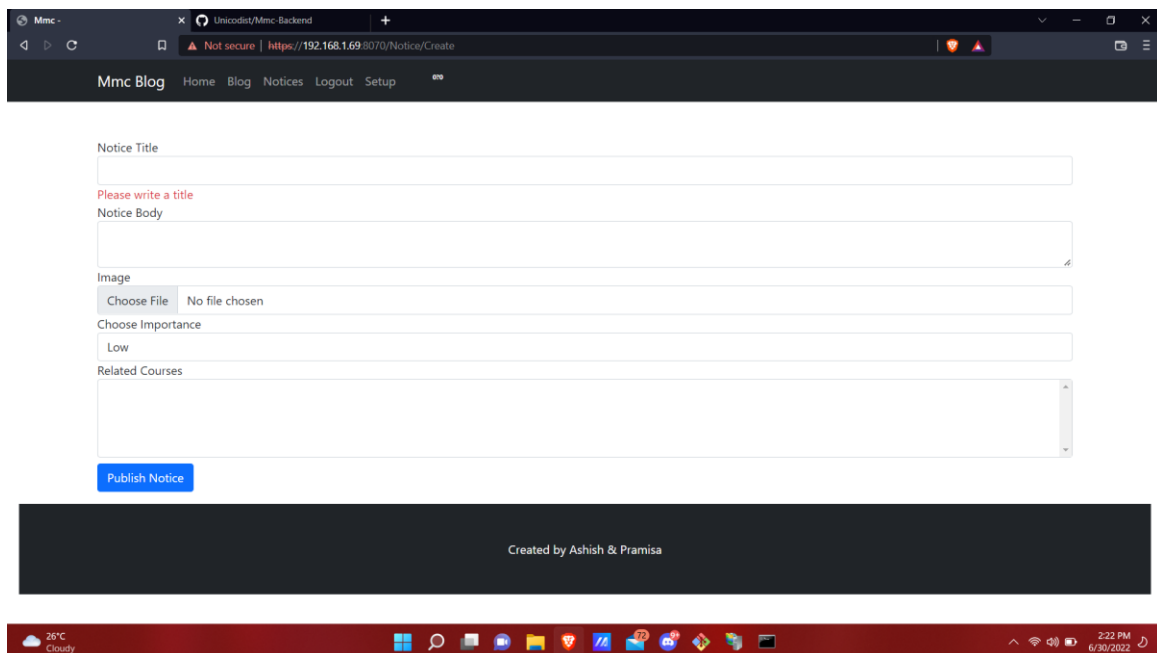


Figure 25 Notice-Create

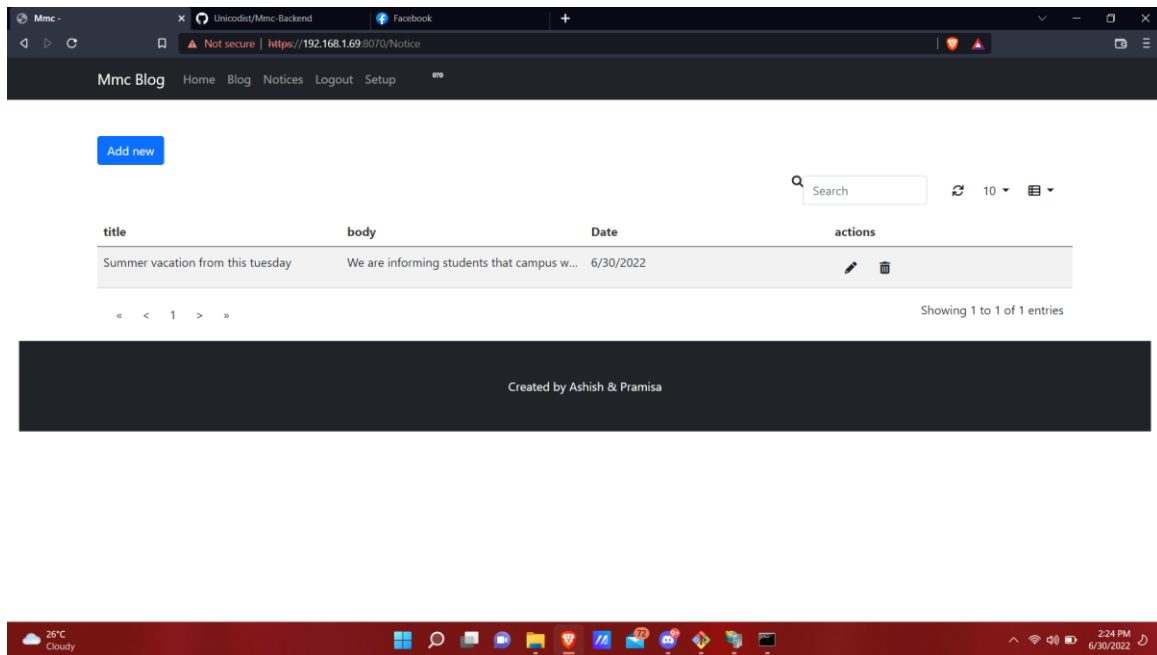


Figure 26 Notice -View

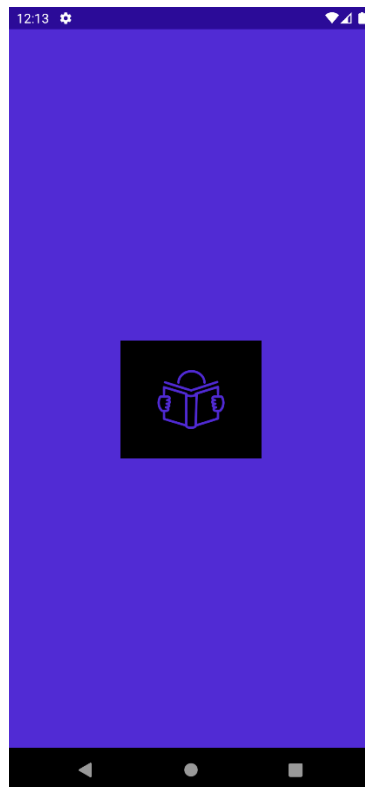


Figure 27 Splash Screen

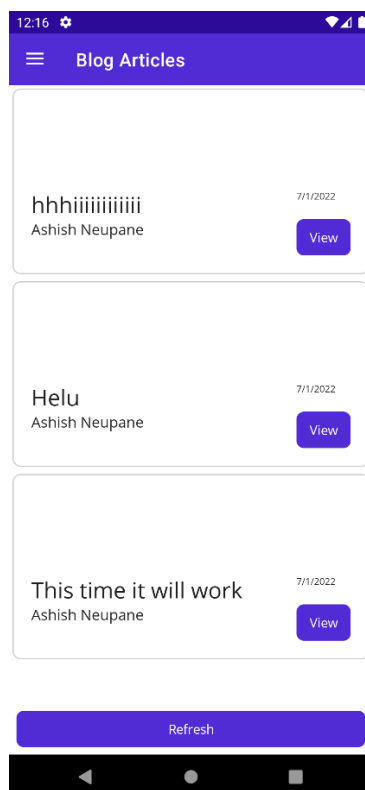


Figure 28 Mmc app Article page



Figure 29 Mmc app Notice page

Source Code

[mmc app article view model]

```
namespace Mmc.Mobile.ViewModel
{
    public partial class ArticleViewModel : BaseViewModel
    {
        ArticleService _articleService;

        public ObservableCollection<Article> Articles { get; } = new();

        public ArticleViewModel(
            ArticleService articleService)
        {
            _articleService = articleService;
            _ = FetchBlogsAsync();
            Title = "Blog Articles";
        }

        [ICommand]
        async Task FetchBlogsAsync()
        {
            if (IsBusy) return;
            try
            {
                IsBusy = true;
                Articles.Clear();
                var articles = (await _articleService.FetchCollection());
                foreach (var item in articles)
                {
                    Articles.Add(item);
                }
            }
            catch (Exception e)
            {
                Debug.WriteLine(e.Message);
                await Shell.Current.DisplayAlert("Error", $"Encountered an
error | {e.Message}", "OK");
            }
            finally
            {
                IsBusy = false;
            }
        }
    }
}
```

[Validating toxic comment]

```
private async Task ValidateComment(IComment comment)
{
    var sampleData = new ToxiCommentFilter.ModelInput
    {
        Comment_text = comment.Body,
    };
    var predicted = ToxiCommentFilter.Predict(sampleData);
    if (predicted.Prediction > 0)
    {
        comment.FlagAsSuspicious();
        await _notificationService.CreateToxicComment(comment);
        await _toxicCommentService.Create(comment);
    }
}
```

[Create articles]

```
public async Task<IArticle> Create(ArticleCreateDto dto)
{
    var admin = await _blogUserRepository.GetByIdAsync(dto.UserId);
    var category = await
_categoryRepository.GetByGuid(dto.CategoryGuid);
    var blogpost = new
Article(dto.Title, dto.Body, DateOnly.FromDateTime(DateTime.Now),
category, admin, dto.Thumbnail);
    await _articleRepository.InsertAsync(blogpost);
    return blogpost;
}
```

References

- [1] <http://desarrolloweb.dlsi.ua.es/blogs/benefits-of-blogs>, "benifits of blogs," [Online].
- [2] A. Agarwal, A. Acharya and M. Sharma, 2069. [Online]. Available: <https://pdfcoffee.com/project-proposal-on-online-notice-board-pdf-free.html>.
- [3] Edecofy. [Online]. Available: <https://www.edecofy.com/blog/benefits-of-real-time-institute-notice-management/>.
- [4] D. Susan, "Why I want my students to blog," 22 October 2012. [Online]. Available: <https://www.gettingsmart.com/2012/10/22/10-reasons-why-i-want-my-students-blog/>. [Accessed 2022].