

Project Title:

NightSpot: A Forum App

Applications Development and Emerging Technologies

Submitted by:

Mark Edison Rosario
Jericho Vince Tacata

BS Computer Science 3 - 3

Submitted to:

Prof. Aleta C. Fabregas

Polytechnic University of the Philippines
Sta. Mesa, Manila

February 2022

I. BRIEF INTRODUCTION

Forums are public messaging boards that people can use to communicate with each other about a variety of different topics.

It is an online platform to discuss topics or ask questions using asynchronous communication. It allows users to hold discussions, as well as respond to existing discussions by sharing their ideas, opinions, and advice. It is a medium where ideas and views on particular issues can be freely expressed.

NightSpot is a project aimed to fulfill the following problem: A need to have a platform for questions and answers, as well as socializing and a field for discussion inside online communities for social circulation and discourse of information

In this platform, we are able to build communities with mutual interest and share our lives with the rest of the world.

II. BACKGROUND

NightSpot was carefully designed by its developers on what key features it should contain and the path it should take. It was proposed, emphasizing on its features and its purpose and role, in order to analyze the value of the project and the potential it has and can have more with few additional suggestions. It was then designed again to consider new constraints and variables that can affect the development cycle of the application which includes addressing potential issues, and current time and complexity constraints.

After a rigid planning, analysis and design, we initiated the development of the application and the implementation of the features.

NightSpot implemented the standard features of a simple forum application. The application starts with an Account Login and Registration. The app requires every user to register an account in order to access the application. The data are stored in a DATABASE with encryption methods.

After a successful login attempt, the main application will be accessed. It provides an interface which allows the users to browse sub forums and threads as well as participate in the discussions. All of the data within the application will be stored and retrieved within a DATABASE, like the existing subforums, threads, comments, and etc.

III. RATIONALE

The successful completion of the application was achieved. We are able to develop an application while dealing with application issues.

The application can hold data for a long period of time with the implementation of a database. Multiple are able to access the application simultaneously. The application is scalable as it can handle a few hundred users which still depends on the capabilities of the server used. The interfaces are well thought of to provide a decent experience to the users. During the application's test and development phase, we are able to identify potential errors or exceptions, and we are able to handle those errors in order to prevent system crashes. The application also prevents unauthorized access. User authentication and validation are tested to conclude that users cannot bypass the login window. One-way encryption methods are also used to secure user info.

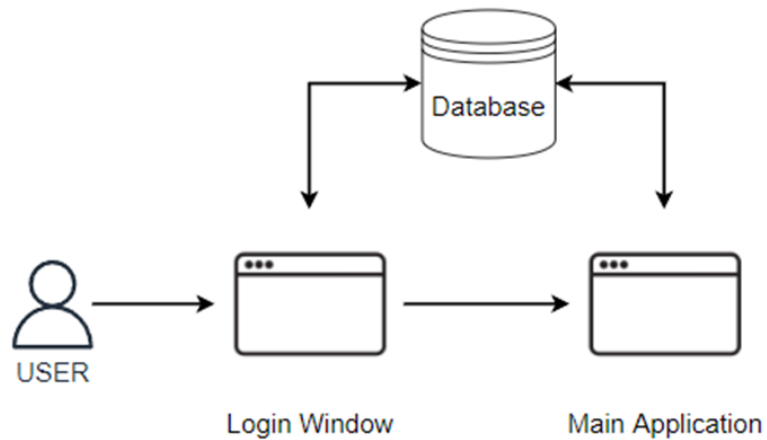
We successfully developed a simple algorithm that shows the most trending spots and posts within the application. The application tracks the most searched and most interacted by users. The posts and spots that hail the most interactions will be featured in the home page's recommendation. The trending list automatically resets every week at Monday 12 am.

Due to lack of time, we are unable to implement admin features. We prioritized constructing the forum's life cycle, the algorithm and the member's capabilities. The application can be only considered an open-source application as of now. Also, it is a desktop application made to run on the Windows OS.

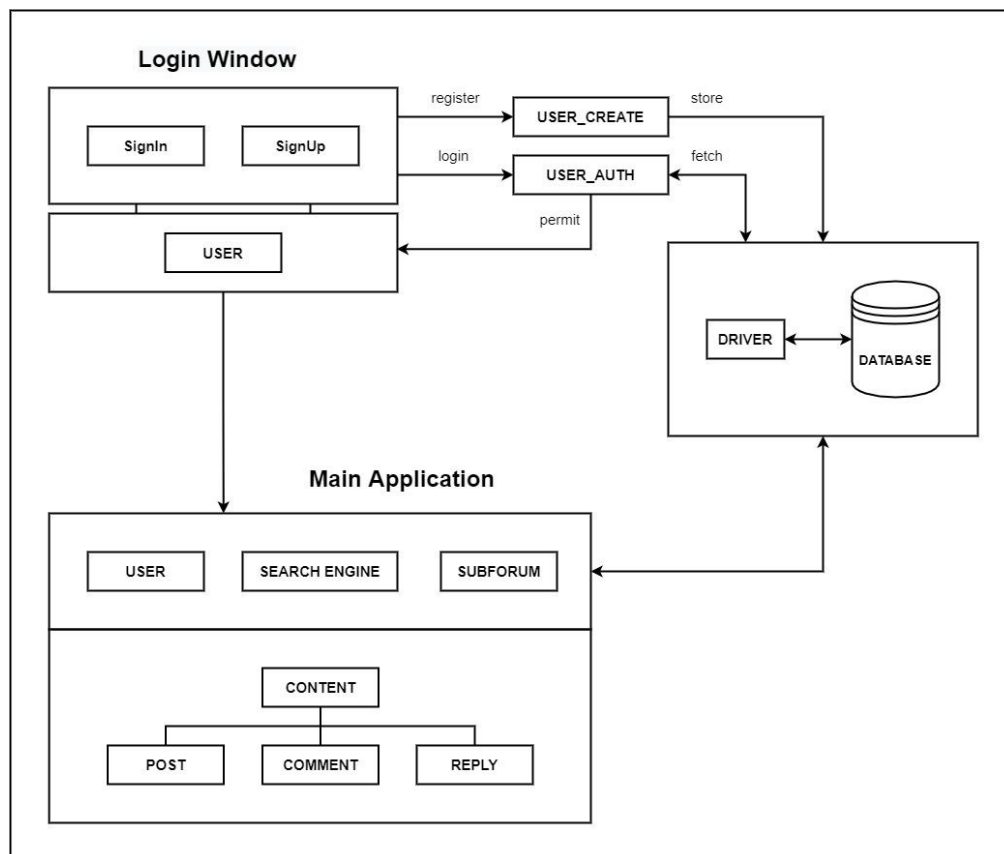
There are several recommendations that can further improve the application starting with making it cross-platform. It will be more accessible to people if it is available and able to run on various machines which includes web browsers, iOS and android operating systems. The application can also take a better server like cloud servers, to be able to handle more data and enable upto millions of more users. The security can also be enhanced by integrating more advanced security layers such as Two Factor Authorization (2FA). The application can also request more information from users like emails, phone numbers, interests, and etc. Handling more data sets enables potential data analytics solutions that can improve the application. The application has a long way to go in order to be considered a full-pledged commercial or proprietary application that can host a large volume of users and data.

IV. SYSTEM ARCHITECTURE

The figure below shows the general system architecture of the application.

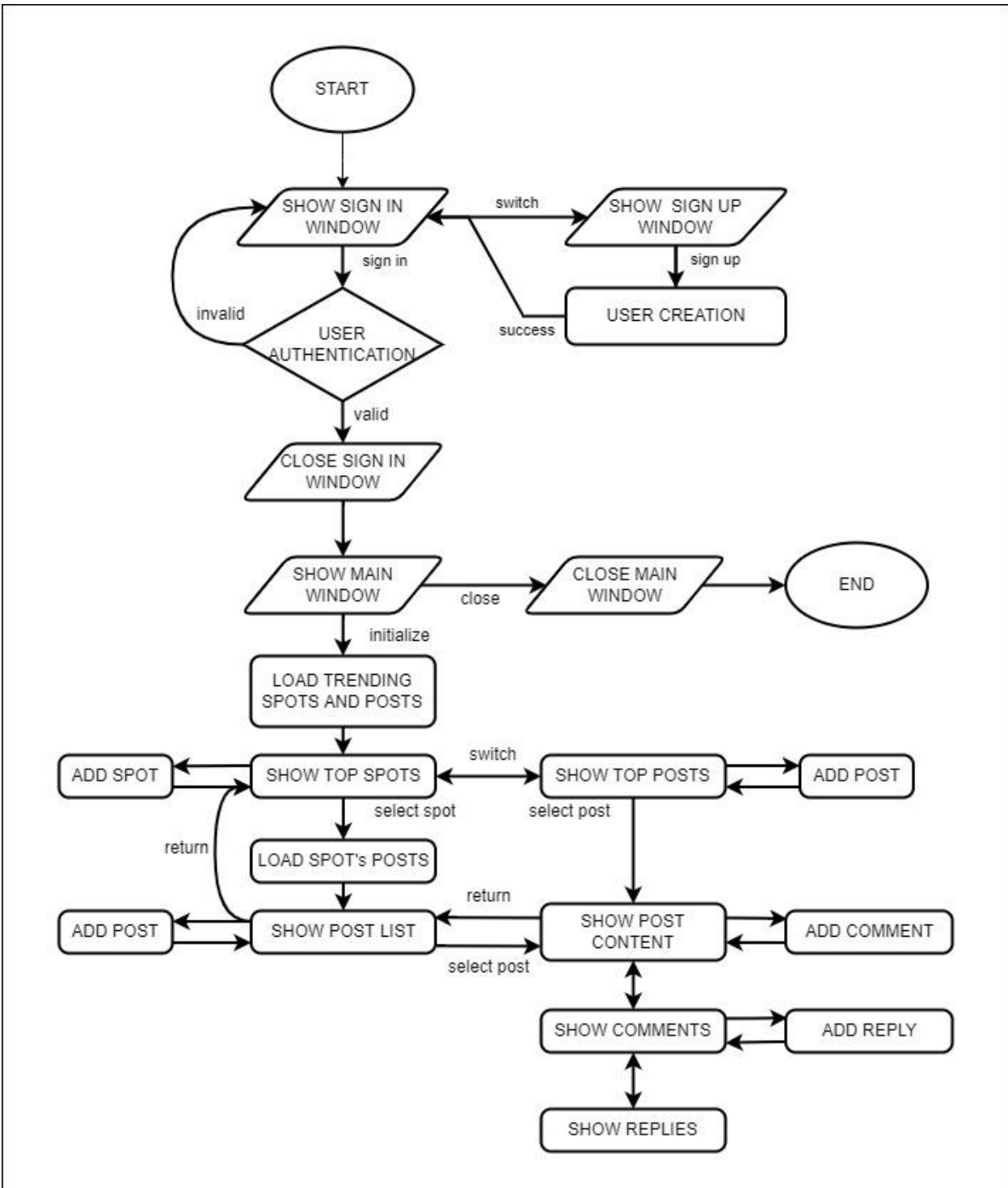


The figure below shows the class-level structure of the application.



System Flowchart

The figure below shows the flow within the program.



V. SOURCE CODE

The project source code is attached within the folder. It includes all classes and resources used in the application.

VI. SCREENSHOT

