

OLD NATIONAL ROAD, PLATERO, CITY OF BIÑAN, LAGUNA

**In and Out System for Students System Documentation**

The main goal of this system is to document what time the students get in and get out of the campus, this is for the ID Tap system that would be applied behind the MLLC. The main function of the system displays the time that the ID was tapped on the system, display the ID Picture, and display the last 3 numbers of the ID number for their privacy. The system should be modular for future plans such as emailing/texting of parents to let them know what time their children got to school, Data summary of how many students got to school at a specific time or how many students got out of school at a specific time, etc.

**How to Use or Access the System**

The system is simple, it can be fitted with an ID Scanner to get the ID number, and it would automatically enter and get the data for it; The system can be used even if there is no keyboard installed. There is no line of code needed for the automatic enter of data, it comes with the function of the ID Scanner.

The system uses C# as its programming language, and it follows the MVC format through the VisualStudio Code IDE, all of its computation/logic can be found within the Controller Module titled ReportingController.cs, all of its design/display can be found within the View Module titled Tap.cshtml, and its connection to the Database within the school campus is through the Model Module titled Reporting.cs; In the Data Module titled AppDBContext.cs initializes the connection to the Table for ease-of-use within the system.

Inside the Controller module for the Reporting contains the logic of checking if the ID exists alongside the image of the user inside the table, and if it does not exist – it would default to False, it would also record the time when an ID has been inserted and insert it into a variable named “recentLog’” Another function that the Module has is that it would check if the same ID has been inserted multiple times in the span of 2 minutes, if it has been inserted multiple times, it would then send out a message; If the ID has only been inserted once, it would only display the last 3 numbers and the rest would be displayed as asterisks. The next logic checks if the “recentLog” of an ID is null, if its LogType is set as ‘Out’, or if the previously logged date is different from the date today, it would then insert a new TimeLog record for the ID and display the previously mentioned details. If the recentLog is not set as null, if the LogType is set as ‘In’, or if the logged date is the same as the date today, it would then set the LogType as ‘Out’.

Inside the Model module for the Reporting contains 2 different Tables, the first table contains the connection from the table ZkUsers wherein it is used for comparing the ID inserted with the currently existing “AccessNumber” within the table, it currently sets the table that it would be **joined** into which would be the table TimeLog, where the entries would be inserted into. The other data that can be seen on the table properties are set as required, and already have values that is set on the Data Module titled AppDBContext.cs and can be left as such.

Inside the View module, the Reporting folder follows the Shared folders files which is the layout of the whole View module. It only displays a simple page wherein it shows the name of the website, and the function; It also displays in the middle of the page a box indicating where the user could Tap/Insert their ID into. The messages that was given by the Controller module is then accessed and displayed here for better communication.

Highly recommended to install VSCode and install the following extensions:

A screenshot of a computer program

AI-generated content may be incorrect.A black screen with white text

AI-generated content may be incorrect.

The system uses the “Microsoft SQL Server Management System 20” for its database, wherein you can connect it directly to your personal computer. Make sure to create a backup to avoid any mishaps for when you create a new function that would alter/access the database. The database also follows basic SQL syntax for interacting with it. The way that the system works is that it does not require any new table or any kind of modification for the existing tables titled “ZkUsers”, and for “TimeLog”.

Other Folders/Files does not need any more modifications since it comes with creating an MVC System in Visual Studio Code. The connection for the SQLServer can be set as “localhost”; If the server does not connect, you can add “TrustServerCertificate=True” on your ConnectionStrings

The file for the DefaultImage can be found inside of the path “wwwroot/images” as this acts as a placeholder since the tables that are connected to the system does not contain any column or any data for the image of the students.