

# Designing Popular Classes On Viewboard Public Assessment Of Lectures Based On Yii Framework

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## Abstract

*The lecture support system in Higher Education has information about student identity in each system, such as profile photos, names, NIM (Student Registration Number) and according to system requirements. An assessment on the public viewboard is an Online Assessment System aimed at improving services at Raharja University. However, in the multiplication flow system still has 3 disadvantages, namely, students do not yet have the facility to see the allocation value between friends in one class in one course to be able to improve the results of lecture grades with classmates and also between classes. In class design Popular writers also do five methods, namely the method of analysis, method of literature review, observation method, design method, and then implemented. With the existence of this study, there are 3 Benefits, namely, students can see the value determined by classmates, can improve the value, and lecturers can ensure the value given must be recognized by students.*

*Keywords: Viewboard Public PEN, Class P*

## 1. Introduction

Assessment is information that is needed by students both students in school institutions or students in Higher Education because the value becomes a benchmark for students in measuring learning skills during learning [1]. In the current era of globalization, technology management has touched every aspect of human life. [2]

Currently there are many official sites in the fields of trade, institutions and education that provide information that can be accessed by the public. [3] At Raharja University before the PEN + system students were required and approached the wall magazine (MADING) in Raharja College only to see information on grades (UTS) midterms, final semester grades (UAS) and independent assignments (TM). ) the highest and lowest and the Popular Class. By looking at Popular Classes, students are expected to have self-awareness to be more enthusiastic about their respective values.

Organization and citation of the bibliography are made in Vancouver style in sign [6, 7] and so on. The terms in foreign languages are written italic (italic). Authors are suggested to present their articles in the section structure: **Introduction, Research Method [The Proposed Method/Algorithm (optional) ], Findings, Conclusion** [8-11]. Of course a university has

several academic activities, for example activities in learning or guidance. [4] In Raharja College there is an online rating system that is often called PEN + so that lecturers can input grades online anywhere and anytime [5] and with the Popular Class both students and lecturers can find out the level of enthusiasm of the class so that the level of awareness to improve grades can increase. The previous system to fill out and publish the results of exam scores to students, lecturers still use conventional methods that will increase the stack of paper on the tables and campus mading. [6] Sometimes the paper can be damaged and lost so that the results of the exam scores to be given to students are too late. As a result lecturers can take longer to give exam results to students, while one of the lecturers' performance is to be able to give results of exam scores faster for students.

Students at Raharja College need information media types that can convey overall assessment information in one class that is taught by students so that they can find out what the highest and lowest scores are in the class that students provide. So that it is expected to provide information more quickly and accurately.

The purpose of this study is to be able to optimize the lecture scoring system by developing a dashboard on the penplus scoring system (PEN +) so that online media can be accessed by students to compare and know the values of each class which can motivate students to further improve their achievements . This study also aims to determine the level of activity of students in the class. As for the lecturer, its function is to believe that the class values and information have been spread by seeing the hits. It can be seen how many times the class is opened. With the use of the Pen + (Plus Assessment) system, the conventional assessment process using paper media has drastically reduced. [7]

## 2. Research Method

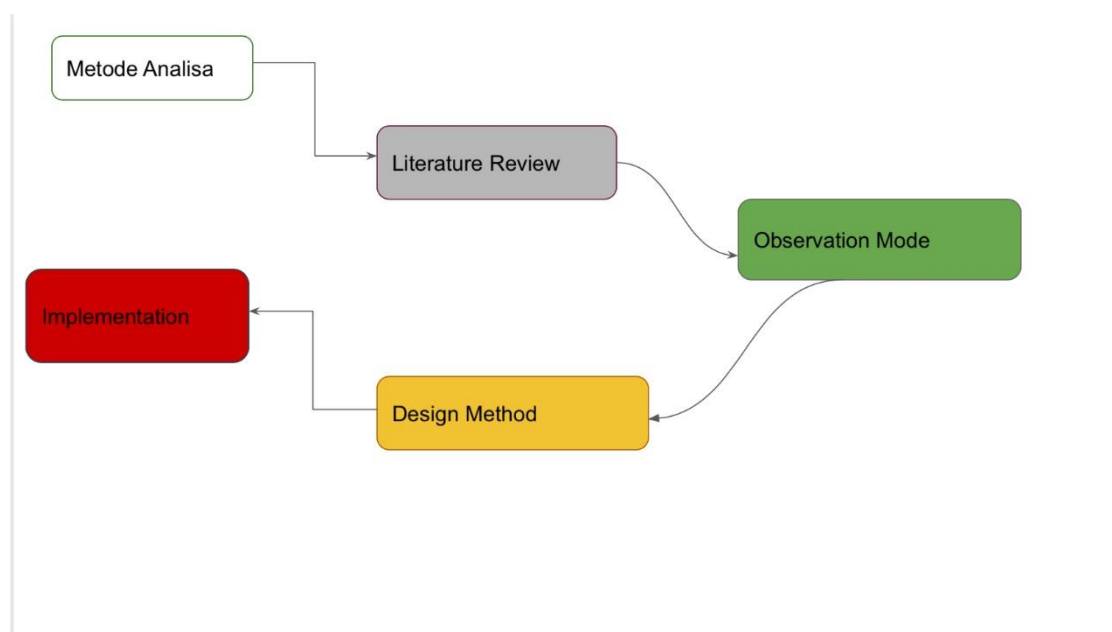


Figure 1. Research Method

Figure 1 is a research method conducted by the author including analysis method, Literature method Review or interview, observation method, design method and implementation method along with an explanation of the methods above, in order to overcome the various problems that exist then in this study the authors apply five methods:

### 2.1 Formula/Algorithm [optional]

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The analysis method, after being analyzed by the scoring system at Raharja Higher Education, especially Popular Class, has more role for the lecturers because lecturers can easily know that the inputted values are spread out and also know how enthusiastic and effective the classes are taught online and students can see the values Personally after getting an e-mail notification, the problems that exist in the grading system at Raharja College are the less optimal role of the scoring system for students to remember that students need to see the overall test scores in one class and at this time students can only get personal value information so they cannot comparing the value of each other student, therefore the assessment system needs to be optimized in order to facilitate students in accessing the overall value.

## **2.2 Literature Review**

Literature review is a literature review method that is done by collecting various kinds of sources to produce a variety of views for what will be done in the scoring system but does not violate the existing code of ethics so it can be decided that there is a dashboard regarding overall value information but does not include name identity students at Raharja College.

1. The research conducted by Dini Nurmallasari (2015) discusses the Information Dashboard as monitoring the drainage system in real time. Informational dashboard is a tool used to present information in the form of diagrams, visual indicators, or graphs in the form of concise, dynamic and relevant information [8]
2. The research conducted by Eva Hariyanti (2014) discusses the design of a dashboard system is a medium for monitoring performance indicators of one of them at the university The purpose of this study is to create a dashboard system that can be used to monitor and evaluate the performance of key performance indicators (KPI) University research conducted using needs identification and dashboard design in dashboard design has 4 activities, namely, user meta-information analysis, functional dashboard design, content analysis and information hierarchy to produce more detailed information. [9]
3. Research conducted by Novianto Budi Kurniawan (2014) discusses the dashboard is information that runs dynamically in accordance with the performance data of the central statistical body based on key performance indicators. This activity is monitoring and measuring performance at the central statistical body which contains information about performance measurements delivered each part's report related to the method used is using design methods including technology design, dashboard interface design, so the results expected by the author are that this information dashboard system can work as a tool for BPS leaders to facilitate BPS staff monitoring and evaluation so that the decision making process and the determination of policies can be directed and realized properly. [10]
4. Research conducted by Eric Wibisono (2012) discusses the role of cognitive in designing dashboard performance. Dashboards can generally be defined as a visual display of key performance indicators in the form of graphs reported in a one-page format. One of the media performance reports commonly used at this time is the Performance dashboard. One of them is Cognitive Reasoning which aims to extract new information and knowledge from the data and facts that have been obtained and there are several categories of dashboard designs such as, category of Grant broken down into several models such as pie charts, line charts, vertical bar charts, many examples can be found in various kinds of media regarding the Performance dashboard. [11]
5. Research conducted by William Suhaidir (2010) discusses the design of a digital dashboard system to present sensitivity analysis of the company's financial performance. The company's financial performance is an important thing for all companies, this must always be measured and evaluated. Sensitivity analysis is an important role to support a system in decision making because enough flexibility of the method used is analysis at PT XYZ. Designing a digital dashboard that is in accordance with the concept is simple and easy so that it can be easily understood on this digital dashboard. There are three main pages, namely the main menu, profit and loss and cash costs so that the resulting dashboard can show the results of the company's profit and loss predictions. [12]

### 2.3 Observation method

Observation method is a way to collect data from various sources from previous researchers because in the assessment system at Raharja College there are 2 previous generations that discussed the lecturers 'dashboards and department heads' dashboards (KAJUR) who have important roles to support each other.

### 2.4 Design method

The design method is the method of designing the dashboard by making a prototype first, the design that will be applied to the system to support an aesthetic in the system and also make it user friendly so that all can understand it well.

### 2.5 implementation

Implementation is an activity carried out after the dashboard has been designed and the prototype is in accordance with the implementation stage.

## 3. Findings

### 3.1 Problem

in this section, before entering the Research implementation section, you can write down the problems that you find during conducting research. and how you can solve the problem. At Raharja College before the assessment system is available, students can see the overall value of one class in accordance with the courses that students are able to take by going to campus and queuing on making just to check the largest and smallest value in their class, checking the value is necessary because to find out whether the student is in a safe or unsafe position because the assessment will affect the IPK and graduation of students. The 6 processes or stages to convey the overall value as in the picture below:

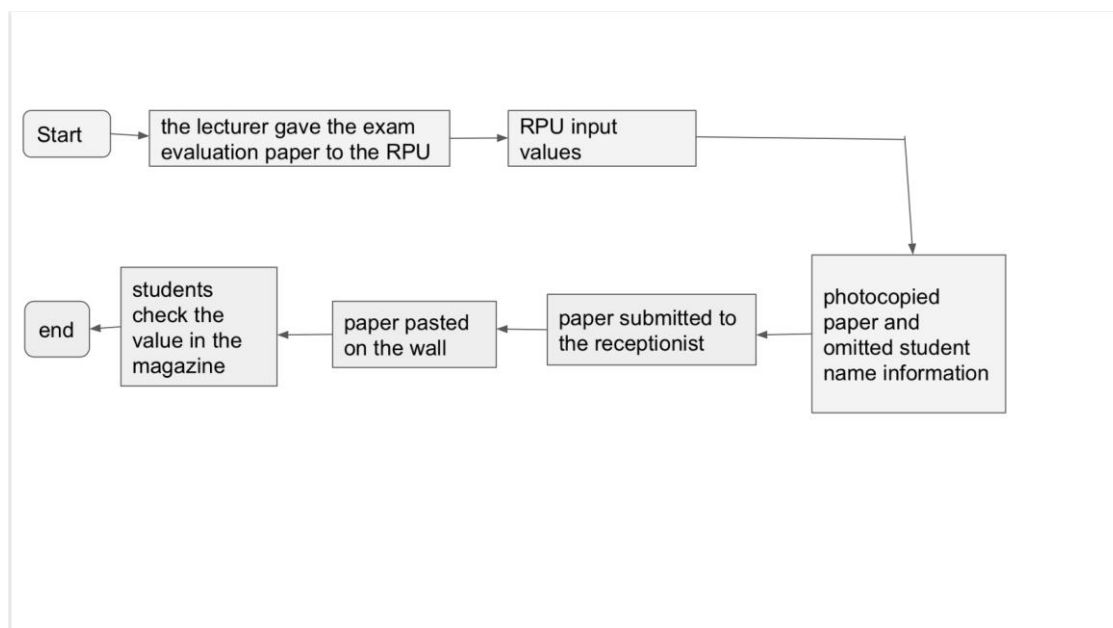


Figure 2. Analysis of Problems

- A. The first stage, the lecturer after finishing examining the exam questions and stating

- the value on the value paper that has been provided next is to deliver the exam grade paper to lecture and exam registration (RPU) parties.
- B. The second stage, after the RPU obtained the paper from the lecturers' grades, the RPU's task was to input the test scores for student data.
  - C. The third stage, if it is completed, hundreds of papers will be given to the head majors for photocopying but in the process of photocopy of student name information must be removed or closed so that it is not printed because the name is not recommended to be carried on the frame of this process is quite time-consuming and costs so it is not effective and efficient.
  - D. The fourth stage, after hundreds of papers have been photocopied, the next process is to give it to the receptionist.
  - E. Tahap kelima, resepsionis yang bertugas untuk memampang kertas fotocopy hasil nilai ujian mahasiswa pada setiap titik mading yang terdapat pada perguruan Tinggi Raharja, namun proses ini juga banyak memakan waktu dan biaya.
  - F. The last stage is that thousands of students check the grades on the way by having to come to campus and waiting in line for this process to waste a lot of time and money.

No	No. Mahasiswa	Ulangan	Midi	Nilai UTS	Nilai UAS	Nilai Mandiri
1	01	80	80	80	80	80
2	02	80	80	80	80	80
3	03	80	80	80	80	80
4	04	80	80	80	80	80
5	05	80	80	80	80	80
6	06	80	80	80	80	80
7	07	80	80	80	80	80
8	08	80	80	80	80	80
9	09	80	80	80	80	80
10	10	80	80	80	80	80
11	11	80	80	80	80	80
12	12	80	80	80	80	80
13	13	80	80	80	80	80
14	14	80	80	80	80	80
15	15	80	80	80	80	80
16	16	80	80	80	80	80
17	17	80	80	80	80	80
18	18	80	80	80	80	80
19	19	80	80	80	80	80
20	20	80	80	80	80	80
21	21	80	80	80	80	80
22	22	80	80	80	80	80
23	23	80	80	80	80	80
24	24	80	80	80	80	80
25	25	80	80	80	80	80
26	26	80	80	80	80	80
27	27	80	80	80	80	80
28	28	80	80	80	80	80
29	29	80	80	80	80	80
30	30	80	80	80	80	80

Figure 3. Paper test results that are pasted on the magazine

The picture above is information on UTS, UAS and Mandiri Task exam scores students in the form of paper pasted on wall magazines contained in Raharja College. This conventional way makes both students and lecturers spend a lot of time, energy, and others so that online lecture scoring systems are made as input media for student grades by online lecturers who can provide student services to the needs of value information efficiently. All forms of student value input activities can be done anywhere and anytime. This has proven to be efficient because it relieves lecturers and academic stakeholders, especially the RPU, only by accessing <http://penplus.raharja.ac.id>. All

activities can be resolved properly. PEN + itself is designed to be very flexible so that the value input process is kept confidential. Through PEN +, the RPU also easily gets the results of the quality lecturers' recapitulation.

### 3.2 Design Dashboard design and implementation of the scoring system

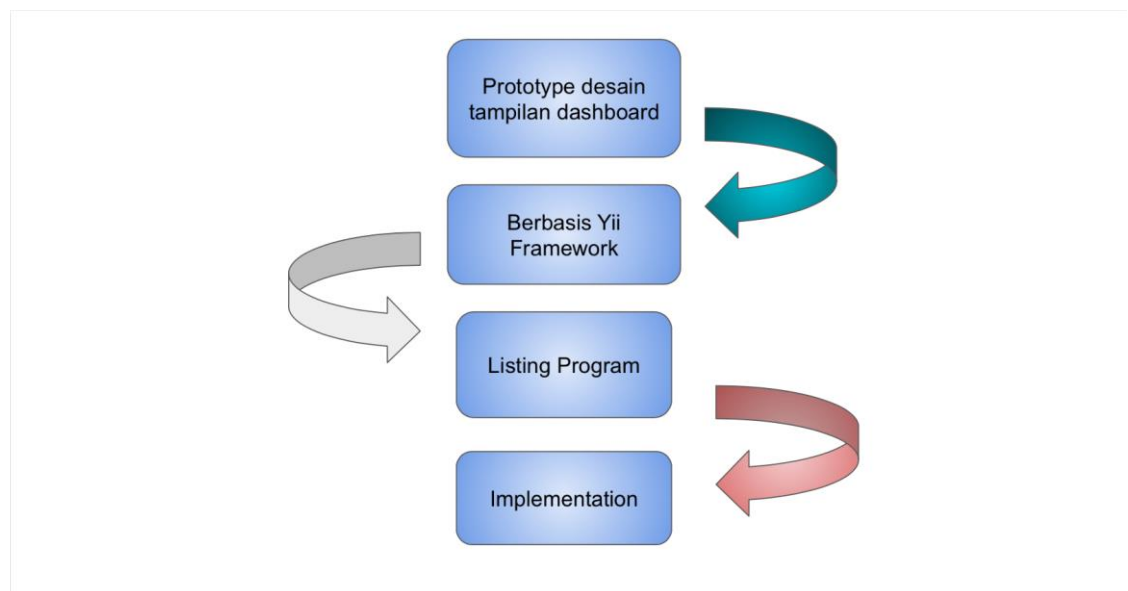


Figure 4. Process of Design and Implementation

In a study, of course using research methods to achieve goals also gets reliable information needed by a researcher to do several stages in research. [13] Can be explained the picture above is the design process of the design to the implementation of the following description of each process:

- A. Dashboard design prototype, to overcome the problems that the author has described above, it is necessary to have a dashboard as a development in the scoring system that can provide information more quickly and accurately and provide benefits for students Raharja. The first process is to make a design or prototype that can be understood by all circles, whether lecturers, heads of departments or students (user friendly). Some of the implementation strategies are suggestion fields (autocomplete) that serve to facilitate the user when inputting class code. which will be searched, there is related class code information, and in autocomplete there are placeholders as instructions for users to input the class code that will be searched for the search column in the upper right position to make it easier for students to check their own values simply by entering the student number (NIM) and the last is a table as information on student values as a whole, including table numbers, student NIM, UTS value, UAS value and Mandiri Task value in addition to making it easier for students to check the highest and lowest scores in one class then the dashboard a table of values UTS, UAS, and Mandiri there are Ascending and Descending items of students just by clicking on it can already know what the highest value and the lowest value in the subject is so that it is more effective and efficient in checking the highest and lowest values, from those values appeared Popular Class which

shows the most active and enthusiastic class as in the picture below:

Kelas Populer TA 2018/2019 Genap

Search :

No	Kode Kelas	NamaMataKuliah	Dosen	Hits
1	BI103B			
2	AK105B			
3	SI350B			
4	MT121E			
5	EK131A			
6	BI102E			
7	MT111B			
8	BI103K			
9	MT111E			
10	EK131C			

Showing 1 to 10 of 10 entries

Figure 5. Display of the Popular class Prototype on the Dashboard

- B. PEN + is an Yii Framework web application. Yii Framework is a component-based PHP, has high performance for large-scale web application development. The name "Yii" stands for Yes It Is, to run Yii-based Web applications, you need a Web server that supports PHP 5.1.0. [9] Based on Yii Framework, Yii (Yes It Is) is a framework or often known as a PHP framework based on performance components in large-scale application or system development. Yii Provides maximum reliability in programming so that it can improve development quickly and significantly which is very suitable to be used to be a medium that can channel overall value information. Yii can run well.
- C. Program Listing, Dashboard functions as a medium to present a table of student value information more clearly and easily understood by Yii Framework based so as to provide effectiveness in finding information needed by students. Following is the Program Listing.

```

<!DOCTYPE html>
<html>
<head>
  <title>Penggunaan Tag Tabel</title>
</head>
<body>
<h1>TOP 10 KELAS TERPOPULER</h1>
<table border="1">
  <tr>
    <td><b>Rank</b></td>
    <td><b>Kode Kelas</b></td>
    <td><b>Mata Kuliah</b></td>
    <td><b>Dosen</b></td>
    <td><b>NID</b></td>
  </tr>
  <tr>
    <td>1</td>
    <td><font color=blue>ML701C</color></td>
    <td>Logika Matematika</td>
    <td>Arief Saptono, S.Pt.,MM</td>
    <td>Baris 2, Kolom 5</td>
  </tr>
  <tr>
    <td> 2</td>
    <td> <font color=blue>ML201C</color></td>
    <td> Kalkulus I</td>
    <td> Arief Saptono, S.Pt.,MM</td>
    <td> Baris 3, Kolom 5</td>
  </tr>
  <tr>
    <td> 3</td>
    <td> <font color=blue>ML201A</color></td>
    <td> Kalkulus I</td>
    <td> Diah Aryani, ST.,M.Kom</td>
  </tr>
</table>

```

Figure 5. Code of Class Popular

```
<td> 3</td>
<td> <font color=blue>ML201A</color></td>
<td> Kalkulus I</td>
<td> Diah Aryani, ST.,M.Kom</td>
<td> Baris 4, Kolom 5</td>
</tr>
<tr>
<td> 4</td>
<td> <font color=blue>UL102A</color></td>
<td> Kebudayaan Indonesia</td>
<td> Abdul Hamid Arribathi, S.Ag.,MM</td>
<td> Baris 5, Kolom 5</td>
</tr>
<tr>
<td> 5</td>
<td> <font color=blue>UL102B</color></td>
<td> Kebudayaan Indonesia</td>
<td> Nurlaila Suci Rahayu Rais,
Dra.,M.M.,M.H</td>
<td> Baris 6, Kolom 5</td>
</tr>
<tr>
<td> 6</td>
<td> <font color=blue>SL1216</color></td>
<td> Komputer dan Masyarakat</td>
<td> Rosdiana, M.Kom.</td>
<td> Baris 7, Kolom 5</td>
</tr>
<tr>
<td> 7</td>
<td> <font color=blue>SL121D</color></td>
<td> Komputer dan Masyarakat</td>
<td> Meta Amalya Dewi, M.Kom.</td>
<td> Baris 8, Kolom 5</td>
```

Figure 6. Code of Class Popular



```
<td> Baris 7, Kolom 5</td>
</tr>
<tr>
<td> 7</td>
<td> <font color=blue>SL121D</color></td>
<td> Komputer dan Masyarakat</td>
<td> Meta Amalya Dewi, M.Kom.</td>
<td> Baris 8, Kolom 5</td>
</tr>
<tr>
<td> 8</td>
<td> <font color=blue>BL102A</color></td>
<td> English For IT II</td>
<td> Nurlaila Suci Rahayu Rais,
Dra.,M.M.,M.H.</td>
<td> Baris 9, Kolom 5</td>
</tr>
<tr>
<td> 9</td>
<td> <font color=blue>SL121A</color></td>
<td> Komputer dan Masyarakat</td>
<td> Meta Amalya Dewi, M.Kom.</td>
<td> Baris 10, Kolom 5</td>
</tr>
<tr>
<td> 10</td>
<td> <font color=blue>UL102E</color></td>
<td> Kebudayaan Indonesia</td>
<td> Rasyid Tarmizi, S.E.,M.M.</td>
<td> Baris 11, Kolom 5</td>

</table>
</body>
</html>
```

Figure 7. Code of class popular

The three images above are codingan from Top 10 popular classes that display numbers, class codes, courses, and hits that inform how much the class code in the Top 10 class is accessed.

D. Implementation, is another word from the application of the scoring system that has been made and applications that have been downloaded and installed after being tested, it turns out that running will then be implemented using Yii Framework as a medium to convey information about the Top 10 Popular Classes on Pen + that indicate class the most frequently visited so that both lecturers and students can find out which classes are the most enthusiastic and effective in learning besides being easy to access is also easy to understand. Related to the development of the system, the addition of features will certainly be available in the system so that other studies are needed that can examine and carry out optimal implementation of existing developments, including in the sales menu in this study. [14] Dashboards that can be accessed on [penplus.raharjo.ac.id](http://penplus.raharjo.ac.id) have been successfully displayed as well as their appearance:

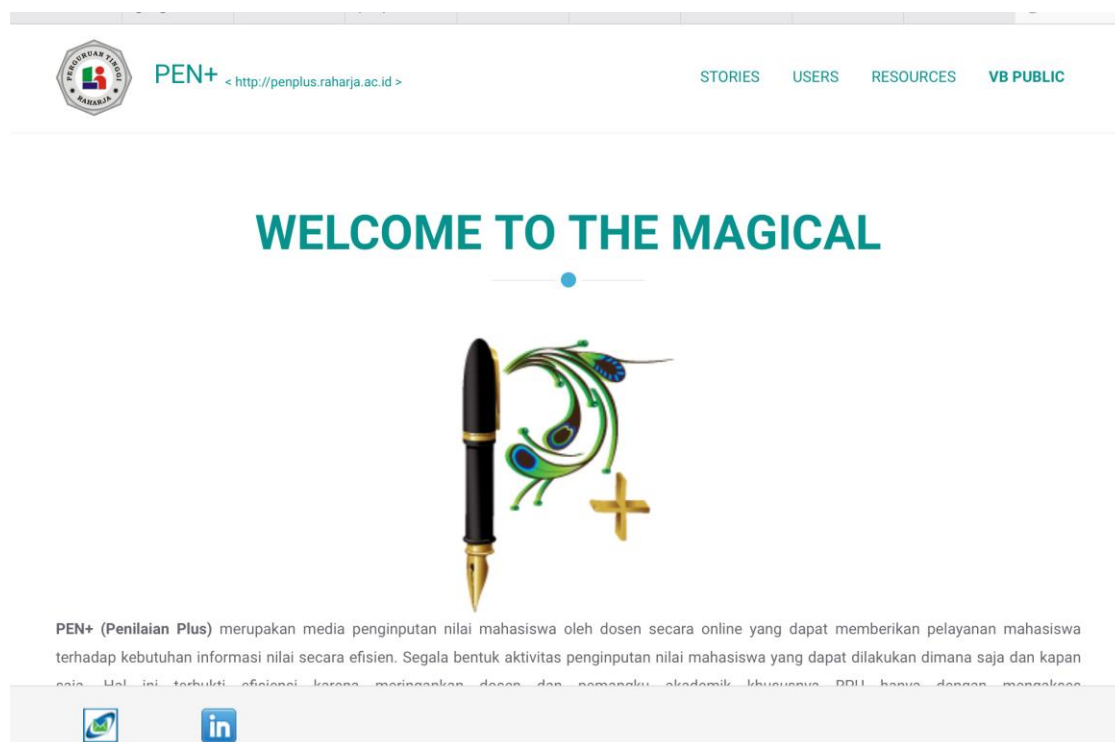


Figure 8. Initial display of the PEN + system

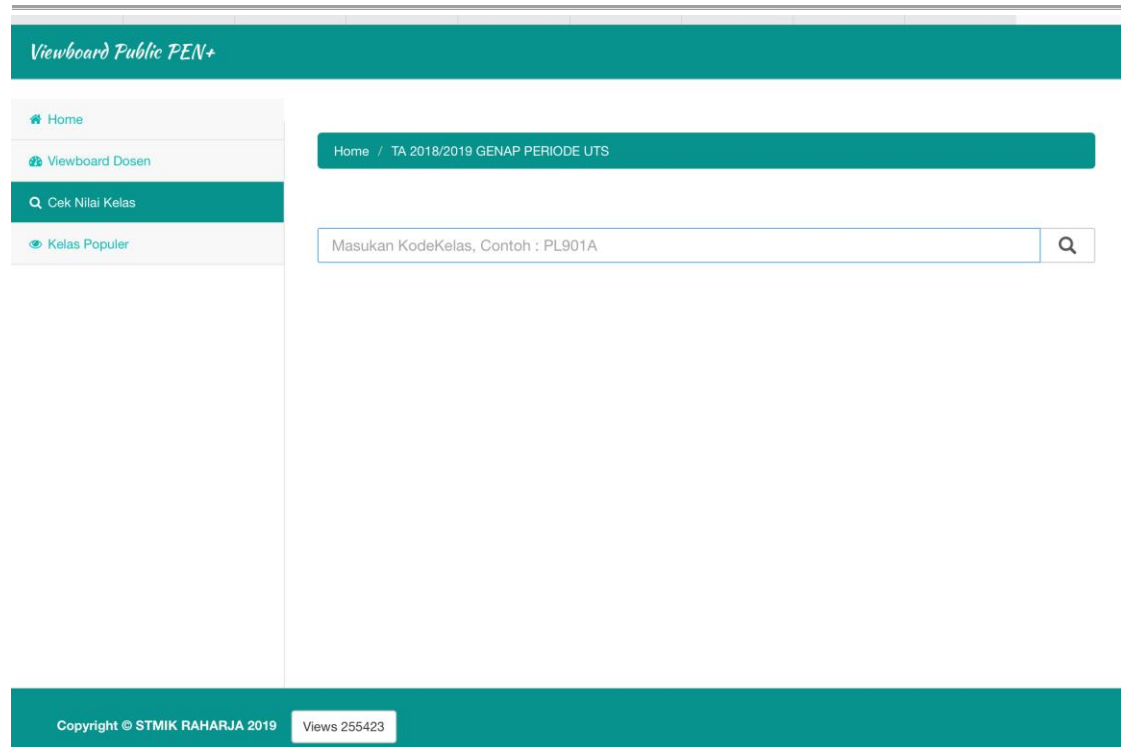


Figure 9. view after clicking Viewboard Public PEN +

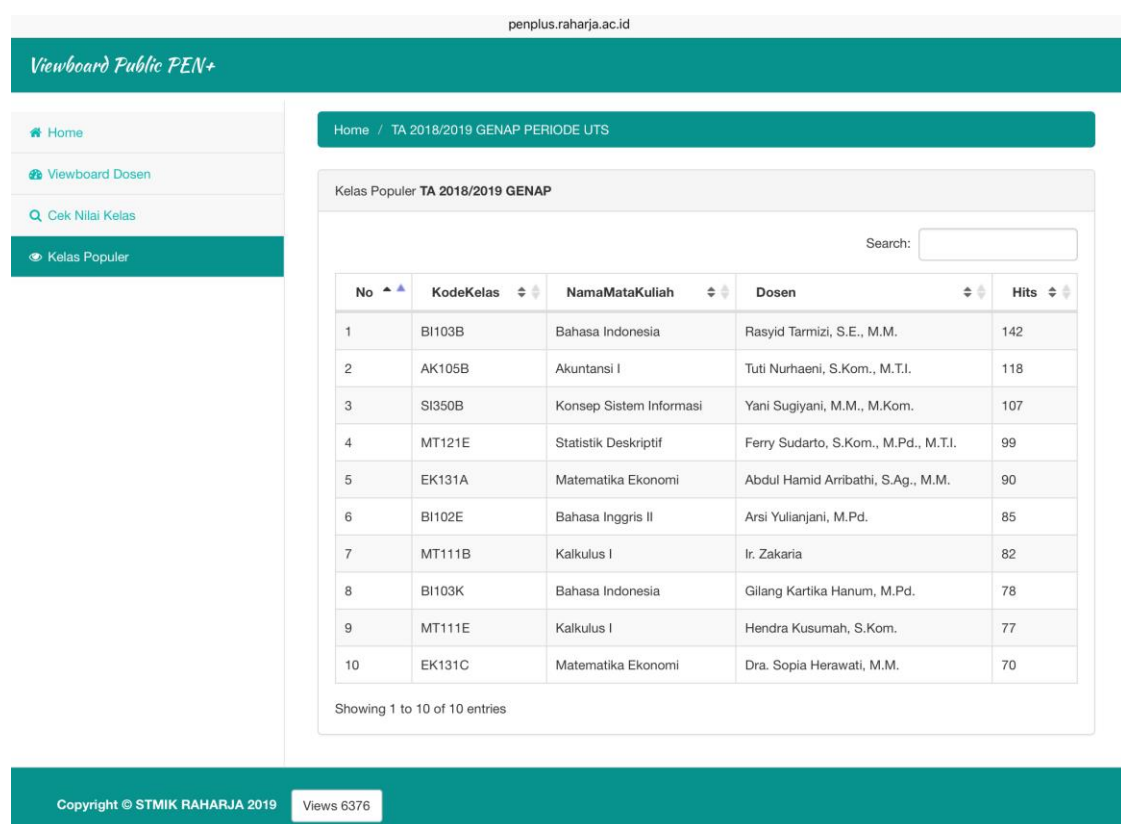


Figure 10. Check menu Top 10 popular classes

The picture above explains which class is most often accessed along with a description of the course's name, the name of the lecturer and there is a rank order that can be seen based on the hits, because hits are information on how much the class is visited. which can be seen in figure 8 after the cursor is pointing at the public viewboard, the display will look like Figure 9, and finally click on the popular class feature which can be seen in Figure 10.

#### **4. CONCLUSION**

Based on the above research it can be concluded that the dashboard can be as a list of tables as well as on the student exam dashboard that has been applied to the lecture scoring system at Raharja University with the media submitting student exam value information both semester midterms (UTS) final semester examinations ( UAS) and the overall independent assignment (TM) per class according to the subjects students are able to access online and can be easily accessed so that it becomes more effective and efficient in the process of finding information on student exam results.As for some of the advantages of the dashboard in the popular class that provides overall information, including the dashboard in the form of a table, the Popular Class can provide real time information in accordance with the data contained in the lecture scoring system. Dashboards can make it easier for students to access grades online anywhere and anytime and find out which classes are most frequently visited. With the dashboard on the popular class of lecturers, we can be sure that the value has been spread and has its own pride if the class is included in the Top 10 popular class according to the data contained in the lecture scoring system in real time. learning in class.

#### **5. SUGGESTIONS**

Based on the discussion that the author has outlined earlier, then it can conclude the suggestion, there must be media that can provide accurate information in accordance with the data contained in the lecture scoring system at Raharja University for example the addition of chart features and new features such as how many lecturers know percent of the value of the class is distributed.

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