Mini Simlitabmas software development in P3M Bali State Polytechnic

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Abstract. The purpose of this study is to provide a forum for researchers in order to input profosal research, history of research, development of semester systems and research reports. This report-based research means that each researcher must pass through the phases that have been determined by the system, without being able to pass the previous phase. At P3M Bali State Polytechnic SIMLITABMAS application has been available from 2017. In the system there is no Year content for the next period, research history, assessment forms for each researcher and research levels that must be obeyed by a researcher. In the development of the Simlitabmas application a researcher must really follow the rules that have been determined by the system such as; researchers cannot upload 100% reports if researchers have not reported 70% research progress, so also reports on the use of research funds must remain tiered. The final result of this research is a Simlitabmas software that can be used as a reference in conducting the research process at the Bali State Polytechnic.

1. Introduction

The development of information technology cannot be separated from the role of the existing software infrastructure, because software is the backbone of all systems that have used computers in their work processes. The speed and quality of data access will be largely determined by the quality of the software. This is what causes computer software to be a very valuable asset for all organizations, and this also applies to the Bali State Polytechnic.

Currently there are a number of software development methods including the process of developing mobile applications, wireless development, mobile application development life cycle models (MADLC), Agile Methodology for Mobile Software Development, MASAM methodology, Mobile Application Development Methodology, and Mobile Development (Mobile D). In order to meet the needs of users, specifically in terms of system changes, it can use Agile in developing software. Agile methodology is an alternative to traditional project management, supporting planning between clients, supporting clients, improving project quality, and increasing client satisfaction. When changes occur in the system, changes must be made in all phases.

The Bali State Polytechnic (PNB) is one of the State Universities which consists of 6 majors and 16 study programs. In part of its performance, the Bali State Polytechnic has utilized the Information System. In addition to information systems, many entities within the PNB scope use the Internet to help their performance. With the increasing number of entities involved, of course it will require better quality infrastructure.

So far, PNB already has Simlitabmas applications from 2017. Often the application development process is taken for granted without looking at the models and needs of each unit or agency. This is of course a high risk, considering that investing in the procurement of computer software is an expensive investment. Development failure will certainly affect the financial side.

In addition to economic problems, from a technical point of view there are often difficulties in the tracking process if there is an incompatibility in an activity. No documentation of the model developed is one of the causes. Searching for software mismatch requires a long time (± one year). Psychologically, of course this process will increase work pressure on employees and users.

Based on the above, in this study Simlitabmas software will be developed at a report-based Bali State Polytechnic.

Based on the things described in the background, the problem can be formulated, namely how to develop Simlitabmas software at a report-based Bali State Polytechnic.

The purpose of this study is to develop Simlitabmas software at report-based Bali State Polytechnic. While the benefits that can be obtained from this research are the formation of Simlitabmas software which can be used as a basis or reference for researchers and P3M units in conducting research activities at the Bali State Polytechnic.

2. Research methods
This chapter will discuss the location and object of research, types and sources of data, data analysis and system design proposed in this study.

2.1. Research place and time
The location of this study is located at the Bali State Polytechnic having its address at Bukit Jimbaran, South Kuta, Badung, Bali. The research will be conducted for eight months starting from April to November 2019.

2.2. Research objects
The object under study is the development of Bali State Polytechnic Simlitabmas software. Observations will be made on the existing conditions of the applications currently owned. Next will be a report-based software development plan.

2.3. Research objects
The data used in this study are related to the results of interviews, literature studies and observations, on block software and existing conditions at the Bali State Polytechnic. While the stage of research is carried out by the following steps:
- Collection of existing data and block software for Simlitabmas of the Bali State Polytechnic.
- Software configuration analysis and design.
- Software compilation.
- User acceptance testing of the Simlibtamas Bali Polytechnic software design.

2.4. Scope of simlitabmas software development
The scoope in the development of Simlitabmas includes the following components:
- Menu list of new proposals.
- List of proposed review.
- Active research and service activities.

3. Discussion

In this study there are several menus that have been fixed according to the scopes that are in the development of Simlitabmas.

3.1. Menu list of new proposals

See list of new proposals for research & service.

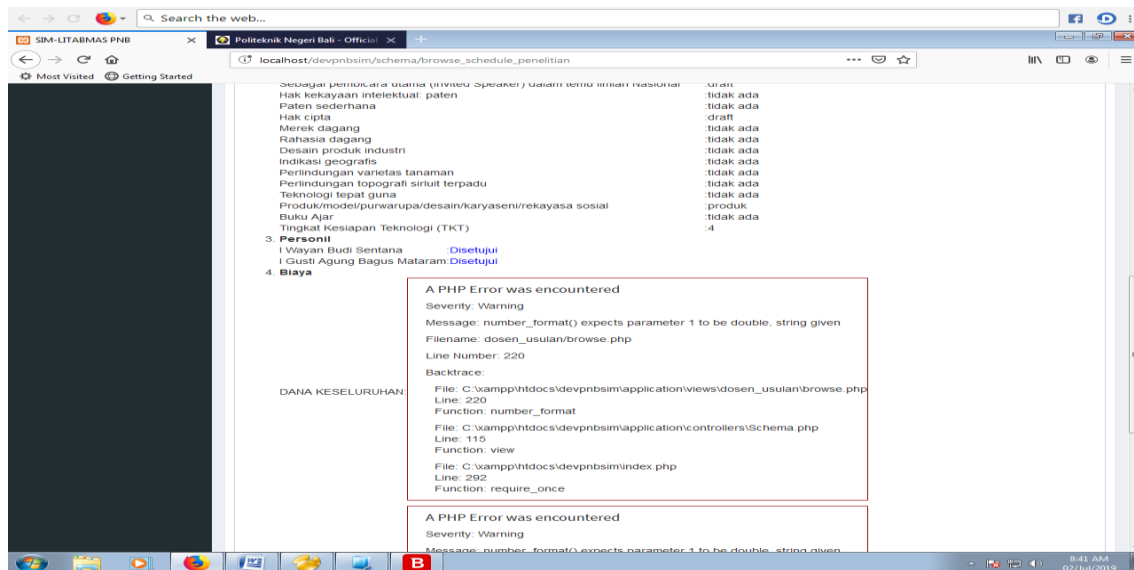Bugs system: appears when displaying the detailed costs that have been posted.

Figure 1. Bugs in menu list of new proposals.

Improvements:

Bugs are caused by a lack of validation of form entries for numeric data, when the entry column is emptied, an error will appear when the data is displayed.
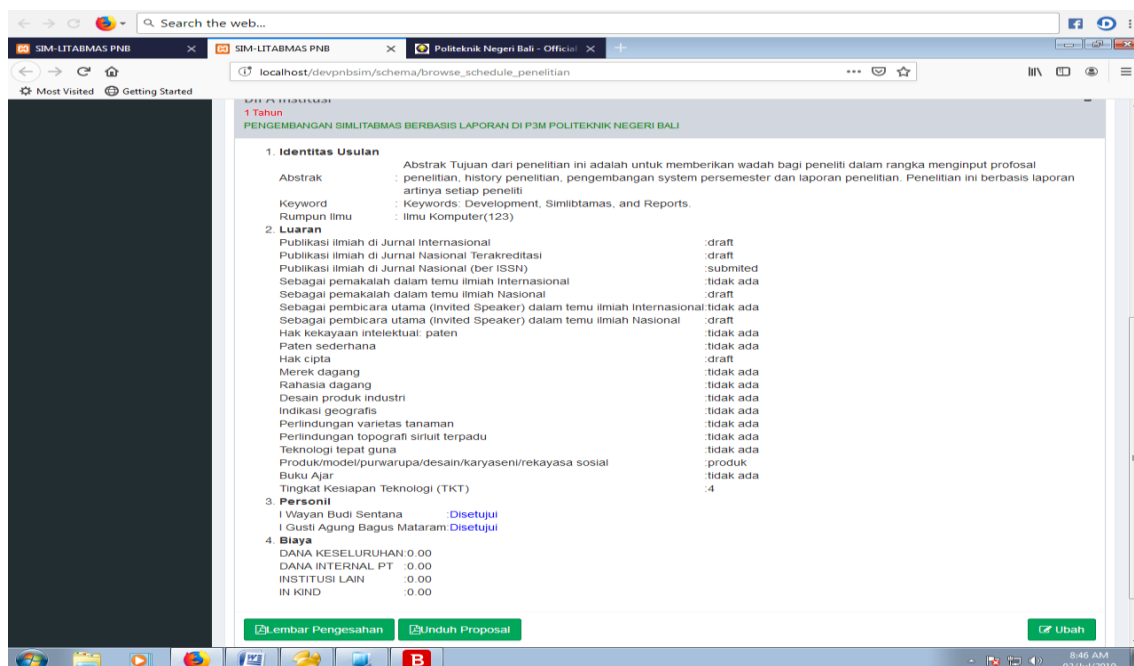

Figure 2. Improvements for menu list of new proposals.

3.2. Lecturer menu » List of review proposals

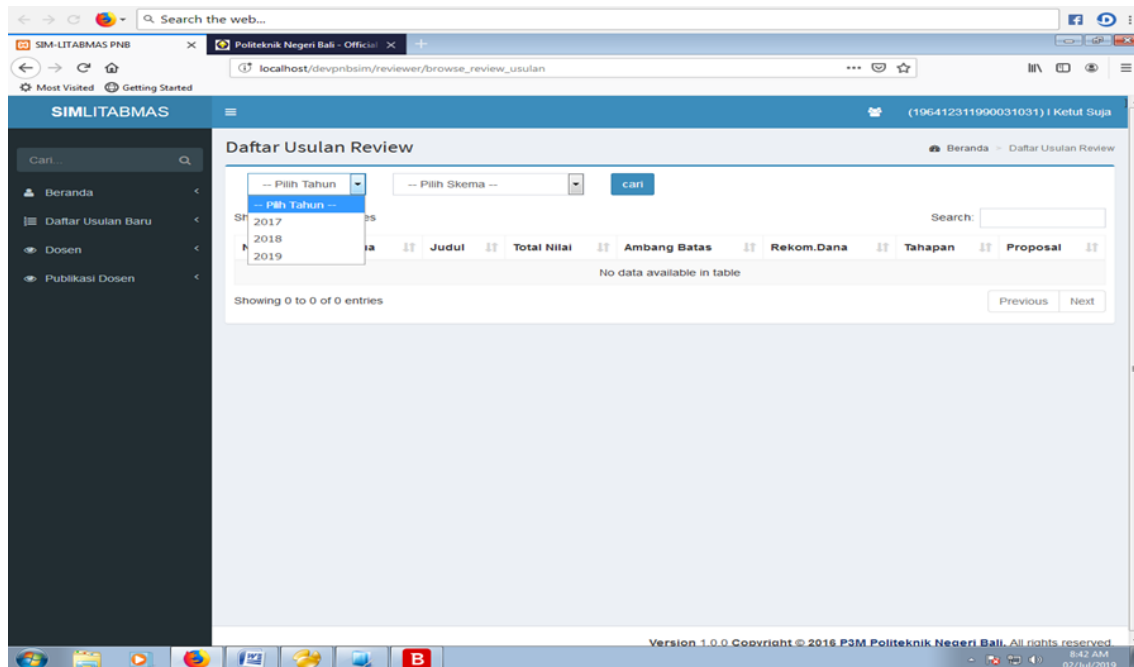Bugs system: the system only displays 2017 and 2018 when data filtering.
Improvements:

Figure 3. Improvements for menu list of review proposals.

3.3. Lecturer menu » Active activity

Bugs system: system only displays 2017 & 2018 when data filtering.
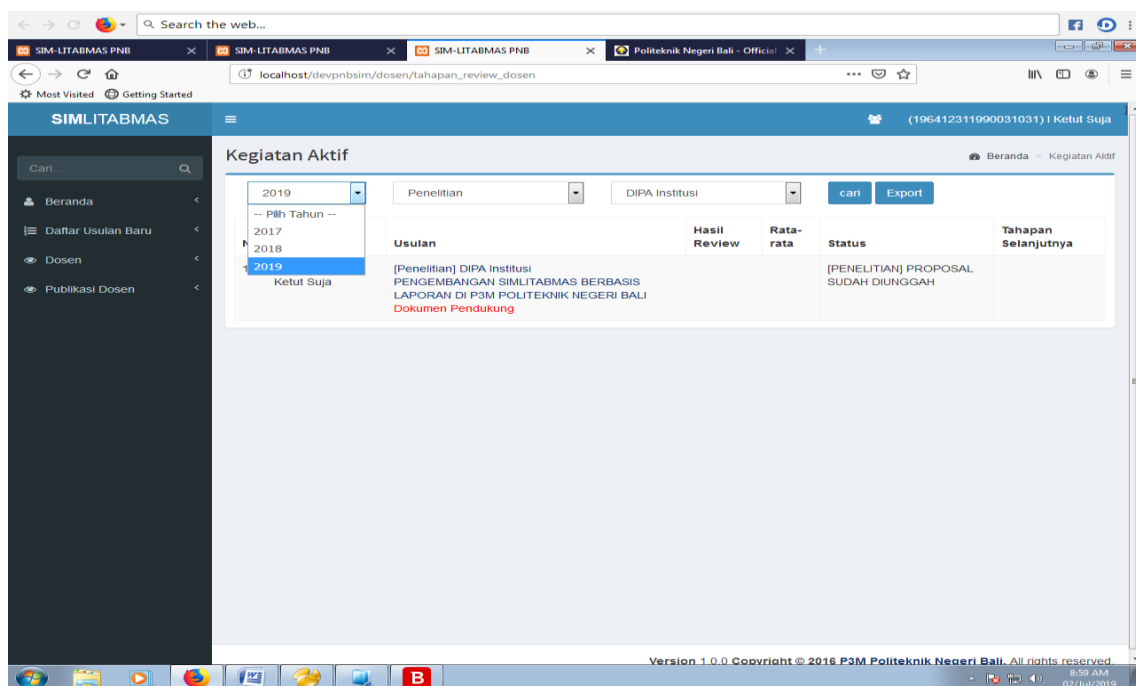Improvements:

Figure 4. Improvements for menu active activity.

3.4. Lecturer menu » history
Bugs system: the system only displays 2017 & 2018 when data filtering.
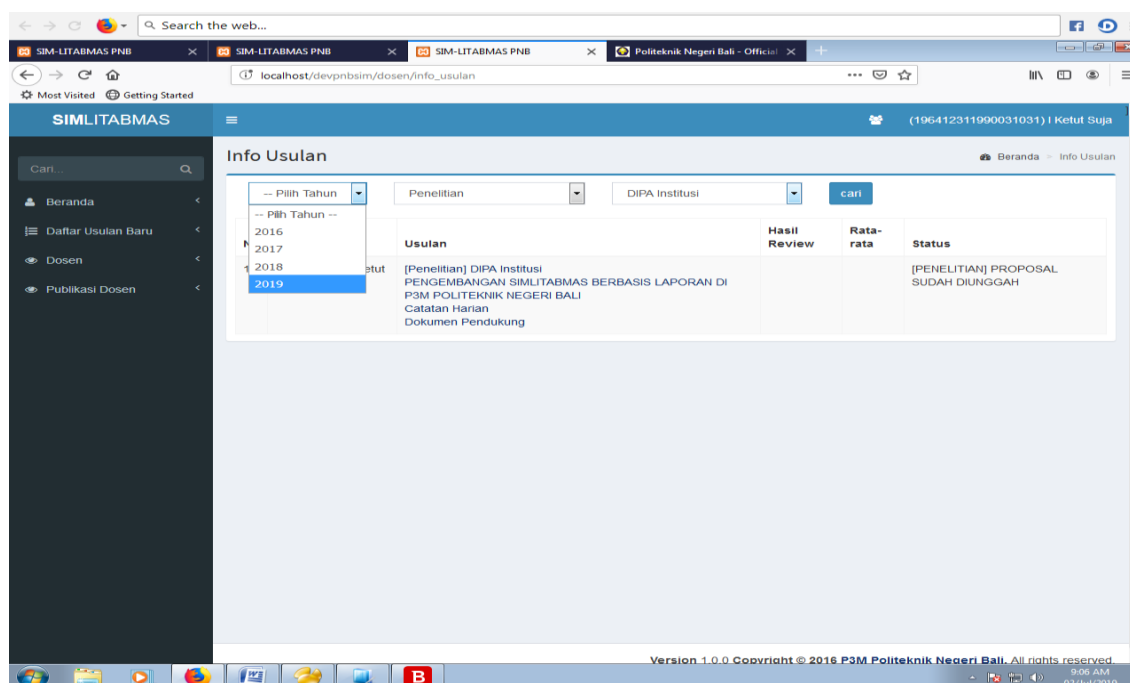Improvements:

Figure 5. Improvements for menu history.

4. Conclusions

In this study there are several menus that have been fixed according to the scopes that are in the development of Simlibtabmas, including menu list of new proposals, list of proposed review and active research and service activities. Before repairing the Simlitabmas Application often came out with an error sign, so the process of inputting data, uploading and downloading was often problematic. After the Simlitabmas Application was perfected, the process of input, output, upload and download was normal, in accordance with the rules and procedures set by the Bali State Polytechnic P3M Unit.

5. References

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