

## Design web-based Aplikasi Sistem Informasi Keuangan (ASIK) at Perwakilan BPKP Provinsi Riau

Ziddo Simanjuntak<sup>1</sup>, Zulfahmi Syahputra<sup>2</sup>, Arpan<sup>3</sup>

<sup>1,2,3</sup> Sistem Komputer, Universitas Pembangunan Panca Budi, Medan, Indonesia

Email: <sup>1</sup>ziddosimanjuntak@gmail.com, <sup>2</sup>zulfahmisyahputra@gmail.com, <sup>3</sup>arsevent@pancabudi.ac.id

### Abstract

---

#### Article Info

Received : 29 November 2021

Revised : 24 December 2021

Accepted : 29 December 2021

In Perwakilan BPKP Provinsi Riau, before official work travel, the officer needs to prepare some documents such as Assignment Letter and Cost Sheet, while the Administrator should make Official Work Travel Letter and Treasurer Accountability Report. To make all the documents the officer has to use other work unit application, and it needs some procedures to be done that makes the process ineffective and inefficient. Other than that there is no application to monitor the budget yet. So we create a web based application that called Aplikasi Sistem Informasi Keuangan (ASIK) which use waterfall method. Result of the research is documents that needed in official travel can be made faster with ASIK so performance of every officer can be more effective and efficient. Also, with ASIK, leader and administrator can monitor the budget easily.

Keywords : Budget, Information Systems, Letter Of Assignment, Official Travel Documents, Website

---

### 1. Introduction

Perwakilan BPKP Provinsi Riau was a government institution with must carry out administrative matters in the field of the financial and development supervisory state / regional. In making official travel documents such as a duty, cost sheet, accountability, and a letter of order for a business trip, current use application that has been created by a unit of work other BPKP. The process of making documents on the application of the local office of one of them is not effective and a long time because there are a lot of procedures to be done.

If there is a mistake made data to make repairs took a response from the developer and it makes other activities are held up. It is also there has never been any budget monitoring served in a disallow module loading that can be used to know the rest of the balance of the budget at each field and accurate realization based on the work being done

Therefore we need an Aplikasi Sistem Informasi Keuangan (ASIK) that can speed up and make it easier for finance staff or employees in managing or making official travel documents as well as real-time budget monitoring

### 2. Method

#### 2.1 System Development Method

Researchers developed a system using the waterfall method, which is a systematic and sequential approach, starting with an analysis of system requirements and then continuing through planning stages such as system and database design or design, coding, testing, and maintenance of the developed system.

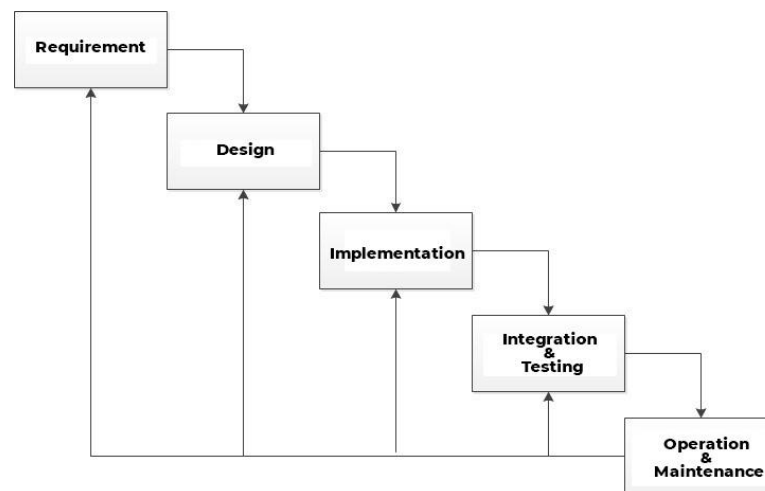


Figure 1. System Development Method

The explanation of each stage is as follows:

- 1) Requirement  
Prepare and analyze the needs of the system to be developed. Information was obtained from interviews, surveys, literature studies, observations, and discussions.
- 2) Design  
The next stage is making a system design before entering the coding process. The purpose of this stage is to have a clear picture of the appearance and interface of the system.
- 3) Implementation  
At this point is the implementation of the system design into a programming language which is then verified for proper operation.
- 4) Integration & Testing  
At this stage, the process of testing the system or testing the design of the information system is then tested as a whole whether it is by the expected results.
- 5) Operation & Maintenance  
The final stage is to operate and repair the system. After testing the system, it moves into the user stage. For the maintenance process, the developer improves the errors found after the user has used them.

## 2.2 Data Collection

At the data collection stage, this is a very important step in the needs analysis in the development of the required application, while data collection consists of:

- 1) Observation  
Make direct observations of the object to be studied to find out directly about the application that is currently running at Perwakilan BPKP Provinsi Riau.
- 2) Interview  
Researchers conducted interviews with related parties, namely the Head of Administration, Head of Division, Head of Sub-Division of Finance and Finance Staff to obtain the data needed by researchers. This is done so that the application developed is in accordance with the needs.
- 3) Analysis  
Researchers reviewed existing applications and documentation for official travel activities to learn about the current management process for official travel activities.

## 2.3 System Interface Design

1) Login Page

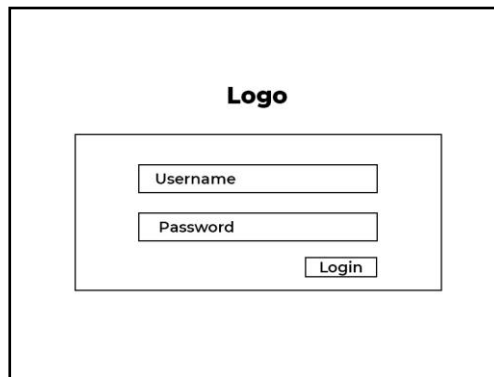


Figure 2. Login Page

2) Admin Main Page

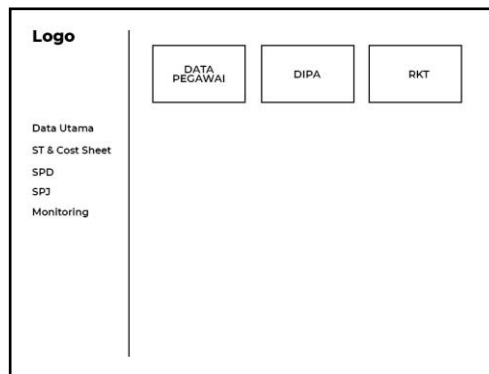


Figure 3. Admin Main Page

3) Employee Main Page

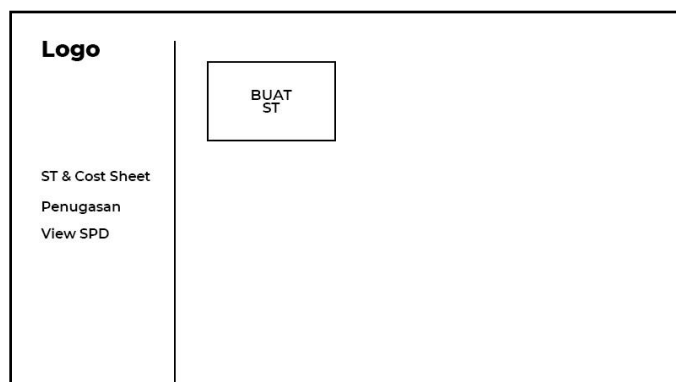


Figure 4. Employee Main Page

4) Budget Monitoring Page

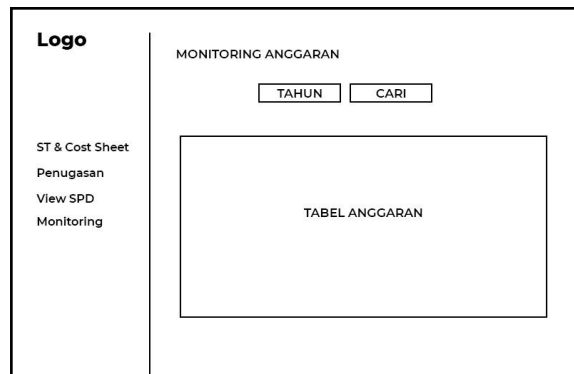


Figure 5. Budget Monitoring Page

5) Assignment Letter and Cost Sheet Making Pages

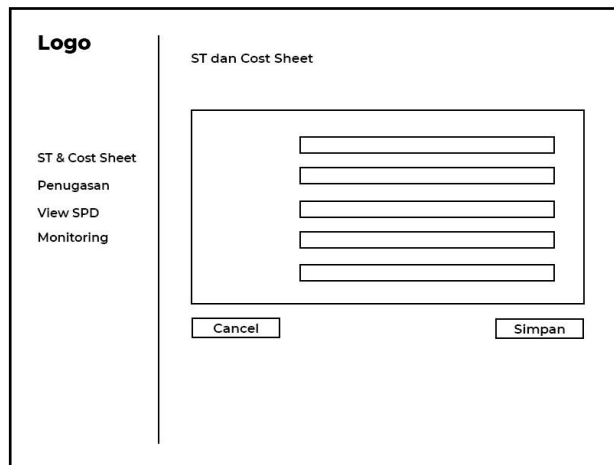


Figure 6. Assignment Letter and Cost Sheet Making Page

2.4 Use Case Diagram

The Use Case Diagram for Aplikasi Sistem Informasi Keuangan (ASIK) can be viewed as shown in Figure 7.

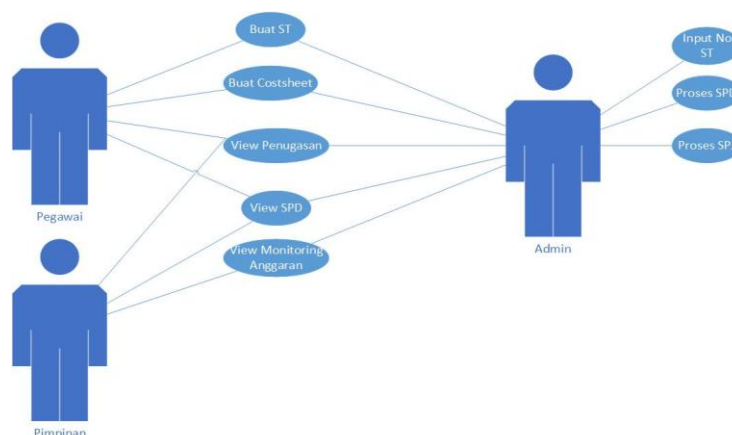


Figure 7. Use Case ASIK

The explanation of use cases ASIK can be seen in Table 1 and Table 2.

Table 1. Definition of Actor

No.	Actor	Description
1.	Employee	For those with access to create assignment letters, cost sheets, see Business Travel Letters & Assignments.
2.	Admin	A person who has responsibility for managing authorization, managing Letter of Assignment, Cost Sheet, inputting Letter of Assignment number, making Official Travel Letter, Letter on Accountability and budget monitoring
3	Leader	Those who have the greatest access to budgetary monitoring.

Table 2. Definition Use Case

No.	Use case	Description
1.	Login	This is a process of control and validation of ASIK access rights.
2.	Buat ST dan Cost sheet	This is the process to prepare an assignment letter and cost sheet.
3.	View Penugasan	It is a process for displaying assignment information.
4.	View SPD	This is a process to view data on official travel that has been completed.
5.	View Monitoring Anggaran	Process to view budget balance data.

### 3. Results and Discussion

#### 3.1 Implementation

After the interface design is complete, an ASIK is generated at Perwakilan BPKP Provinsi Riau which is made using the PHP programming language and the MySQL database, and can be seen in the image below:

##### 1) Login Page

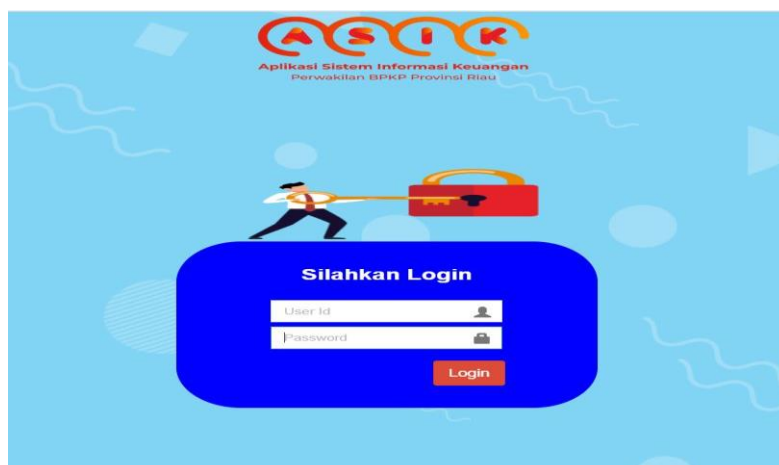


Figure 8. Login Page

The log-in screen is used to enter the main view by entering a user name and password for administrators and employees.

2) Main Page



Figure 9. Main Page

After connecting, the main admin screen will display. In this view, you will find Employee Data, DIPA, and RKT menus. Administration can enter employee data, input budget (DIPA), and group budget, by field (RKT). In the meantime, for employees, there is just a menu for an assignment letter and a cost sheet, as shown in Figure 10.



Figure 10. Employee Main Page

3) Assignment Letter and Cost Sheet Pages

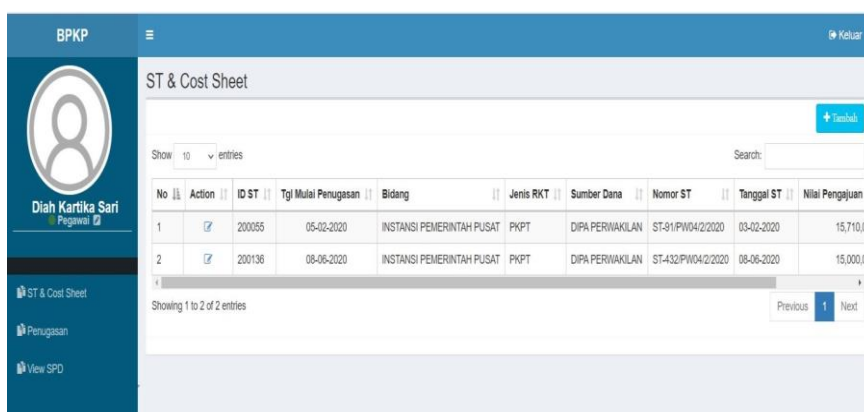


Figure 11. Assignment Letter and Cost Sheet Pages

This view contains information on the letter of assignment, such as number, proposed budget,

and source of funds. Employees who want to take official travel must first prepare an assignment letter and a cost sheet. To create an assignment letter and cost sheet, click the Add button.

4) Official Travel Letter Page

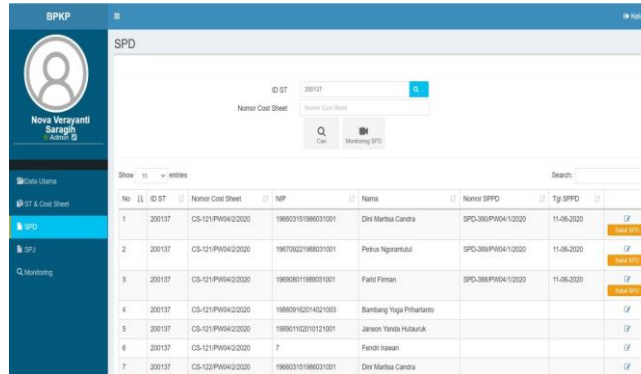


Figure 12. Official Travel Letter Page

After the employee has finished making the Assignment Letter and Cost Sheet, the finance department will make a Business Travel Letter on the SPD menu. In this view there is a search feature for Assignment Letter ID, the admin looks for an Assignment Letter ID then the data for employees who will go on an official trip will appear, then the admin chooses to make an SPD.

5) Budget Monitoring Page

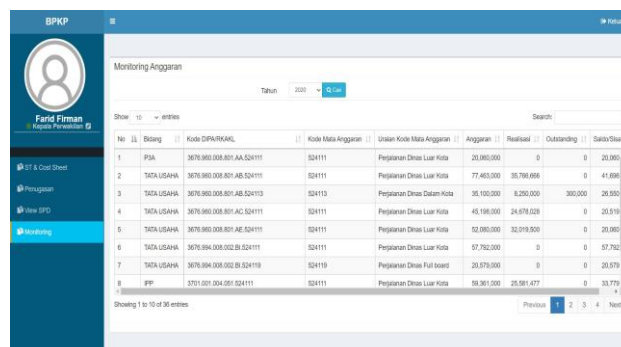


Figure 13. Budget Monitoring Page

In this view, Leaders and Admins can see the total budget, budget realization, and remaining budget by selecting the budget year and selecting the search button.

3.2 System Test

After the implementation phase is complete, the application is tested to determine the success of the system and its quality. The tests shall be performed using a questionnaire test method. In total, 13 respondents were employees of the Department of Finance and employee representatives from each division. The test results can be seen in Table 3.

Table 3. Test Result

Pertanyaan	Setuju	Tidak Setuju
Desain Tampilan Aplikasi Sistem Informasi Keuangan (ASIK) mudah untuk dipahami	13	-
Aplikasi Sistem Informasi Keuangan (ASIK) memudahkan dalam membuat ST dan Cost Sheet untuk perjalanan dinas	11	3
Aplikasi Sistem Informasi Keuangan (ASIK) mempercepat pembuatan SPD dan SPJ	10	3
Aplikasi Sistem Informasi Keuangan (ASIK) memberikan informasi anggaran secara realtime	10	3
<b>Total</b>	44	9
<b>Rata-Rata</b>	<b>84,6 %</b>	<b>17,3%</b>

Based on the results of the questionnaire, it can be seen that 84.6% of employees agree that ASIK has a display design that is easy to understand, makes it easier to make official travel documents and is able to provide budget information in real-time.

#### 4. Conclusion

Based on the results of the research that has been done, it can be concluded that with ASIK making official travel documents can be done easily and quickly. In addition, it makes it easier for admins to input data to produce effective and efficient performance. ASIK also makes it easier for admins and leaders to monitor budgets. This application still has many shortcomings, so is a need of development so that in the future it works better.

#### References

- [1] Fauzan, N.M., Roza, Rahmi. (2019). Tutorial Sistem Informasi Approval Berbasis Web Menggunakan Framework Codeigniter Dengan Notifikasi E-Mail. Kreatif Industri Nusantara
- [2] Hikmah, B.A., Supriadi, D., Alawiyah, T. (2015). Cara Cepat Membangun Website dari Nol Studi Kasus: Web Dealer Motor. Andi Offset.
- [3] Kurniawan, H., Effiyaldi. (2020). Analisis Dan Perancangan Sistem Informasi Manajemen Perjalanan Dinas Pada Dinas Lingkungan Hidup (DLH) Provinsi Jambi. Jurnal Manajemen SistemInformasi,5(3),429-439.  
<https://doi.org/10.33998/jurnalmanajemensisteminformasi.2020.5.3.913>
- [4] Lestari, K.A.E., Anjarwani, E.S., Agitha, N. (2018). Rancang Bangun Sistem Informasi Surat Perintah Perjalanan Dinas pada Sekretariat Daerah Provinsi Berbasis Web. Enterprise Information System, 2(1), 29-36. <https://doi.org/10.29303/jcosine.v2i1.68>
- [5] Syahputra, Z. (2020). Website Based Sales Information System With The Concept Of Mvc (Model View Controller). Augustus: Manajemen, Teknologi Informatika dan Komunikasi (Mantik), 4(2), 1133-1137. <https://doi.org/10.35335/mantik.Vol4.2020.915.pp1133-1137>
- [6] J. Sihotang, "Analysis Of Shortest Path Determination By Utilizing Breadth First Search Algorithm," *J. Info Sains Inform. dan Sains*, vol. 10, no. 2, pp. 1-5, 2020.
- [7] P. S. H. Hasugian and A. Simangunsong, "Implementation Of Least Significant Bit (LSB) Algorithm For Data Security In Digital Imagery," *J. Info Sains Inform. dan Sains*, vol. 10, no. 2, pp. 6-12, 2020.



- [8] C. Baturu, “Brute Force Algorithm Implementation Of Dictionary Search,” *J. Info Sains Inform. dan Sains*, vol. 10, no. 1, pp. 24–30, 2020.
- [9] A. Simangunsong and P. S. Hasugian, “Application of the Certainty Factor Method to Diagnose Escherichia Coli Bacteria in Refilled Drinking Water,” *J. Info Sains Inform. dan Sains*, vol. 10, no. 1, pp. 7–12, 2020.
- [10] M. R. Rofendi and A. Manalu, “Learning Support System With Computer Assisted Instruction Method,” *J. Info Sains Inform. dan Sains*, vol. 10, no. 1, pp. 1–6, 2020.