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Impelementation Of The Unfield Modeling Langguage Model In The Criminality Data Processing Information System

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ABSTRACT

Implementation of Model Unfield Modeling Language in Information Systems Data Processing Criminality a system to provide information such as the report the complainant, witnesses, suspects, and criminal cases terjadi.sehingga help speed and quality in the provision of information. Unified Modeling results Langguage model implementation in the information system aims to facilitate the development of the information system which checks data processing, recording and reporting of data processed in digital form. This information system has access user is admin and user comprising leaders. This information system task criminality entering and storing data.

1. Introduction

The application of computer technology in every aspect of life in the work, both individually and organization become a necessity. Not having a good information system the data can give undesirable effects of data can not be found quickly or data is missing or lost. The use of technology make the job effectively and efficiently. information systems as an information technology that is used by organizations and companies improve performance, assist in the implementation manage documents quickly and accurately in order to reduce the time jobs as well as improving public services were good. Behaviors that do not conform to the norms or can be called a fraud that has done well on the agreed norms affect the disruption of order and peace of life.[1]

At the Polres Labuhanbatu has a unit of administration work in everyday activities, namely an operating unit, unit development partnership, administrative units, units provost, unit administration, units of the central police services, unit inteljen security units criminal detectives, unit Sabhara, and unit traffic , Having a document data or still stored in the archive, the data piles and enable event of data loss or fire. It took long enough to find the data. In manual data processing, it is necessary to computerized data processing so that the processing of data quickly and accurately. Improve performance in organizations and institutions, there should be a breakthrough in managing to produce a good performance.[2]

The design process in the flow of life in the software design can be illustrated by the diagram UML (Unified Modeling Language), which is for modeling and communication about a system using diagrams and other supporting texts. Units of content included in the model example UML use case diagrams, class diagrams models, models activity diagrams, sequence diagrams and models. Creating a good modeling impact on the design of the software is also good, a good system should be able to meet the needs of users, can process data into valuable information quickly. Then the UML diagram modeling needs to be done into one of the stages of the units that will be developed in the information system or software.[3]

With penerapam UML modeling in designing an information system the data penggolahan criminality portrait needs to build an information system helps analysis system to meet the needs required by the development of software engineering.

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2. Method

Application of modeling UML (Unified Modeling Language) in the information system of data processing crime approach by modeling some diagrams UML (Unified Modeling Language). Unified Modeling Language (UML), one of the standard reference sample has been used at present as identify the needs in the development of information systems, and conduct analysis and design, as well as making charts of the architecture in object oriented programming. Shaped language UML modeling and visualization as well as the communication on an integrated system of Baian or other element-element[4],

3. Results and Discussion

In starting to design information systems that will be applied to this system, ranging from building UML models with step by step in accordance with the guidelines in UML modeling that has Standardize to be understood in building a good all information systems and efficient.[5]

a. Use Case Diagram

Use case diagram pictures or symbols to tell how the information system gives a user the information on the system. Use case consists of a set of scenarios performed by an actor (people, hardware, chronologically or other systems)

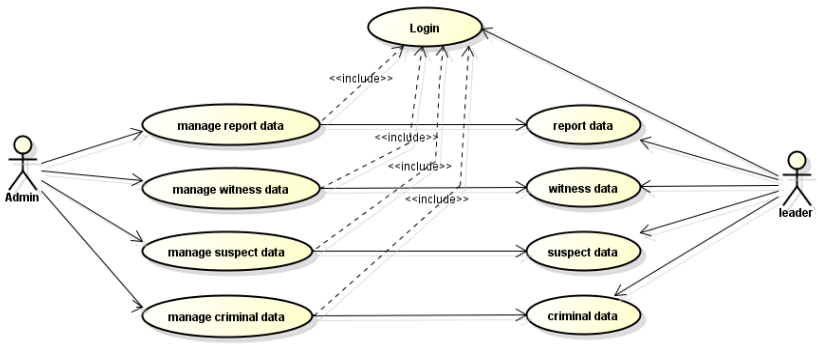

Fig 1. Use case diagram of the criminality Data Processing Information System

Figure 1. Use case diagrams Crime Data Processing Information Systems as a description of the information system is built, the system has some of the scenarios that is practiced by admin actor and leader in the use of the information system. In the information system development can be seen that an admin can manage the data of case reports, witness statements, the data is unpredictable and the data of criminal suspects by first log into the system, while the leader or the head of the unit receiving the report either that the data reported cases, data inquiry report, the data report suspected unexpected and report data reported by admin.[6]

b. Activity Diagram

Activity Diagram to portray the behavior of the system that serves to carry out the activity, among others .:

a) Merancangan process on every order of activity depicted on the results of the system built.
b) Well sort grouped according to the appearance of the interface every activity has a display interface.
c) Designing a test on any activity that requires a test that needs to be defined.[7]

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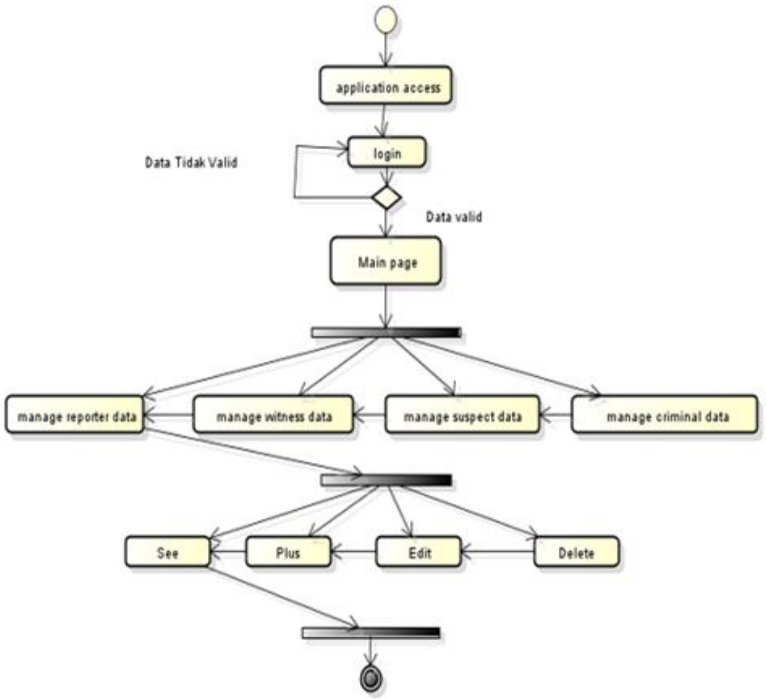

Fig 2 Activity Diagram of criminality Data Processing Information System

Figure 2 Activity Diagram Data Processing Information Systems Crime describe the activity track activity this application is used, starting with the first login, if the username and password is wrong then repeat the same action until the correct username and password. On the main page there is a system of reporting, navigation data case, unexpected menu and menu suspect. In the data reports are bebebrapa measures that can be used include view, add, modify and delete.

c. Class Diagram

Class diagrams serve as an illustration of the relationship between the other tables in the database gentleness. each class are built have attributes and methods or functions in accordance with the process.

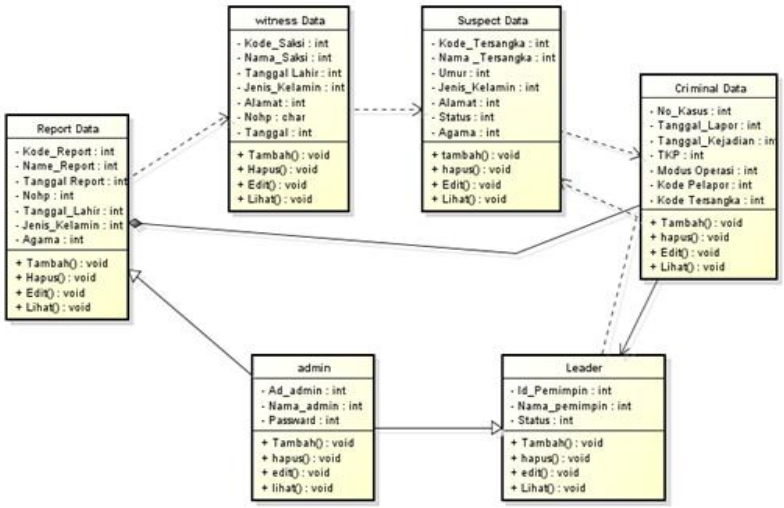

Fig 3. Class diagram of criminality Data Processing Information System

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Figure 3. Class diagram Data Processing Information Systems Crime there is a case report with details to be filled in Adala, report code name of the report, the report date, no phone, date of birth, gender and religion. And report this data, an admin can take action, add, delete, modify and view. after the report is filled completely, then the next action is to fill in the data of witnesses, the data required by the admin of the results of witness testimony in the form, the code Kaksi, names of witnesses, date of birth, gender, address, phone no, date of the event, after the admin enter data data witness further action is enter data unexpectedly, on this data admin enter data in the form of unexpected code, the name of the suspect, umut, gender, address, status, religion. After the data is unexpectedly filled the next admin action is to conduct criminal charging data, with the data that must be filled is, no case, the report date, the date of the incident, the scene, the mode of operation, code reports, the suspect code. All data have been filled by the admin, then the head of the unit can be checked case by first login as a leader.[8]

d. Squence Diagram

This diagram memngambarkan interactions between objects or elements that exist in the system that are arranged in a sequence step by step, the interaction both between objects and users, and so artists display a message (massage). Sequence diagram illustrates the scenario or series of steps undertaken as an action carried out by the system and responding to an incident / event to generate a specific output.[9]

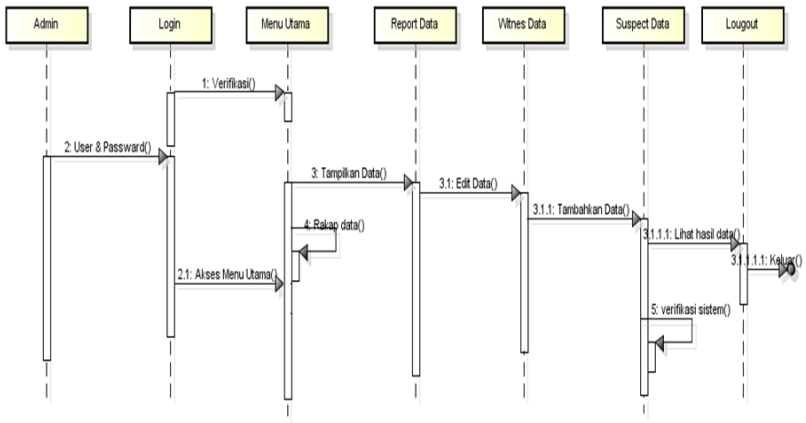

Fig 4. Sequence Diagram of criminality Data Processing Information System

Squence diagram in Figure 4. Data Processing Information Systems Crime that the actor is Admin. Activation boxes generally choose a line that tells activity that occurs when actors or objects interact to another. An admin bertintraksi by first logging into the system, then the system verifies the login, if the login is successful then the admin can proceed to the main menu system, where in the system admin can add case reports and modify reports the case, on the Data menu witness admin can add data , the data is unpredictable, and the data of the Criminal suspects.

4. Conclusion

Results of Unified Modeling Langguage model implementation in the information system is intended to facilitate the development of data processing information systems which facilitate checking, recording and reporting computerized data. This information system has access user is admin and user comprising leaders. This system works to enter and store data crime. The results of this modeling to build a criminal data information system that helps the performance of an employee or staff unit reskrim making it easier to use the system to perform data processing crime effectively and efficiently.

5. References

[1] R. Agung and R. Wijayanto, "UPAYA PENEGAKAN HUKUM TERHADAP PELAKU KEJAHATAN PENCURIAN DENGAN KEKERASAN," *Din. J. Ilm. Ilmu Huk.*, vol. 26, no. 8, pp. 1000–1009, 2020.
[2] I. R. Munthe, "Perancangan Sistem Informasi Pengarsipan Data Penduduk Pada Kantor Camat Bilah Hulu Kabupaten Labuhan Batu Dengan Metode System Develovment," *Informatika*, 2017.

Jurnal Mantik
Volume 4 Number 1 May 2020, pp. 92-96 E-ISSN 2685-4236
https://iocscience.org/ejournal/index.php/mantik/index

[3] M. Syarif and W. Nugraha, "PEMODELAN DIAGRAM UML SISTEM PEMBAYARAN TUNAI PADA TRANSAKSI E-COMMERCE," *J. Tek. Inform. Kaputama*, vol. 4, no. 1, 2020.
[4] D. D. Pertiwi and R. Taufiq, "Analisis dan Desain Sistem Informasi Pengolahan Nilai Siswa di SMK Avicena Rajeg," *J. Tek. Inform. Univ. Muhammadiyah Tangerang*, 2020.
[5] Haviluddin, "Memahami Penggunaan UML (Unified Modelling Language)," *Memahami Pengguna. UML (Unified Model. Lang.*, vol. 6, no. 1, pp. 1–15, 2011.
[6] S. Sengupta and S. Bhattacharya, "Formalization of UML Use Case Diagram-A Z Notation Based Approach," in *International Conference on Computing & Informatics*, 2006, doi: 10.1109/ICOCI.2006.5276507.
[7] L. Wang, J. Yuan, X. Yu, J. Hu, X. Li, and G. Zheng, "Generating test cases from UML activity diagram based on gray-box method," in *Proceedings - Asia-Pacific Software Engineering Conference, APSEC*, 2004, pp. 284–291, doi: 10.1109/APSEC.2004.55.
[8] A. S. Evans, "Reasoning with UML class diagrams," in *2nd IEEE Workshop on Industrial Strength Formal Specification Techniques, WIFT 1998*, 1998, vol. 1998-Octob, pp. 102–113, doi: 10.1109/WIFT.1998.766304.
[9] S. Wahyudi, "PENGEMBANGAN SISTEM INFORMASI KLINIK BERBASIS WEB (Studi Kasus : Klinik Surya Medika Pasir Pengaraian)," *Riau J. ofComputer Sci.*, vol. 06, no. 01, pp. 50–57, 2020.

Accredited "Rank 4"(Sinta 4), DIKTI, No. 36/E/KPT/2019, December 13th 2019.