

CRIMINAL ACTION DATA INFORMATION SYSTEM AT THE POLICE OFFICE

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ABSTRACT The Indonesian National Police (POLRI) is a law enforcement security apparatus always ready to serve all people who need help and protection from all crimes. The Abung Semuli sector, located on Jalan Semuli Raya, Abung Semuli District, North Lampung Regency, Indonesia, serves people who need assistance. Criminal data processing in the Abung Semuli sector has not yet used computer technology as a tool. It is still recorded in the crime data book in processing criminal and civil data. Still stored in a form that makes it difficult to find data and make reports on criminal data. The proposed criminal data information system functions to report the list of members, list of articles, and reports of criminal acts. In the process of searching for data and reports, it can produce accurate information..

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1. INTRODUCTION

A criminal act is an act committed by a person by committing a criminal act or crime that harms the interests of others or harms the public interest. Or acts that are prohibited and threatened with criminality by law (criminal)Chazawi (2021). In contrast, civil law is a law or provision that regulates obligations, rights, and interests between individuals in a closed (closed) society. Civil law is often referred to as private law. Civil law functions to handle cases that are private or private. The processing of criminal data in the Abung Semuli sector currently does not use computer technology as a tool. In processing data on criminal and civil acts, it is still recorded in the criminal data book and stored in the form of a form. To improve performance in data processing, it is necessary to have an information system that can process criminal and civil data computerized. So that the research carried out does not deviate from the problem, an information system will be built that can process data on criminal acts in the Abung Semuli Sector to assist in processing, data collection, and reporting of criminal data.

2. MATERIALS AND METHODS

The system development methodology used in this research is a structured system analysis and design methodology. The stages that must be carried out in this methodology include: policy and planning, analysis, design, selection, implementation and maintenance. **System Policy and Planning**. In this study the policy provided does not directly encourage system development, but is in the form of granting permission to researchers to be able to analyze existing system work procedures and design information systems that

will be proposed as alternative solutions that are expected to improve the performance of existing systems. **System Analysis**, At this stage it is used to analyze the system that is running to find out the weaknesses of the system that is running so that it is easier to develop the system that will be needed. **System Design**, At this stage, create a design using context diagrams to describe the system in general or the system to be proposed and this also makes a design using DFD to design the system in detail, output design, input design, database design, coding system, and logic program. **System Selection**, at this stage is done for hardware and software selection. **Implementation**, At this stage, create an application program based on the design that has been carried out in the previous stage.

3. RESULTS AND DISCUSSION

System development policy is a form of support provided by management in the system development process carried out in an organization. In this study, it is hoped that the policy provided does not directly promote system development, but gives permission to researchers to be able to analyze current system procedures and design information systems that will be proposed as alternative solutions that can improve the performance of existing systems. through the following steps.

- Reviewing the company's goals, strategic plans and tactics in the implementation of its line of business.
- Observing the support systems that play an important role in the company's goals.
- Determine the priority of system development that needs to be developed immediately.
- feasibility study and feasibility of the system to be developed.

64 After going through the planning stage, it has been confirmed that the system to be developed is technically, economically, schedule, legal, and operationally feasible. The next stage is analysis, which first collects the necessary data. To collect the data, the researcher did it by using field research methods and literature studies. In field research, the writer collects data using interviews and direct observation of the object of research, namely the Abung Semuli Police. To complete this research material, a literature study is also carried out aimed at obtaining theories that can support the research carried out. Based on the data that has been collected, then an analysis of the weaknesses and needs of the current system is carried out by first modeling the current system to help understand the condition of the system. The system discussed in this study is related to the administration of unlawful data processing, starting from job descriptions, problems faced, and problem-solving frameworks. The description of the ongoing criminal act data information system can be seen at (Figure 1)

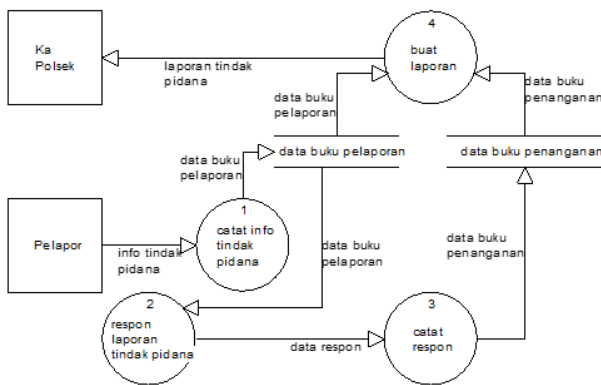


FIGURE 1. DFD Level 0 Ongoing Crime Data Information System.

Weakness Analysis of Running System.

Based on the results of the analysis, it was found that the system that was running above still had weaknesses, including:

- a. Reporting data and data on handling criminal acts are not yet integrated.
 - b. The work happened twice, namely when recording data in the reporting and handling books for criminal acts.
- Having to recap the report can result in inaccuracies in the data in the report to be presented.

Proposed Information System

After looking at the analysis of the system running at the Abung Semuli Police, it is proposed to develop the current system, one of which is by implementing software to assist in processing criminal data. The proposed system is arranged in a context diagram, and a data flow diagram, as shown below.(Figure 2) and (Figure 3)

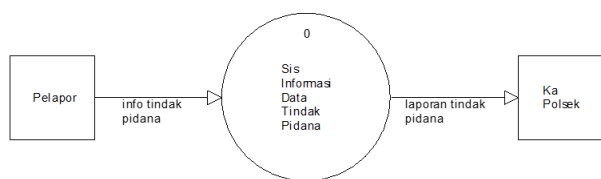


FIGURE 2. Context Diagram of the Proposed System.

Output Design

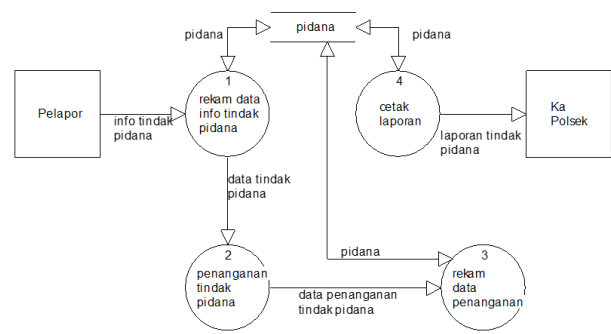


FIGURE 3. Data Flow Diagram Level-0.

The output design is an output design for data processing of criminal acts in the Abung Semuli sector. The input design consists of: member data input, data input, Crime Reporting Transaction input, and Crime Handling process input. The input design is also for entering data. One form of data entry is to add rules to the rules menu (Figure 4)

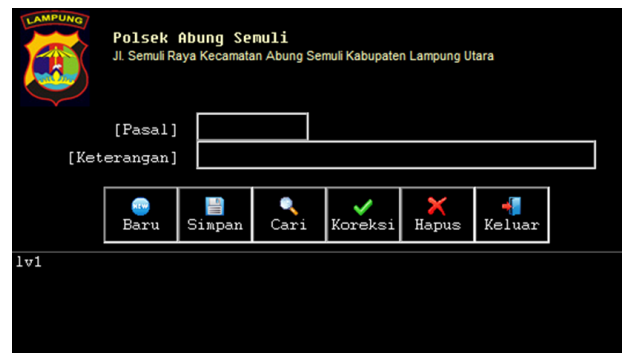


FIGURE 4. Design of Data Input Form Rules menu.

Database Design

Database design is used to design input data that aims to form a database system that is interconnected and related between tables with one. In addition, the database design is also used to determine the character length of each field and its data type. Database design is explained in two sub-discussions: relations between tables and database structure design (Figure 5).

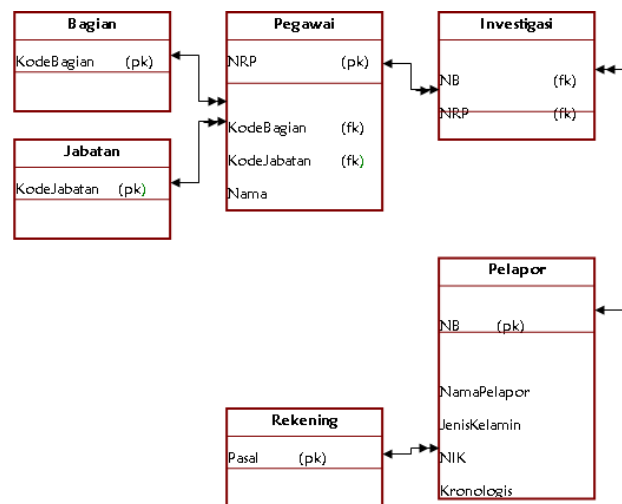


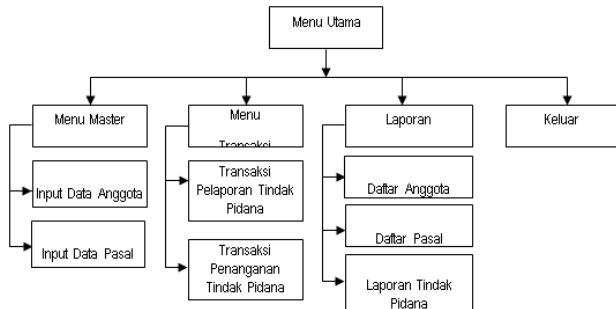
FIGURE 5. Database Design.

Coding System

The following is a code system used in the database:

118 NB code system, The code system used in NB is a Group
 119 code system with the following rules.
 120 Numbers 1-3: show **sign** of transaction/process
 121 Number 4-5: shows the **month** of transaction/process
 122 Numbers 6-7: show the **year** of the transaction/process
 123 Numbers 8-10: show the **order** of transactions/processes

124 **Example:** NB TR-0616001 (10 digits)
 125 **Hierarchy Input Process Output (HIPO) Chart**
 126 HIPO chart describes the relationship of each program
 127 model in the system related to one another. HIPO chart
 of criminal act data information system on (Figure 6).



128 **FIGURE 6.** HIPO Chart Main Menu.

129 **4. CONCLUSIONS**

130 The information system currently running at the Abung
 131 Semuli Police has several obstacles, including reporting
 132 and handling data not yet integrated. Work occurs twice,
 133 namely when the action is taken, the administrative sec-
 134 tion records data in the reporting book and handling book,
 135 which then has to recap the report. The information sys-
 136 tem of criminal act data at the Abung Semuli Police, which
 137 is proposed, includes the Master data member menu, arti-
 138 cle data, the process menu contains the process of report-
 139 ing criminal acts and handling criminal acts, and the report
 140 menu, which functions to report the list of reporters, list
 141 of articles, and reports. Criminal act. While the sugges-
 142 tions that can convey are that there needs to be a more com-
 143 prehensive system developed to address the needs that are still
 144 needed, including the need for data back-up and temporary
 145 data security, and so that this system can run and function
 146 properly, it is necessary to have staff who can operate the
 147 system. as well as training, is needed for the operation of
 148 the system itself

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162 **AUTHORS' CONTRIBUTIONS**

163 They are the ones who have contributed to completing this
 164 research with the responsibilities and abilities according

to their respective fields. MRR and S designed this study
 and wrote the initial manuscript. MRR Made improvements
 to the manuscript and matters related to publications, S
 Translated the text, CBZ and YJS tested the system design
 results. "All authors have approved the final version of the
 manuscript."

171 **REFERENCES**

172 Al Fatta H, et al. 2007. Analisis dan Perancangan Sistem In-
 173 formasi untuk keunggulan bersaing perusahaan dan or-
 174 ganisasi modern. Penerbit Andi.
 175 Chazawi A. 2021. Hukum Pembuktian Tindak Pidana Ko-
 176 rupsi: Edisi Revisi. Media Nusa Creative (MNC Publish-
 177 ing). <https://books.google.co.id/books?id=wQZMEA>
 178 AAQBAJ.
 179 Community Z. ????. 36 Menit Belajar Komputer: Php Dan
 180 Mysql. Elex Media Komputindo. <https://books.google>
 181 [.co.id/books?id=Eva5mY4Yw-wC](https://books.google.co.id/books?id=Eva5mY4Yw-wC).
 182 Dixit J. 2007. Structured System Analysis and Design. Laxmi
 183 Publications Pvt. Limited. <https://books.google.co.id>
 184 [/books?id=oEDWxmwaKwQC](https://books.google.co.id/books?id=oEDWxmwaKwQC).
 185 Editya D. 2020. Membuat Website Keren Dalam 1 Jam: De-
 186 velop Website dengan Mudah dan Gratis. How-To. Lec-
 187 tura Publishing. <https://books.google.co.id/books?i>
 188 [d=7yP_DwAAQBAJ](https://books.google.co.id/books?id=7yP_DwAAQBAJ).
 189 Hamidin M. 2017. Analisis dan Perancangan Sistem Infor-
 190 masi: Pembahasan Secara Praktis dengan Contoh Ka-
 191 sus. Deepublish. <https://books.google.co.id/books?i>
 192 [d=MjxyDwAAQBAJ](https://books.google.co.id/books?id=MjxyDwAAQBAJ).
 193 Hathaway T. 2015. Data Flow Diagrams – Simply Put!: Pro-
 194 cess Modeling Techniques for Requirements Elicitation
 195 and Workflow Analysis. Business Analysis Fundamen-
 196 tals. BA-Experts. <https://books.google.co.id/books?i>
 197 [d=oO29DwAAQBAJ](https://books.google.co.id/books?id=oO29DwAAQBAJ).
 198 Islami MRR, Muharni S, Sutomo B, Syaputra MA, Yusuf R,
 199 Nurdianto H. 2021. Application of the profile match-
 200 ing method in determining concentration courses
 201 of leading fields at stmik dharma wacana. Design
 202 Engineering:1806–1813.
 203 Jogiyanto, Hartono M. 2017. Sistem informasi pendekatan
 204 terstruktur teori dan praktek aplikasi bisnis. Penerbit
 205 Andi, 2017.
 206 KADIR A. 2003. Pengenalan sistem informasi.
 207 Karnila S, Sulistiyanto S. 2015. Aplikasi Pembelajaran Berba-
 208 sis Online Untuk Manajemen Pengetahuan Bahan Ajar
 209 di Pon-Pes Roudlatul Quran Kota Metro. Informatika
 210 Mulawarman : Jurnal Ilmiah Ilmu Komputer. 10(2):51-
 211 58. doi:10.30872/JIM.V10I2.191. <http://e-journals.u>
 212 [nmul.ac.id/index.php/JIM/article/view/191](http://e-journals.unmul.ac.id/index.php/JIM/article/view/191).
 213 Kristanto A. 2003. Perancangan sistem informasi dan ap-
 214 likasinya.
 215 Zaki A, Islami MRR. 2021. RANCANG BANGUN MEDIA PEM-
 216 BELAJARAN BLENDED LEARNING BERBASIS WEBSITE
 217 DI SMK KP GAJAHMADA 1 METRO. Journal Computer
 218 Science and Information Systems : J-Cosys. 1(1):1–9. doi:
 219 10.53514/JC.V1I1.34. <https://www.e-jurnal.dharmaw>
 220 [acana.ac.id/index.php/JCO/article/view/34](https://www.e-jurnal.dharmawacana.ac.id/index.php/JCO/article/view/34).