



RESEARCH ARTICLE

# Register Collection of Employee Reports at Sekretariat Aceh Reintegration Agency

Muntasir<sup>1</sup> | Abdus Salam<sup>2\*</sup> | Bahruni<sup>3</sup>

<sup>1,3</sup> Informatics Management Study Program, AMIK Indonesia, Indonesia.

## Correspondence

<sup>2</sup> Informatics Management Study Program, STMIK Indonesia Banda Aceh, Indonesia.  
Email: [abdussalam@stmikiba.ac.id](mailto:abdussalam@stmikiba.ac.id)

## Funding information

LPPM AMIK Indonesia.

## Abstract

The aim of this research is; knowing the data collection on employee report registers at the Aceh Reintegration Agency Sekretariat, and designing desktop-based data collection on employee report registers at the Aceh Reintegration Agency Sekretariat. The development method used is prototyping and this application is designed using VB.NET while the evaluation process is carried out based on 4 categories, namely Content, Organization and Readability, Navigation, User Interface Design and Performance and Effectiveness. From the results of research and observations that have been carried out at the Aceh Reintegration Agency (BRA), it can be concluded that; 1) With the employee registration information system at the Aceh Reintegration Agency (BRA) it becomes precise, and accurate, especially in the personnel section, and getting information about the employee becomes easier, 2) This information system is able to overcome the problems that often occur in the Reintegration Agency Aceh (BRA) difficulties in controlling and supervising employee data and reporting which can avoid delays in making employee reports every year and for a certain period of time, and 3) Developing an information system program to obtain quality information, and 4) Based on the evaluation of the current desktop application display With the prototype design, it is known that each category has an increase in the usability value. Content, Organization and Readability previously had a value of 0.53 and increased to 0.73. The Navigation category was previously 0.42 to 0.62. The previous User Interface Design category was 0.42 to 0.64 and the previous Performance and Effectiveness category was 0.67 to 0.68.

## Keywords

Data Collection; Register; Employee Report; Sekretariat of The Aceh Reintegration Agency; Prototyping Models; VB.NET.

## 1 | INTRODUCTION

With the development of the times, the changes and dynamics of society are getting faster [1][2]. Information technology is one example of a technology product that can help make it easier for humans to manage data and present quality, fast and accurate information [3][4]. Technology in the era of globalization also plays an important role in supporting daily activities, both in the world of education, business, entertainment, government and so on [5][6]. One of the technological developments is the computer [7]. Computers that exist today have capabilities that are more than just ordinary mathematical calculations, but have developed into the field of information and communication, and one aspect that needs to be supported by computer technology is data collection on companies [8][9]. Personnel data, employee data and reports are one of the important things that need to be considered in a government agency [10]. Almost all agencies ranging from small to large scale have started using computers to support their operational activities, both in employee data collection [11], salary calculations [12], attendance data collection [10] as well as assisting in decision making [13]. The Secretariat of the Aceh Reintegration Agency is one of the agencies that uses information technology used for employee data collection, but the management process has not been maximized because so far the Aceh Reintegration Agency Secretariat has only used ordinary office applications which resulted in the slow reporting of employee data every certain period. The author limits the problem only to data collection on employee report registers at the Aceh Reintegration Agency Secretariat, while the objectives of this study are; to find out data collection on employee report registers at the Aceh Reintegration Agency Secretariat, and to design a desktop-based data collection on employee report registers at the Aceh Reintegration Agency Secretariat.

## 2 | BACKGROUND THEORY

An information system is a system created to facilitate the process of processing data into precise and accurate information [14], making it easier for system users to make decisions. Information is knowledge obtained from learning, experience, or instructions [15]. In the field of computer science, information is data that is stored, processed, or transmitted [16]. Many things can damage information systems, such as natural disasters, fire, temperature, water, dust, fraud, system failures, errors, inefficiencies, sabotage and so on. Several controls need to be designed and implemented to ensure that things that can damage the system can be prevented or if errors occur, they can be immediately addressed. In application development, a database is needed to accommodate data, the larger the data, the decision in choosing the tool to be used is important to improve the quality and efficiency of the data. One of the databases that can manage small data is using Microsoft Office Access [17]. Microsoft Access is one of the database software that runs under the windows system, with Microsoft Access we can design, load and manage databases in an easy and fast way [18]. One example of a relational DBMS (or so-called RDBMS, with R stands for Relational) which is very well known in the PC environment. In Microsoft Access, a database is stored in a file with the extension. MDB [17][18]. It is in this file that all objects related to the database, including all tables, are stored. So from the description of the literature, the author can conclude that Microsoft Access is one of the database software that can store various information so that it can be processed in such an easy and fast way. In today's world of information technology because there are many database software available, the meaning of database can be slightly different from one device to another. In the development of desktop applications, it is undeniable that Microsoft Visual Basic is most appropriate to run on the Windows Platform [19].

Microsoft Visual Basic is more flexible and easy, both in operating and compiling artificial applications, compared to other programs so that many database programmers move to Visual Basic programs [20][21]. Furthermore, the Visual Basic program does not require large software or hardware, so it does not require large memory, hard disk, and processor [22]. Visual Basic programs can be run on Windows 98/ME/XP/2000 to Windows 11 operating systems, both stand-alone computers and computer networks [23]. Some of the advantages of Visual Basic such as; Shorter learning and development curve than other programming languages such as C/C++, Delphi or even PowerBuilder, Eliminates the complexity of calling windows API functions, because many of these functions have been "embedded" into visual basic syntax, Suitable for developing applications / programs that are "Rapid Application Development), Very suitable to be used to create business programs or applications, Used by almost Microsoft Office as a macro language and will soon be followed by others, Can create ActiveX Controls, Can use OCX or components provided by third party (Third Party) as developer tools, Provides a very useful wizard to shorten or simplify application development, Approaches Object Oriented Programming, Can be integrated with the internet [24][25], both on the Client side and on the Server side, Can create ActiveX Automation Server, Integration with Microsoft Transaction Server, and can run the server from the same machine or even from

another machine or computer [26]. While Visual Basic Disadvantages are Runtime Distribution Files are larger than C/C++ and do not have functions to extract features from the operating system as much as C/C++ and so on.

### 3 | METHOD

In application development, researchers use the prototype method which is a software development method that allows interaction between system developers and system users, so as to overcome incompatibility between developers and users [27]. The stages in the prototype method consist of 5 stages, namely; Stage 1: Requirements Gathering and Analysis, Stage 2: Quick Design, Stage 3: Build Prototype, Stage 4: User Evaluation, and Stage 5: Refining Prototype [28].

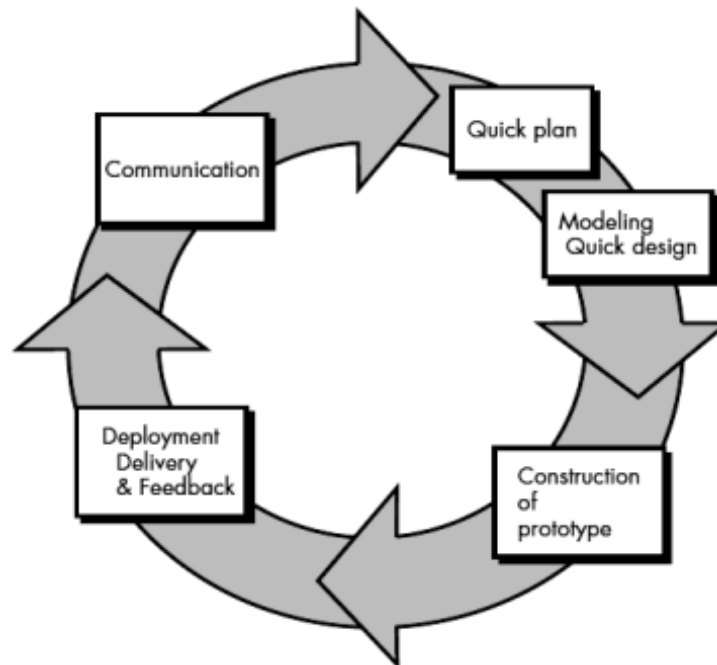


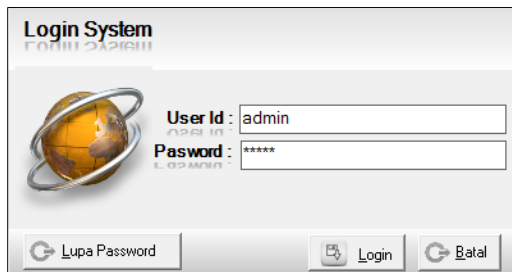
Figure 1. Prototype Method

Prototyping can also be defined as the process of developing a prototype quickly to be used first and continuously improved until a complete system is obtained [29]. Prototyping helps in finding requirements in the early stages of development, especially if the client is not sure where the problem is coming from. In addition, prototyping is also useful as a tool for designing and improving the user interface – how the system will be seen by the people who use it [30]. The key to a successful prototype model is to define the rules of the game at the beginning of the collaboration. The developer and client must agree that the prototype is built to define requirements. Prototyping will be partially or completely eliminated and the actual software engineered to the specified implementation quality. The next stage is data collection and interviews which aim to help establish the user context of the system that will be created. The data and information needed are user groups, therefore interviews with stakeholders and users were conducted. Then evaluate the appearance of the current web application which aims to determine the usability value by distributing questionnaires to 30 respondents, the questionnaire consists of 4 categories, namely Content, Organization and Readability, Navigation, User Interface Design and Performance and Effectiveness.

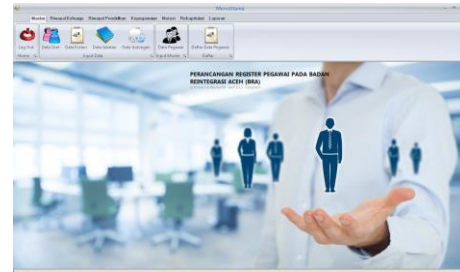
### 4 | RESULT

The design of the employee register information system at the Aceh Reintegration Agency (BRA) which the author designed consists of several stages, namely input design, output design, process design, control design, labor design, and cost design. The author hopes that this design will make it easier for every user, especially the staffing section of the Aceh Reintegration Agency (BRA). The design of the employee data collection information system at the Aceh Reintegration Agency (BRA) which the author designed consists of several stages, namely, Context Diagrams, Tiered Diagrams of the design system, Data Flow Diagrams for Level 0 System Design, Data Flow Diagrams for Level 1 Process Number 1 System design, Flow Diagrams Data Level 1 Process Number 3 System

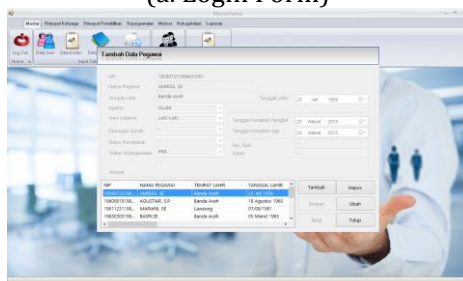
design and table design. Controlling User registration begins with collecting data into the tables in the database. This process is carried out to prevent duplication or redundancy of data that will be input into the database. In addition, this process also ensures that the data entered is the correct data. In carrying out the desktop-based employee data collection information system design at the Aceh Reintegration Agency (BRA), it requires workers who can operate computers so that it is easy to process track record data. The current workforce is sufficient to run this application, only 1 person is needed to run this application, and it is necessary to provide training and skills on the use of the application. In order to carry out a job perfectly, it is inseparable from the cost factor. As for the details of the proposed costs needed to handle the data collection process for employee data collection at the desktop-based Aceh Reintegration Agency (BRA), it only costs 2 million rupiah. This input design consists of several program files, namely; User Data Form, Echelon Master Data Form, Position Master Data Form, Group Master Data Form, Employee Data Form, Family History Data Form, School History Data Form, Employee Position Data Form, Rank Data Form, Training Data Form, and Transfer Data Form.



(a. Login Form)



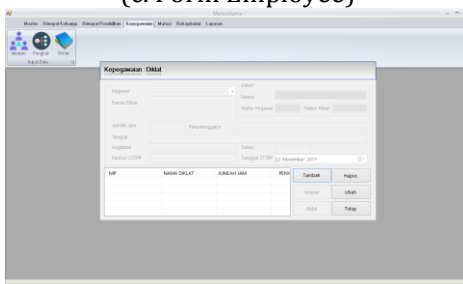
(b. Main Form)



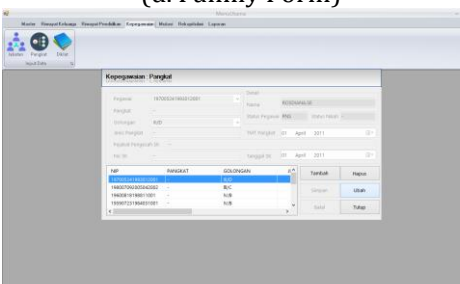
(c. Form Employee)



(d. Family Form)



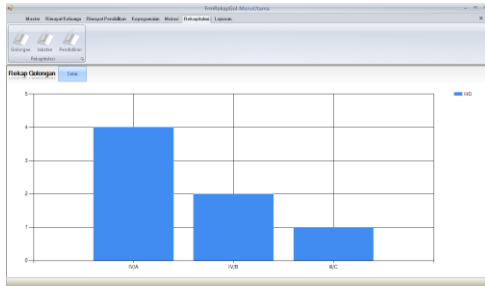
(e. Training Form)



(f. Rank)

Figure 2. Application Display Results

Meanwhile, the output design of the system for the design of the employee data collection process at the Aceh Reintegration Agency (BRA) consists of several program outputs, namely; Group Recap, Position Recap, Education Recap, Employee Nominative Report, Employee Bezetting Report, Employee Recap Report, Rank and Position History Report, Education and Training History Report, Retirement Employee Report, and Employee Transfer Report.



(a. Chart)

PROVINSI ACEH BADAN REINTEGRASI ACEH (BRA) Jl. Teuku Umar, Kp. Baru, Baturahman, Kota Banda Aceh, Aceh 23116		
Rekapitulasi Pegawai Berdasarkan Golongan		
NO	GOLONGAN	JUMLAH PEKAWAI
1	III C	1
2	IV B	2
3	IV A	4
4	III D	3

(b. Employee Recapitulation)

PROVINSI ACEH BADAN REINTEGRASI ACEH (BRA) Jl. Teuku Umar, Kp. Baru, Baturahman, Kota Banda Aceh, Aceh 23116		
Rekapitulasi Pegawai Berdasarkan Jabatan		
NO	JABATAN	JUMLAH PEKAWAI
1	Kabid. Analisis Sloganes Diapok. Lingkungan	1
2	Kabid. Keselamatan Lingkungan dan TIGSD	1
3	Kabid. Keselamatan Saaher Daya Alam	1
4	Kasubag. Keuangan	1
5	Kasubag. Urusan dan Kepegawaian	1
6	Kasubid. Hubungan Timbalbalasan Lingkungan	1
7	Kasubid. Pengendalian Emission. Kawasan Perair	1
8	Kasubid. Laboratorium Lingkungan	1
9	Kepala BLN	1

(c. Position Recapitulation)

DAFTAR NOMINATIF PEKAWAI NEGERI SIPIL Per Tanggal: 03 September 2018										
NO	NAMA, ILMU, NIP, AGAMA	JENJIR BELANJAU	PUTI TERAKHIR GOL. RIANG	TMH	JABATAN NAMA	TMH	ESK	JENJIR BELANJAU TUGAS	ALAMAT & NOHP/HP	KEP
1	AGUSTINE, S.P. Banda Aceh 18 Agustus 1980	III A	IV B	01	Kepala Seksi	20	DB	01	UNIVERSITAS	DB
2	MARLESE Banda Aceh 23-7-1989	III A	IV B	01	Kelembagaan	10	DB	01	Agrikom	DB
3	PUTRI PURNAMA, S. BUCIT SUKSES 27 Agustus 1985	III A	IV A	01	Kasubid. Kelembagaan	10	DB	01	Agrikom	DB
4	KAPITULLAH, S. E. SUKSES	III A	IV A	01	Kasubid. Kelembagaan	10	DB	01	Agrikom	DB

(d. Nominative Report)

DAFTAR BEZETTING PNS BADAN REINTEGRASI ACEH (BRA) PERIODE BULAN 9 TAHUN 2018						
NO	NAMA TEMPAT LAGKAL & ALAM	NIP	PANGKAT GOL. RIANG	GOLONGAN	PERIOD TERAKHIR	KEP
1	AGUSTINE, S.P. Banda Aceh 18 Agustus 1980	198003100010001	-	IV B	01	PNS
2	MARLESE Banda Aceh 23-7-1989	19890723100010001	-	IV B	01	PNS
3	MARLESE Banda Aceh 02-03-1985	19850302100010001	-	IV A	01	PNS
4	PUTRI PURNAMA, S. BUCIT SUKSES 27 Agustus 1985	19850827100010001	-	IV A	01	PNS
5	MARLESE Lampung 01-08-1981	19810801100010001	-	III D	01	PNS

(e. Bezetting Report)

RIWAYAT PANGKAT DAN JABATAN 03/09/2018										
PANGKAT		PROJEKSI		JABATAN						
NO	TMH	NO	TMH	JABATAN	TMH					
1	01-01-2012	1	01-01-2012	Kasubid. Kelembagaan	10					

(f. Employee History)

Figure 3. Application Output Results

In the evaluation activity, an assessment of the resulting display is carried out. Evaluation using a Google Form questionnaire. Questionnaires were distributed to 30 respondents from AMIK Indonesian students. The results of the evaluation of the current application display in each category, namely the Content, Organization and Readability category, obtained an average usability value of 0.53. Navigation category obtained an average value of 0.42. User Interface Design category obtained an average value of 0.42. Performance and Effectiveness category obtained a value of 0.67. Design analysis before repairs and also after completion of the user interface improvement and discussion of the comparison between the results of the evaluation conducted by 30 respondents to the current dekstop application display and the results of the evaluation of the prototype design.

Evaluation

Source: Abdus Salam

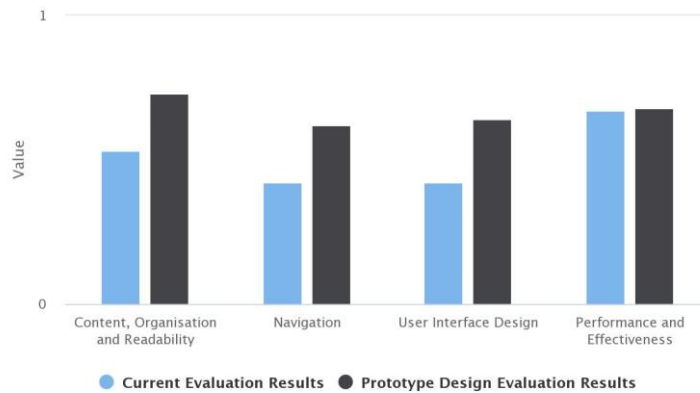


Figure 4. Category Value Diagram of the Evaluation Results of the Current Desktop Application Display with Prototype Design.

Based on the picture, it can be seen that each category experienced an increase in the usability value. Content, Organization and Readability previously had a value of 0.53 and increased to 0.73. The Navigation category was previously 0.42 to 0.62. The previous User Interface Design category was 0.42 to 0.64 and the previous Performance and Effectiveness category was 0.67 to 0.68.

## 5 | CONCLUSIONS AND FUTURE WORK

From the results of research and observations that have been carried out at the Aceh Reintegration Agency (BRA), it can be concluded that; With the existence of this employee register information system at the Aceh Reintegration Agency (BRA) to be precise, and accurate, especially in the personnel department, and to obtain information about these employees becomes easier, this information system is able to overcome the problems that often occur in the Aceh Reintegration Agency (BRA). ) which is difficult to control and supervise employee data and reporting which can avoid delays in making employee reports every year and a certain period, The creation of an information system program in order to obtain quality information and Based on the evaluation of the current desktop application display with prototype design it is known that each category increased usability value. Content, Organization and Readability previously had a value of 0.53 and increased to 0.73. The Navigation category was previously 0.42 to 0.62. The previous User Interface Design category was 0.42 to 0.64 and the previous Performance and Effectiveness category was 0.67 to 0.68. In further research, evaluation of the needs of users who become suggestions / input in designing prototypes is carried out and the guidelines used are still lacking. Therefore, the authors suggest conducting analysis and evaluation by experts so that they do not only use user needs and for further research can add to the guidelines used in order to produce a better prototype design design. Although in this research the prototype design has been at the usability good level, but further evaluation needs to be carried out in order to produce a usability excellent level.

## ACKNOWLEDGEMENTS

Thank you to the entire research team and LPPM AMIK Indonesia as funders for research development activities in 2018.

## REFERENCES

- [1] Rizal, S., & Wali, M. 2018. Perbankan Komputer: Teori dan Praktikum. Deepublish.
- [2] Wali, M., & Salam, A. Pengembangan Access Open Journal System (AOJS) sebagai Sistem Indeksasi dan Manajemen Pengelolaan Publikasi Jurnal. *Journal Digital Technology Trend*, 1(1), 1-14. DOI: <https://doi.org/10.56347/jdtt.v1i1.31>.
- [3] Wali, M., & Ahmad, L. 2020. Source Code Library (SCL): Application Support Learning Software Development: Source Code Library (SCL): Application Support Learning Software Development. *Jurnal Mantik*, 4(1), 7-13.
- [4] Wali, M. 2022. Pelatihan Manajemen Pengembangan Usaha bagi UMKM Provinsi Aceh. *Jurnal Pengabdian Nasional (JPN) Indonesia*, 3(1), 33-38. DOI: <https://doi.org/10.35870/jpni.v3i1.65>.
- [5] Wali, M., Amri, K., Rizal, S. and Salam, A., 2022. Sosialisasi Peluang Home Business dalam Ekonomi Digital. *Kawanad: Jurnal Pengabdian kepada Masyarakat*, 1(1), pp.25-31. DOI: <https://doi.org/10.56347/kjpkkm.v1i1.9>.
- [6] Rizal, S., & Wali, M. 2020. The Impact of Using Technology (Technostress) with the Forward Chaining Method as a Decision Support System: The Impact of Using Technology (Technostress) with the Forward Chaining Method as a Decision Support System. *Jurnal Mantik*, 4(1), 521-527.
- [7] Amalia, R., Sagita, S.M. and Faisal, A., 2021. Pengembangan Aplikasi Sistem Absensi Dan Pendataan Karyawan PT Jaya Indo Pratama. *Journal of Information System, Informatics and Computing*, 5(2), pp.308-323. DOI: <https://doi.org/10.52362/jisicom.v5i2.610>.

- [8] Wali, M., & Mukhtar, M. (2020). PKM: Pelatihan Microsoft Excel 2013 Dalam Rangka Membentuk Tenaga Pengajar Yang Profesional. *TRIDARMA: Pengabdian Kepada Masyarakat (PkM)*, 3(1, Mei), 31-34.
- [9] Evitasari, R., & Kusumadiarti, R. S. 2022. Perancangan Sistem Informasi Penggajian Karyawan di CV Anugerah Sukses Gemilang. *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)*, 6(4), 600-607.
- [10] Shofi, N., Fitri, I., & Iskandar, A. 2021. Perancangan Sistem Manajemen Absensi Online dengan Barcode scanner Menggunakan Power Apps. *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)*, 5(4), 430-437.
- [11] Damayanti, D., & Nirmalasari, N. 2019. Sistem Informasi Manajemen Penggajian dan Penilaian Kinerja Pegawai pada SMK Taman Siswa Lampung. *Jurnal Teknologi Informasi dan Ilmu Komputer*, 6(4), 389-396.
- [12] Taman, A. 2019. Sistem Informasi Manajemen Penggajian dan Penilaian Kinerja Pegawai pada SMK Taman Siswa Lampung. *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, 6(4).
- [13] Munawir, M. and Ardiansyah, A., 2017. Decision Support System Pemilihan Karyawan Berprestasi Dengan Pendekatan Analisa Gap Profile matching Di Kantor Perwakilan Bank Indonesia Provinsi Aceh. *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)*, 1(1), pp.7-14.
- [14] Wali, M., 2020. Modul Praktikum Rekayasa Perangkat Lunak. Ellunar Publisher.
- [15] Ahmad, L. and Wali, M., 2019. Perancangan software asisten dosen sebagai media dalam pelaksanaan computer assisted learning di AMIK Indonesia Banda Aceh. *Smart Comp: Jurnalnya Orang Pintar Komputer*, 8(1), pp.38-43.
- [16] Wali, M. and Ahmad, L., 2021. Computer Assisted Learning (CAL): A Learning Support System Solution. *Webology*, 18(1).
- [17] Wali, M. 2017. *Membangun Aplikasi Windows dengan Visual Basic. NET 2015 Teori dan Praktikum: Indonesia* (Vol. 1). KITA Publisher.
- [18] Wali, M. 2018. *Add-ins Microsoft Office: Add-ins Microsoft Office* (Vol. 1). KITA Publisher.
- [19] Petroustos, E., 2010. *Mastering Microsoft Visual Basic 2010*. John Wiley & Sons.
- [20] Zak, D., 2015. *Programming with Microsoft Visual Basic 2015*. Cengage Learning.
- [21] Petroustos, E., 2008. *Mastering Microsoft visual basic 2008*. John Wiley & Sons.
- [22] Willis, T. and Newsome, B., 2008. *Beginning Microsoft Visual Basic 2008*. John Wiley & Sons.
- [23] Halvorson, M., 2003. *Microsoft Visual Basic. NET Step by Step Version 2003*. Microsoft Press.
- [24] Wali, M. 2022. Pemrograman PHP. *Pemograman Web*. 51-59. Indie Press.
- [25] Wali, M. 2022. Teori Game. *Riset Operasi*. 131-144. Indie Press.
- [26] Okeniyi, J.O. and Okeniyi, E.T., 2012. Implementation of Kolmogorov–Smirnov p-value computation in Visual Basic®: implication for Microsoft Excel® library function. *Journal of Statistical Computation and Simulation*, 82(12), pp.1727-1741.
- [27] Wali, M. 2022. Analisis dan Interpretasi Data Riset Berbasis Digital. *Metode Riset Berbasis Digital: Penelitian Pasca Pandemi*. 89-108. Media Sains Indonesia.
- [28] Suhaimah, A., Triayudi, A. and Handayani, E.T.E., 2021. Cyber Library: Pengembangan Perpustakaan Online Berbasis Web Menggunakan Metode Prototyping (Studi Kasus Universitas Nasional). *Jurnal JTIK (Jurnal Teknologi Informasi dan Komunikasi)*, 5(1), pp.41-48.

- [29] Akbar, G.N. and Ramadhan, G., 2022. Manajemen Sistem Informasi Akuntansi Penjualan Menggunakan Microsoft Visual Studio 2019 di Café More Wyata Guna Bandung. *Jurnal JTİK (Jurnal Teknologi Informasi dan Komunikasi)*, 6(4), pp.616-623.
- [30] Evitasari, R. and Kusumadiarti, R.S., 2022. Perancangan Sistem Informasi Penggajian Karyawan di CV Anugerah Sukses Gemilang. *Jurnal JTİK (Jurnal Teknologi Informasi dan Komunikasi)*, 6(4), pp.600-607.

How to cite this article: Muntasir, Salam, A., & Bahruni. 2022. Register Collection of Employee Reports at The Secretariat of The Aceh Reintegration Agency. *Journal Dekstop Application (JDA)*, 1(1), 1-8. <https://doi.org/10.35870/jda.v1i1.99>.