Journal Basic Science and Technology 12 (1) (2023) pp. 12-19

Published by: IOCSCIENCE

Journal Basic Science and Technology

Journal homepage: www.iocscience.org/ejournal/index.php/JBST

Development of real time transaction based android e-ticket application as regional tax monitoring facilities (Case study: Ayu rejeki swimming pool object, probolinggo regency)

M. Mahaputra Hidayat[1], Vicinthia Veren Sudrajat[2], Permata Ayu Rahmawati[3], M. Rizqika Brimadi H[4]

[1,2,3,4]Department of Informatics Engineering, Bhayangkara Surabaya University

ARTICLE INFO

Article history:

Received Jan 30, 2023
Revised Feb 18, 2023
Accepted Feb 28, 2023

Keywords:

Android
E-Ticket
Local Tax
Monitoring
Transaction

ABSTRACT

There are so many local entertainment tourism objects in the Probolinggo Regency area, this is not spared for the local government to apply an entertainment tax to the taxpayer sector in accordance with the amount of income. However, there are still entertainment tax objects whose ticket sales use a manual system where tickets and taxpayer payments as well as SPTPD reports (Regional Tax Returns) are all written manually. One of them is the Ayu Rejeki Swimming Pool Tourism Object. This is considered ineffective on the part of the taxpayer, and the large amount of tax paid is less accurate on the part of the Probolinggo Regency regional government revenue agency. To overcome this, tax monitoring activities are carried out at the tax object so that the amount of tax deposit paid is in accordance with the results of ticket sales revenue for the tax object. In order to support monitoring activities, a special application was created for Pool Taxpayers Ayu Fortune in the form of Android-based e-Tickets and real-time transactions. The method used to create this e-Ticket application is the REST API; HTTP request methods GET, POST, PUT, and DELETE. The e-Ticket application, which has real-time transaction capabilities, directly records the number of transactions or income in the tax object to the regional tax monitoring dashboard (this will later become the taxpayer's e-SPTPD report) Kab. Probolinggo. Application testing that has been used states that the system records transactions in real time. So it can be concluded that the e-Ticket application is very profitable or very good for both parties with transaction efficiency and automatic SPTPD reports. The Probolinggo Regency regional government revenue agency will also benefit from increased accuracy of tax payments from taxpayers.based on the assessment of the admin or user of this e-ticket application, it gets a score of 95% so that it is an application in the "very good" category.

Corresponding Author:

Vicinthia Veren Sudrajat,
Department of Informatics Engineering,
Bhayangkara Surabaya University,
Jl. Ahmad Yani No. 114, Ketintang, Kec. Gayungan, City of Surabaya, East Java
Email: vicinveren@gmail.com

1. INTRODUCTION

Based on Law Number 23 of 2014 concerning Regional Government, they have great authority to plan, formulate, implement and evaluate development policies and programs that suit the needs of local communities (Sukmadewi, 2019). One of the government's powers today is the authority to manage regional potential and collect taxes from regional produce in order to fulfill the Regional Original Revenue (PAD) budget (Sukmadewi, 2019). This regional financial policy is directed at increasing financial income in an area where this regional original income will later be used by each region to finance its regional needs. Local Own Revenue is income that is obtained by the region without the interference of foreign parties, this income can be said as a form of regional independence. With the existence of regional autonomy, it means that regional governments are required to be more independent, including being financially independent.(Rizqy Ramadhan, 2019)

Regional taxes, which are one of the original regional revenues, are mandatory contributions made by individuals or regional head bodies without direct remuneration that can be forced and used to finance local government operations (Sukmadewi, 2019). It can be said that tax is one of the biggest sectors which still contributes more to the Regional Original Income (PAD).

Probolinggo Regency, which is an area with various local tourism objects, can explore several financial sources in the area, the entertainment tourism object sector is one of the mainstays of the local government in increasing Regional Original Revenue (PAD). The entertainment tax is one of the regional revenue sources that the Probolinggo Regency government relies on for deve- lopment costs.(Amalda Putra & Marsono, 2020) Entertainment tax is a regional tax whose potential is growing in Probolinggo Regency. It can be seen from the cooperation between BAPENDA and Bank Jatim in order to increase local taxes, which has installed a tax monitoring tool for all entertainment object entrepreneurs. (Biringkanae & Tammu, 2021) Therefore, the Regional Government of Probolinggo Regency implements a regional tax monitoring program, with the hope that entertainment tax revenue is achieved in accordance with the targets set, and as one of the activities carried out in optimizing the achievement of local tax revenue targets. This activity is carried out by providing tax monitoring tool facilities to taxpayer entertainment business entities. especially for entertainment tourism business entities that are still in a manual system in their transactions. One of them is the Ayu Rejeki Swimming Pool entertainment tax object.

So far, buying tickets to enter the Ayu Rejeki swimming pool has been done in the conventional way, namely the counter keepers record and give ticket papers to visitors who come. Therefore, to support the smooth running of tax monitoring activities, a monitoring tool was made in the form of an Android-based e-ticket application. By utilizing this increasingly advanced technology, the Ayu Rejeki tax object can use the e-ticket application for ticket purchase transactions, where the application is equipped with a real-time transaction recording feature, display of transaction recapitulation data per day, month and year, as well as accompanied by a print out ticket/receipt that can be given to visitors as proof of purchase. This e-ticket, which is a real-time transaction, sends sales transaction data by Ayu Rejeki to the regional tax monitoring dashboard or the BPKAD Probolinggo Regency select server directly.

Ayu Rejeki's real-time income figures are entered into a regional financial and tax management system called E-SPTPD (electronic-based local tax notification). E-SPTPD is defined as a system for online hotel, restaurant and entertainment tax reporting, with the aim of making it easier for taxpayers to fulfill their obligations. and also this becomes a system that can also be used to find out arrears and bills that must be paid off (Setiawan et al., 2020). The main goal of innovation is to avoid tax leakage and make it easier to make taxpayer payments and tax reporting to make it easier and more efficient in its implementation (Setiawan et al., 2020).

The focus in this study is the success factors of the role of an e-ticket application innovation as a tool that helps smooth reporting of entertainment taxpayer income to their business entities online to local government. The typical of this research is a descriptive analysis model, namely regular breakdown and the data that has been obtained is given an understanding and explanation so that it can be more easily understood by the reader.

2. RESEARCH METHOD

Entertainment Tax Object "Ayu Rezeki Park"

Probolinggo Regency has many tours that can be visited, one of which is the Ayu Rezeki Park tour which is located in Kerpangan Village, Leces District. Ayu Rezeki Park offers three rides that you can enjoy, namely a water park, a flower garden and children's games, as well as an Instagramable Cafe. To be able to enter this destination, the price of entry tickets for visitors is priced at a price that can be said to be cheap.

e-Tickets

E-ticketing is in the form of innovation in the field of e-commerce where the sales process of customer activities can process purchases without having to issue paper or conventional means, Electronic ticketing or E-ticketing is a way to document or record the ticket sales process, and all information regarding electronic ticketing is stored digitally in the system (Putri et al., 2020).

Androids

Android is a Linux-based operating system that is used for mobile devices or devices tablets (PDAs). Android provides an open platform for developers to develop applications homemade which makes Android a popular mobile operating system to date. Androids was founded in 2003 by Andy Rubin, Nick Sears, Rich Miner and Chris White which was later bought by Google in July 2005. (Windane & Lathifah, 2021)

MySQL

MYSQL is a management system relational databases. That is, data managed in the database that will be placed on several separate tables so that data manipulation will be much faster. MYSQL can be used to manage database start from small to very large.(Novendri, 2019)

RESTful APIs

API (application programming interface) consists of documentation consisting of interfaces, functions, classes, structures, and so on to build software. With this API, then make the programmer to "disassemble" the software to be developed or integrated with other software. API can be agreed as a hub for applications with other applications that allow programmers to use system functions. The REST API makes it possible to develop all types of web applications, android applications that have all possible CRUD (Create, Read, Update, Delete) or HTTP request Get, Post, Put, and Delete operations.(Choirudin & Adil, 2019)

Research Stages / Application Working Method (Flowchart)

The following is in Figure 1, the flowchart that we use in managing how overall users can use the application or the workings of the e-Ticket application that we built.

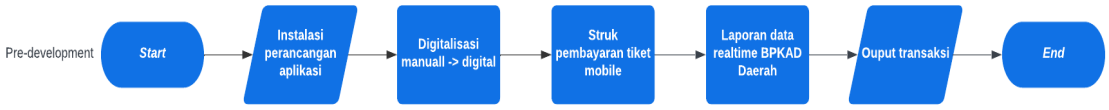


Figure 1. Research methods

The proposed system

The system proposed for the Android-based E-Ticket Regional Tax Monitoring Application will use a PDT (Personal Data Transaction) or Android Point Of Sale to carry out entry ticket transactions, in real time the transaction data that occurs at that time is automatically reported in the report. government's tax monitoring dashboard. The proposed system can be seen in Figure 2.

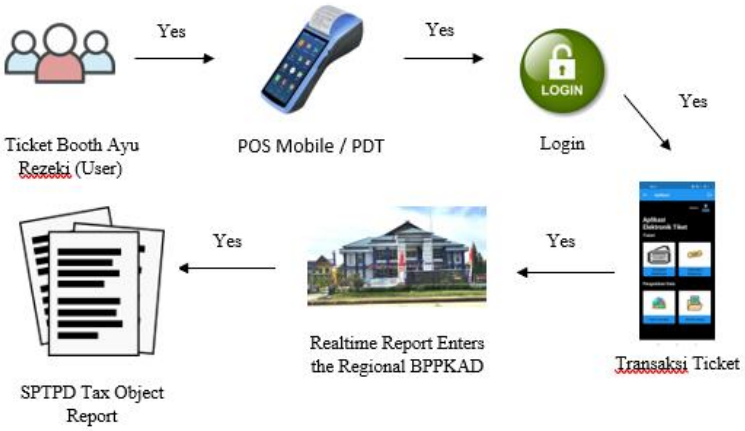


Figure 2. Proposed system

3. RESULTS AND DISCUSSIONS

The research results of a transaction technology system called E-Ticket and Android-based monitoring of tax reports were developed specifically for the Regional Revenue Agency of Probolinggo Regency, which is related to the implementation of withdrawing entertainment tax data, where transaction data for entertainment tax will be entered in the application in real-time. time and will automatically calculate the value of the relationship tax and support until it prints the SPTPD.

The results and discussion include the creation or design of a mobile application for ticket sales transactions entering the Ayu Rezeki Park swimming pool as a regional tax monitoring program tool. The results discussed are the application of android mobile that can be used in accordance with the needs analysis that has been carried out. There are two applications for this object transaction reporting application, namely the android application and the tax monitoring dashboard web appli- cation. The two applications are interconnected to be able to record incoming transaction reports and the local government can find out or calculate the amount of tax that must be paid by the taxpayer.

3.1 Design Result

The system is running

Currently, visitors who want to enter and enjoy the tourist destination Ayu Rezeki Park, the price is to buy tickets in advance at the counter. The obstacle faced by the tour owner is that apart from having to recap existing transactions manually writing to a book, in the end, when you want to pay taxes, you have to write a daily transaction report in one month manually again to the SPTPD which is given by the tax officer. In addition, the obstacle from the regional financial government is that because the taxpayer object does not have its own system or manual, the reporting provided when they want to pay taxes may not be in accordance with actual transactions in the field, so that the amount of tax that should be paid is not appropriate or not fulfilled (Yusuf et al., 2019).

3.2 Implementation Results

This research produces an android-based ticket sales application for the Ayu Rezeki Park entertainment tax object. This application serves the purchase of entrance tickets by visitors which are processed by the admin online, in the tax monitoring program it works as a tool in reporting transactions that occur in real time. Figure 3 below is an Android-based application display on the user side.

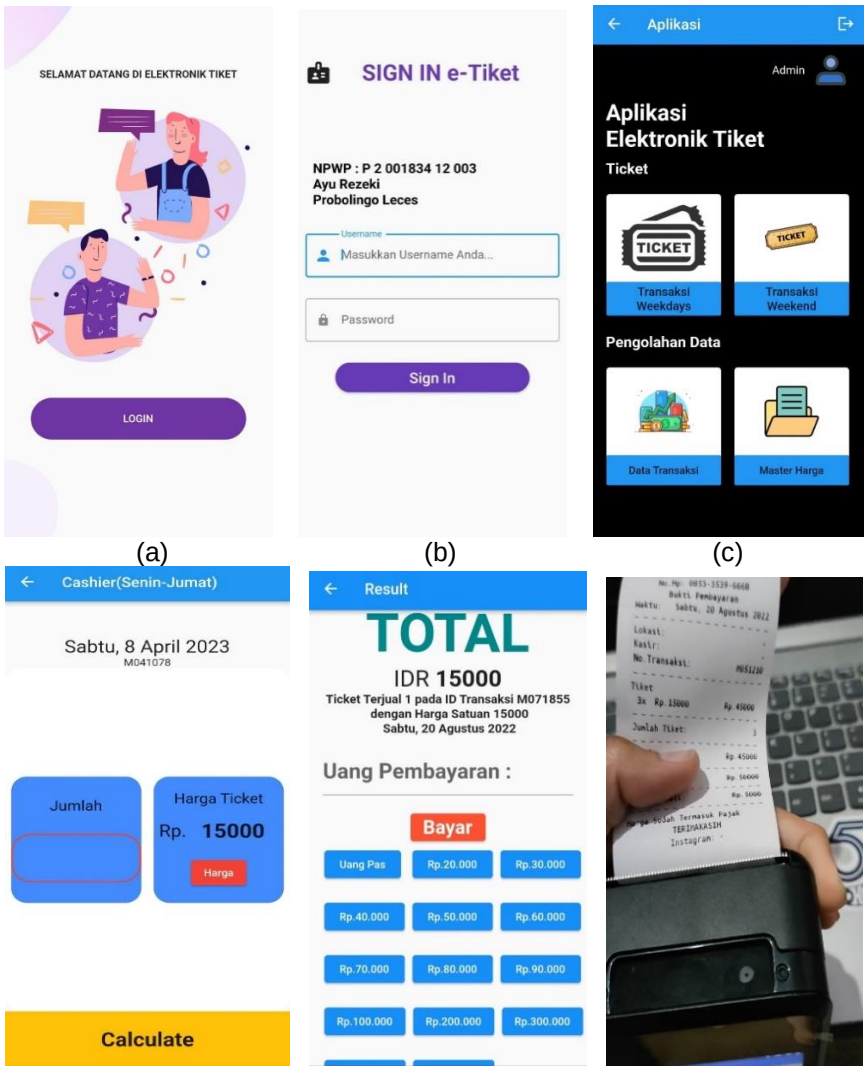
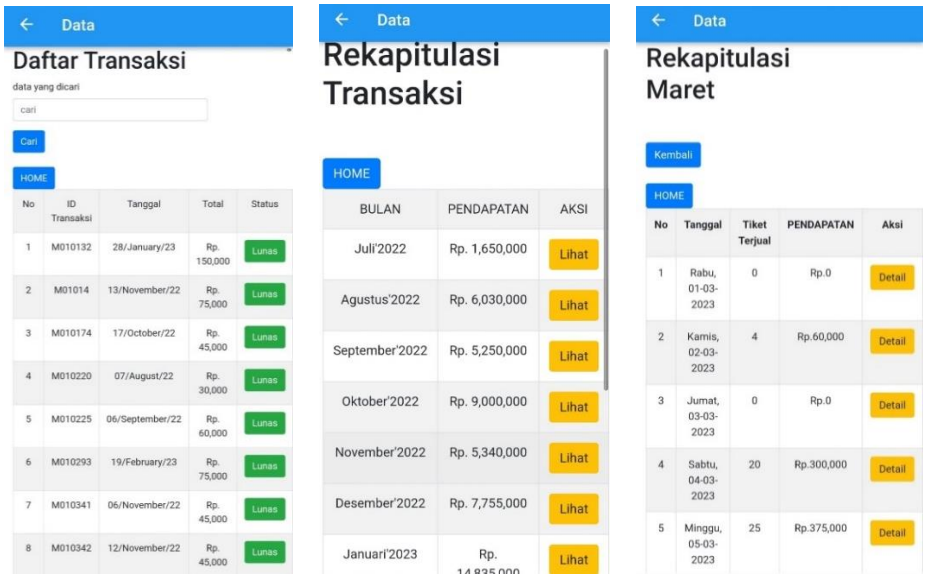


Figure 3. (a) Splash login, (b) Login page, (c) Application main menu, (d) Cashier page for e-ticket transactions(e) Cashier page at the payment stage, (f) Print the e-ticket transaction receipt

In Figure 3 : (a) this is the initial display when the user opens the application / a kind of login splash, (b) the login page is used by the user to enter the username and password so that he can enter the application menus, (c) is the main application page that offers several feature menus that can be used, (d) pages for transactions when a customer purchases a ticket, (e) an additional page to make it easier for users to calculate total transactions at the payment stage, and (f) as application output in the form of transactions that have been made. Previously

Purchase data and e-tickets will be recorded or recapitulated transactions will be made directly, both daily and monthly. Admin Ayu Rezeki can see all sales transactions, as shown in Figure 4 below.



(a) (b) (c)

Figure 4. (a) Global recapitulation data, (b) Monthly recapitulation data, (c) Daily recapitulation data

In Figure 4 above: (a) is a page that offers a transaction recapitulation menu while using this e-Ticket application, (b) a page that displays all transactions that exist globally, and (c) is a transaction recapitulation page that is more detailed / recorded all payment transaction that ever existed.

From the transaction data recorded on this e-ticket application which will be recorded the same as the income report on the local government tax monitoring dashboard. So with this recapitulation, the owner of Wisara Ayu Rezeki can use it without having to record total sales by hand. And there is no need to report transactions at the end of the month when you want to pay taxes, because with this application an SPTPD report will be automatically generated.

3.3 Testing

Application functionality testing is carried out to test each application item whether there is an error or not. This can be seen in table 1 below.

Table 1. Application Functional Testing

No	Test Items	Scenario	Result
1.	Splash Screen Login	The page appears and button click to navigate to the login page	Succeed
2.	Login Page	Can input the username and password that matches the database and verified login to the application's home page	Succeed
3.	Application Menu	All application menus can react according to plan	Succeed
4.	E-Ticket	All ticket sales transaction data is recorded online, and you can print e-ticket receipts	Succeed
5.	Transaction Recapitulation Data	All ticket sales transactions are recorded and counted in real time	Succeed
6.	Reported Sales Transaction Data	Real-time transactions can also be reported directly to the local government's regional tax monitoring program or dashboard.	Succeed

Testing Admin Usability Aspects With three respondents containing as many as 13 questions, This can be seen in table 2 below

Table 2. Admin Usability Test Results

No.	Instrument	VA (5)	A (4)	N (3)	DA (2)	VD (1)	Skor
Accuracy							
1	The android e-Ticket application often doesn't have an error	3	1		1		21
2	The e-Ticket application button corresponds to the function	5					25
3	The e-Ticket application provides accurate transaction data information	5					25
4	The e-Ticket application provides accurate tax amounts according to the transaction data recorded in the application	5					25
Format (Display)							
5	Information design is very clear	3	2				21
6	The user interface design is very attractive	4		1			23
7	the color combination is very attractive	4		1			23
Ease of Use							
8	The android application is very easy to use	5					25
9	The e-Ticket application is very easy for ordinary people to use	4	1				24
10	The e-Ticket application is very easy to interact	5					25
Timeliness							
11	The e-Ticket application is very fast in response	4	1				24
12	The e-Ticket application is not large in capacity	4		1			23
13	Real-time transaction-based e-Ticket application	5					25
Total							309

Based on the test results on the usability aspect above, a test score of 309, for the maximum score on the usability test is obtained if all respondents answered "Very Agree" then multiplied by the number of questions. So the maximum score is (5 x 5) x 13 = 325. if calculated using a Likert scale and the results of the criteria can be seen as follows.

$$\text{Results} = \frac{\text{Score}}{\text{Max}} \times 100\% \quad \text{obtained score}$$

$$\text{Results} = \times 100\% \quad \frac{309}{325}$$

= 95%

Based on the respondents' responses criteria on the table above then the usability testing results on.The e-ticket application got a score 95% certain it was “very good”. Excellent response from admin responders.

4. CONCLUSION

This study, which used descriptive analysis methods, had the goal of developing an Android-based E-ticket application, which initially used a manual system to help monitor tax transactions in tourist areas, Ayu Rejeki Swimming Pool, Probolinggo Regency in real time. In this research, the author has succeeded in developing an E-Ticket application which can later be managed directly by tourist objects and the local tax office.The results of the study prove that the E-Ticket application is able to increase efficiency and effectiveness in monitoring local tax transactions at the Ayu Rejeki Swimming Pool tourist attraction, Kab. Probolinggo. This application is also able to optimize the speed in processing entrance ticket payment transactions and facilitate the management of transaction data, local tax reports and for users.

In the research so far the authors have not found any obstacles in the development of the E-Ticket application, but maybe it's just a problem of accessing applications that must be online based and have not implemented offline access. Where users can use the application if there is an internet connection.

It can be concluded from the research analysis which shows that Android and web-based E-ticket applications can be an effective alternative for monitoring local tax transactions at tourist objects in real time. It is hoped that this application can be applied to tourist objects and other regional tax offices, especially in Indonesia, to increase efficiency and effectiveness in processing local taxes.

Based on the assessment of the admin or user of this e-ticket application, it gets a score of 95% so that it is an application in the "very good" category

REFERENCES

Putri, N., Agung Prabowo, N., & Widyanto, R. A. (2020). Implementasi Metode Prototyping pada Perancangan Aplikasi Electronic Ticket (E-Ticket) berbasis Android. *Jurnal Komtika (Komputasi Dan Informatika)*, *3*(2), 62–68. https://doi.org/10.31603/komtika.v3i2.3474

Setiawan, A. R., Al-Fauzi, M. L., & Prathama, A. (2020). Implementasi E-SPTPD (Surat Pemberitahuan Pajak Daerah Berbasis Elektronik) Dalam Pengelolaan Keuangan Dan Pajak Daerah Dikota Surabaya. *Jurnal Syntax Transformation*, *1*(2), 1–10. https://doi.org/10.46799/jst.v1i2.12

Sukmadewi, F. ((Universitas G. (2019). Efektivitas Pemungutan Pajak Hiburan Oleh Badan Pengelola Keuangan Daerah Kabupaten Pangandaran Di Objek Wisata Pantai Pangandaran. *Jurnal Moderat*, *5*(3), 344–354.

Yusuf, M., Danuri, D., & Jaroji, J. (2019). Aplikasi Penjualan Tiket Ro-Ro Bengkalis Berbasis Android. *INOVTEK Polbeng - Seri Informatika*, *4*(2), 201. https://doi.org/10.35314/isi.v4i2.1077

Windane, W. W., & Lathifah, L. (2021). E-Commerce Toko Fisago.Co Berbasis Android. *Jurnal Informatika Dan Rekayasa Perangkat Lunak*, *2*(3), 285–303. https://doi.org/10.33365/jatika.v2i3.1139

Novendri. (2019). Pengertian Web. *Lentera Dumai*, *10*(2), 46–57.

Amalda Putra, A., & Marsono, S. (2020). PENGARUH PENERAPAN SISTEM ONLINE PAJAK (E-REGISTRATION,E-FILING, DAN E-BILLING) TERHADAP TINGKAT KEPATUHAN WAJIB PAJAK ORANG PRIBADI. (Studi Kasus Kantor Pelayanan Pajak Pratama Surakarta). *Advance: Jurnal Akuntansi*, *7*(1), 45–55. https://e-journal.stie-aub.ac.id/index.php/advance

Choirudin, R., & Adil, A. (2019). Implementasi Rest Api Web Service dalam Membangun Aplikasi Multiplatform untuk Usaha Jasa. *MATRIK : Jurnal Manajemen, Teknik Informatika Dan Rekayasa Komputer*, *18*(2), 284–293. https://doi.org/10.30812/matrik.v18i2.407

Rizqy Ramadhan, P. (2019). Pengaruh Pajak Daerah Dan Retribusi Terhadap Pendapatan Asli Daerah Kabupaten/Kota Di Sumatera Utara. *JURNAL AKUNTANSI DAN BISNIS : Jurnal Program Studi Akuntansi*, *5*(1), 81. https://doi.org/10.31289/jab.v5i1.2455