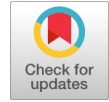


Two Layer Security for Ticket Booking

G.Michael, C. Nalini, C. Geetha



Abstract: In this paper we use online payment gateways for payment systems even for ticket booking or movie ticketing. In that we use our credit card for payment. There is no security as we use credit card. More hacking is taking place. In this system, we are using hybrid technology and two layer security for the ticket booking process. With this we are bringing more secured transactions. In the first method SMS is used and in the second method browser based ticketing system is used. In the SMS model user will be giving their account number, pin number, withdrawal amount as text SMS to the GSM modem connected to the bank server. The bank server verifies account number and the pin number and the balance amount in the user account then generates OTP along with the bank's ID to the user's mobile number. Then user logs in to the merchant (eg. cinema theatre) website gives the pin number along with the bank id using their own keypad matrix. This data is encrypted and sent to the merchant's URL for the security purpose. At the initial point of registration bank provides a unique keypad ID for every user. The Merchant's website will forward the pin number of the user to the corresponding bank. Bank will verify the OTP as well as keypad ID. If both are matched corresponding amount requested by the user is transferred to the merchant. Then the merchant issues the ticket to the user. In Modification phase, each key which is provided by the bank will have the expiration time that means if the key has two hours of time limit. Then we have to use the key within two hours else the amount will be reverted back to the corresponding account.

Keywords: Security, Ticket Booking, Hardware

I. INTRODUCTION

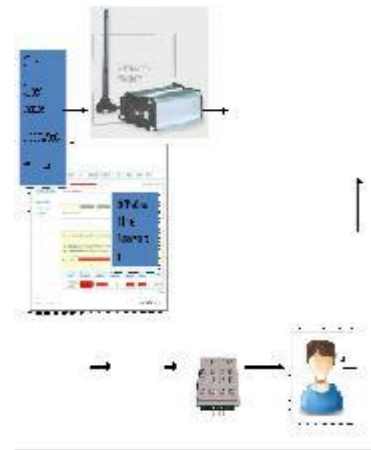
A hardware reference structure that shows the skills that a cell phone needs to help stack the product. A Linux operating system that provides low-level hardware interface, executive memory and process control, all enhanced for versatile devices. Open-source libraries for application improvement, including SQLite, WebKit, OpenGL, and a media manager. A run time used to execute and have Android applications, including the Dalvik virtual machine and the center libraries that give Android-explicit usefulness. The runtime is intended for use on flexible appliances to be small and skilled [1-4].

An implementation architecture that skeptically introduces the application layer to system administrations, including window manager and zone manager, content providers, communication, and sensors. A UI hosting and dispatching

application scheme. Pre-installed apps conveyed as a stack function. Due to the overall use of web-based shopping and banking, e-trade installment frameworks have turned out to be increasingly well established. Over the years, Visas has proven to be one of the most well-known kinds of installments for internet business transactions.

In addition, internet retailers must comply with the strict rules laid down by credit and platinum card backers (Visa and MasterCard), which means that sellers must have safety agreements, and methods are gradually established to ensure transactions. Instead of placing card subtleties on the buyer's page, the installment gate allows you to determine from which bank you want to receive. At that stage, the customer is diverted to the location of the bank, where they can validate themselves and then confirm the payment. Normally, some sort of two-factor authentication will also occur.

II. SYSTEM OVERVIEW



Due to the overall use of the web-based shopping and banking, e-commerce payment systems have turned out to be increasingly well established. Over the years, credit cards have proven to be one of the most commonly known installment kinds for web-based company transactions. In addition, internet retailers must agree to stringent norms set by loan and verify card backers (Visa and MasterCard), which means that traders must have a security protocol, and techniques are increasingly safe to ensure transactions. Instead of joining card subtleties on the buyer's page, the payment gateway in this scheme allows you to determine from which bank you want to receive. At that stage, the customer is diverted to the location of the bank, where they can validate themselves and then assist the deposit. Normally, some sort of two-factor authentication will also occur.

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It is usually observed to be safer than using credit cards, with the result that it is offered as an alternative by almost all merchant accounts in India [5-9].

III. SYSTEM ANALYSIS

A. Existing system

We use online payment gateways for payment systems even for ticket booking or movie ticketing. For that we use our credit card for payment. So, anyone (hackers) can use take the credit card and pay for the things which they bought. **DISADVANTAGES:** There is no security as we use credit card. More hacking is taking place [10].

B. Proposed system

We are using hybrid technology and two layer security for the ticket booking process. With this we are bringing more secured transactions. In the first method SMS is used and in the second method browser based ticketing system is used. In this project we have three major modules. 1. User, 2. Bank, 3. Merchant/Seller. In the SMS model user will be giving their account number, pin number, withdrawal amount as text SMS to the GSM modem connected to the bank server. The bank server verifies account number and the pin number and the balance amount in the user account then generates OTP along with the bank's ID to the user's mobile number. Then user logs to the merchant (eg. cinema theatre) website gives the pin number along with the bank id using his own keypad matrix. This data is encrypted and sent to the merchant's URL for the security purpose. At the initial point of registration bank provides a unique keypad ID for every user. The Merchant's website will forward the pin number of the user to the corresponding bank. Bank will verify the OTP as well as keypad ID. If both are matched corresponding amount requested by the user is transferred to the merchant. Then the merchant issues the ticket to the user [11-14].

ADVANTAGES:

- Secured credit card transactions
- Hacking possibility is reduced

IV. MODULES

A. USER

The first page of the application consists of the process of user registration. We will create the button and Text Field Class User Login Page. We need to schedule the website while creating the application by carrying devices such as Button, Text field, and Radio Button. We need to write the instructions for each of them when we organized the website [15].

B. BANK SERVER

The server is the server application that is used to interact with the clients of the bank. GSM modem allows the server to interact with their bank client. Java / DotNet programming languages can be used to make the server application. The server will monitor the receipt of information from the bank client and respond to the requested information from the client. The server will not allow the unauthorized user to enter the network. With the goal we can give the system from the exercises of the misconceived customer. The server will also differentiate the activity of the malicious nodes [16].

C. MOVIE SERVER

Movie server consist of the amount of the ticket, number of tickets and show timings. First the user should select the amount of ticket then the show timing. Then we should select the total number of tickets that the user needs to book and click submit. Then the transaction id and total amount will be generated automatically [17-22].

V. RESULT AND DISCUSSION

A. Embedded hardware fabrication

The embedded hardware used are GSM modem, microcontroller and the keypad matrix. The GSM modem is used to receive the message and to verify the password using the SIM in the modem. The microcontroller consists of the LCD display to display the message and the password. The keypad matrix is the device used to type the password which has the unique id [23-26].

B. Generation of OTP and keypad ID

Mobile user's will give user name, pin number, amount to be paid in the application. The GSM modem will verify it and send the OTP to the mobile. User will receive a password notification. Using the Random Generation Algorithm, the user will offer the password using the keypad matrix. It will go to the server from the ATM and check the server. The server will only allow the customer to unlock the gate after verifying the password. In this scheme, therefore, the safety standard is enhanced [27, 28].

C. Account transfer and issue of tickets

The amount is transferred to the client from the server and the tickets are issued. Driver's attendance is maintained daily with the help of thumb impression. Monthly reports are taken. Driver's details like date of birth, license number, designation, phone number, date of birth, photo, address are maintained in a database. Driving license should be checked for renewal. Details with printout facilities should be made available. Salary details with yearly increment must be done [29, 30].

VI. CONCLUSION

Mobile user's will give user name, pin number, amount to be paid in the application. The GSM modem will verify it and send the OTP to the mobile. User will get a message of the password using Random Generation Algorithm. The password will be entered using the keypad matrix, security level is improved in this system.

REFERENCES

1. G Gowri Sankaran, B., Karthik, B. & Vijayaragavan, S.P. 2019, "Weight ward change region plummeting change for square based image huffman coding", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 10, pp. 4313-4316.
2. Gowri Sankaran, B., Karthik, B. & Vijayaragavan, S.P. 2019, "Image compression utilizing wavelet transform", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 10, pp. 4305-4308.
3. Kandavel, N. & Kumaravel, A. 2019, "Offloading computation for efficient energy in mobile cloud computing", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 10, pp. 4317-4320.

4. Vinoth, V.V. & Kanniga, E. 2019, "Reversible data hiding in encrypting images-an system", International Journal of Engineering and Advanced Technology, vol. 8, no. 6, pp. 3051-3053.
5. Selvapriya, B. & Raghu, B. 2019, "Pseudocoloring of medical images: A research", International Journal of Engineering and Advanced Technology, vol. 8, no. 6, pp. 3712-3716.
6. Senthil Kumar, K. & Muthukumaravel, A. 2019, "Bi-objective constraint and hybrid optimizer for the test case prioritization", International Journal of Engineering and Advanced Technology, vol. 8, no. 6, pp. 3436-3448.
7. Kavitha, G., Priya, N., Anuradha, C. & Pothumani, S. 2019, "Read-write, peer-to-peer algorithms for the location-identity split", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 445-447.
8. Kaliyamurthie, K.P., Michael, G., Anuratha, C. & Sundaraj, B. 2019, "Certain improvements in alzheimer disease classification using novel fuzzy c means clustering for image segmentation", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 599-604.
9. Kaliyamurthie, K.P., Sundarraj, B., Geo, A.V.A. & Michael, G. 2019, "RIB: Analysis of I/O automata", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 1019-1022.
10. Velvizhi, R., Rajabhushanam, C. & Vidhya, S.R.S. 2019, "Opinion mining for travel route recommendation using Social Media Networks (Twitter)", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 508-512.
11. Kavitha, R., Sangeetha, S. & Varghese, A.G. 2019, "Human activity patterns in big data for healthcare applications", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 1101-1103.
12. Pothumani, S., Anandam, A.K., Sharma, N. & Franklin, S. 2019, "Extended VEOT framework - Implemented in a smart boutique", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 762-767.
13. Kaliyamurthie, K.P., Michael, G., Krishnan, R.M.V. & Sundarraj, B. 2019, "Pseudorandom techniques for the internet", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 915-918.
14. Aravindasamy, R., Jeffrin Rajan, M., Rama, A. & Kavitha, P. 2019, "Deep learning provisions in the matlab: Focus on CNN facility", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 990-994.
15. Theivasigamani, S., Linda, M. & Amudha, S. 2019, "Object sensing and its identification & motion sensing", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 545-549.
16. Mary Linda, I., Vimala, D. & Shanmuga Priya, K. 2019, "A methodology for the emulation of IPv4", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 848-852.
17. Velvizhi, R., Priya, D.J., Vimala, D. & Linda, I.M. 2019, "Increased routing algorithm for mobile adhoc networks", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 1606-1608.
18. Sangeetha, S., Anuradha, C. & Priya, N. 2019, "DNS in real world", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 937-940.
19. Geetha, C., Vimala, D. & Priya, K.S. 2019, "Constructing multi-processors and spreadsheets with SKIVE", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 516-519.
20. Yugendhar, K., Sugumar, V. & Kavitha, P. 2019, "A novel method of univac using fuzzy logic", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 435-437.
21. Kaliyamurthie, K.P., Michael, G., Elankavi, R. & Jijo, S.A. 2019, "Implementing aggregate-key for sharing data in cloud environment using cryptographic encryption", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 957-959.
22. Jeffrin Rajan, M., Aravindasamy, R., Kavitha, P. & Rama, A. 2019, "A novel method of object orientation variation in C++ and java", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 708-710.
23. Nayak, R., Dinesh, S. & Thirunavukkarasu, S. 2019, "A novel method improvement of rapid miner for the data mining applications", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 457-460.
24. Sivaraman, K., Krishnan, R.M.V., Sundarraj, B. & Sri Gowthem, S. 2019, "Network failure detection and diagnosis by analyzing syslog and SNS data: Applying big data analysis to network operations", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 883-887.
25. Vimala, D., Linda, I.M. & Priya, K.S. 2019, "Decoupling online algorithms from erasure coding in DNS", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 950-953.
26. Rama, A., Kumaravel, A. & Nalini, C. 2019, "Preprocessing medical images for classification using deep learning techniques", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 711-716.
27. Sangeetha, S., Srividhya, S.R., Anita Davamani, K. & Amudha, S. 2019, "A procedure for avoid overrun error in universal synchronous asynchronous receiver transmitter (usart) by utilizing dummy join and interrupt latency method", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 657-660.
28. Aravindasamy, R., Jeyapriya, D., Sundarajan, B. & Sangeetha, S. 2019, "Data duplication in cloud for optimal performance and security", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 1156-1158.
29. Aravindasamy, R., Jeffrin Rajan, M., Sugumar, V. & Kavitha, P. 2019, "A novel method on developing superblocs and the transistor using apodyral", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 9 Special Issue 3, pp. 982-985.
30. Sasikumar, C.S. & Kumaravel, A. 2019, "E-learning attributes selection through rough set theory and data mining", International Journal of Innovative Technology and Exploring Engineering, vol. 8, no. 10, pp. 3920-3924.

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