

Eventify - An Online Ticketing System

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Abstract: In this paper we introduce a new online ticketing system branded as "Eventify". The paper discusses the critical design and implementation issues for an online Event Ticketing System and prospective issues for fully automated online Event Ticketing with high availability. This system is an attempt to replace paper ticketing services used nowadays.

Keywords: online ticketing, e-commerce, events

I. INTRODUCTION

During the last years we have seen a considerable growth of use in Internet and India has an internet user base of approx. 250 million people. With the increase in use of Internet, the e-commerce is also a booming industry with much faster rate. E-commerce is the sale of goods and services by electronic means. Though penetration of e-commerce in India is low compared to markets like United States and the United Kingdom. Presently there are many areas which have high potential for exploitation like the B2C e-commerce service which can also help the masses. One of such high potential market is online ticket system for the medium sized events hosted by colleges and other firms.

As we can see some previous system are supporting online ticketing system but many of them are not available in India like Eventbrite.com, TicketBud.com and also the payout period is much more than feasible. Though we found system which is active in India but again the payout period of this system is varies i.e payout is issued on 8th working day of each month, which is not feasible in Indian market. Some of the websites just provide the listing of events like Knowfest.com, myfest.in, Festpav.com, events.betechs.com and many more.

So here in this paper we are trying to showcase the facts and findings of a system named "Eventify" which was developed to exploit the market potential. The system deployed on a Linux apache server with each user having a remote user interface through a web browser to interact with it, accessible with domain name eventify.co.in. This system (Eventify) will allow any user to create an account to become an attendee. The attendee, through the process of account creation, will have the option to become a member of the site. The system will allow attendees to browse, search, select, and add events to a shopping cart. Then, provided they have events in their registration basket, they can check-out and get registered for selected event(s). The Online Event Ticketing System also allows a host to manage the inventory with full create, retrieve, update and delete (CRUD) functionality with regards to events in the system. The Online Event Ticketing System has full sms & email capabilities; the automated email functionality will be used to send registration slips to attendee as well as provide sms notifications to both attendee and hosts as per their configurations.

The remainder of this report is structured to first provide the reader with background information (Section 2) in the relevant areas of e-commerce, common carting techniques, etc. Section 3 details us with different Functional Requirements that necessary to fulfil, it also explains us Online ticketing approach. Section 4 contains an overview of the system implementation including goals, and objectives. It also details the design choices and system architecture, as well as the design requirements that led to them. Section 5 concludes the paper with findings drawn about the process used and result reached, with regards to the design choices made, as well as the overall system.

II. SPECIFIC SYSTEM REQUIREMENTS

The online purchase for event tickets of entertainments share all common requirements with most online shopping Systems, like a carting functionality, payment gateway, sms- gateway, etc.

1. Open Architecture

Eventify is an online ticketing system with multiple service providers, operated in different environments and at different platforms. The system should be able to provide services to both hosts of event and attendees for that event with different ways of Internet access or even with no means of Internet access. The system must be easy for service providers and attendee to join and it should minimize the modification of software for providing other kind of E-services rather than Ticketing. To achieve this we have divided the architecture into three tiers, Each tier will be responsible to provide services to its user. The proposed architecture provides standard web interfaces to all system users which is platform independent, and XML as data presentation for exchanging information in the heterogeneous environment.

2. High Service Availability

Same as other e-commerce systems, Eventify should guarantee 99.99% up-time by being online 24x7. Eventify must perform system backup periodically and adopt a certain redundant approach in order to guarantee the system recovery within the shortest response time as possible. In addition, large amount of attendees may purchase their tickets on-the-spot and shortly before the event begins. So as to provide this facility it is necessary that event is online on Eventify till it has begun.

3. Fully automate the online event ticketing

Although Eventify provides online ticketing i.e purchase and payment of registration fees to facilitate attendee, there are still some parts of the selling process which must get human involved like marketing the event and so-on. While developing Eventify this setback was considered

and a option to share event on social media was implemented. Integration capabilities with social media make Eventify a fully automatic and complete online ticketing system.

4. Scalability

The scalability of E-ticketing systems vary from system to system in event types and geographic locations covered. Some events sell tickets in national or international wide while most of them are for particular cities. In online ticketing the service providers also have to deal with currency exchange for various kinds of events which need international participation. This paper proposes an open architecture system with scalability, which supports various events, multi-event providers but restricts registration with Indian Currency only.

5. Tickets can't be faked

In conventional system all of the tickets are printed on paper and delivered by delivered by hand, these tickets have to be examined by human when the attendee presents it for the events. This may provide chances for fake ticket holders and also support corruption or black-marketing of tickets. Adoption the electronic ticket is the solution to all such problems. The electronic ticket can be stored on the portable devices like mobiles, PDA's, tablets, etc. With the electronic ticket, full automation of ticket purchase, delivery and check in could be realized.

III. MAIN FUNCTIONAL MODULES

1. Functional Requirements

The fundamental functions of the Eventify is to provide web-based on-line booking and purchase services to individual attendee. Customer-centricity is the heart of E-Commerce, the system must provide services flexible to all target customers, local and abroad, Web online users and mobile phone users. The system supports Internet on-line purchase and on-line booking, electronic purchase through agents on-site. An attendee can book and buy tickets of events through the Internet at anytime in any place directly via the Internet access either from a computer or mobile device.

The Eventify system provides services to three types of users, the web-customers, the event providers, and the system administrator shown in Figure 1.



Figure 1: Overview of Eventify

The Eventify is composed of four subsystems and two third-party modules to realize the sophisticated requirements, the online booking and purchase subsystem, event management subsystem, host management subsystem, and the system administrative subsystem, sms-gateway and payment-gateway are the two third-party modules shown in Figure 2 [4].

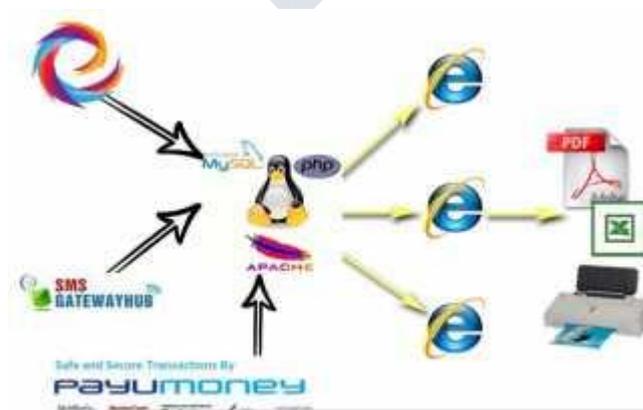


Figure 2: Architecture of Eventify

2. Online booking and purchase subsystem

The heart of the online ticketing system is to process booking and payment requirements. In addition to providing

registration, booking and payment functions, the system provides customer flexible discount, payment and ticket delivery functions. It processes customer booking and purchase orders based on available seats, price and discount policies, issue tickets. It is a very user-friendly system even with purchase consolation function, those are seldom seen form most of ticketing systems.

(a) *Discount Schemes*

The system provides customer a various discount choices. In edition to quantity discount, package and other discount are configurable by the event provides. Hosts or Event providers can also provide discounts on basis of their choosed categories.

(b) *Tickets*

All information about each ticket sold or booked is stored at the central database. Each ticket has assigned a ticket ID associated with particular customer. The ticket has QR-Code printed on it to verify its Authenticity. Tickets are sent in pdf format to attendees registered mail id after succfeull checkout. Attendee can also download tickets directly from his/her dashboard.

	Event Name Event Date Event Time Event Venue	(No. of attendees) 
	Participant Name Participant Email Participant Mobile	Registration no

Figure 3: Sample Registration Slip

(C) *Payment*

Customer has choice to pay on-line by various options like net-Banking, Credit-Card, Debit Card, etc. Customers are free to choose any of the payment methods acceptable. The online payment is handled by the bank systems, the E-Ticketing system provided an interface to the Bank Internet Payment Gateway.

IV. ARCHITECTURE OF EVENTIFY

1. Multi-tier architecture

Eventify has tight requirements on the system's speed, scalability, security, and reliability. One way to meet this need is to use a multi-tier model where a thin-client application invokes business logic that executes on the server. An important advantage of multi-tier is the reusable middle and back-end services that speeds up implementation of new applications. These tiers are both logical and (actually) physical division of the system. Client programs communicate with the database through the web-server using platform independent web-browser. The web-server responds to the client requests, makes database calls as needed into the underlying database, and replies to the client as appropriate.

The Client-tier contains the client user interface, which can be any internet web browser, applet or standalone applications. Presentation-tier provides all presentation logic, which are required by the client (user). It dispatches user requests and constructs the response.

Logic-tier provides the core business functions provided to the user. All business logic is centralized into this tier, which allows loose coupling between tiers and the underlying platform. (Hence any of the tier's platforms can be changed without major modification). Session and transaction handling are resided in this tier.

Database-tier is the central storage of system data and business transaction records.

2. Platform independent

The system provides standard web-interface to all subsystems. It provides the platform independent bases for all kind of users to interact with the system. PHP is used as the main development language implemented main modules.

3. XML based data exchange suitable for heterogeneous environment

The XML file is the main means of data exchange among subsystems and the central ticketing processing system. Seat availability and ticket information are exchanged in XML file format.

V. CONCLUSION

The Eventify system has been fully implemented. The over all system analysis and, design flowed software engineering development lifecycle. The Objectoriented UML is adopted as the tool of analysis and design. The system passed all functional tests. The system performance tests obtained the satisfactory results. The system will be put in use upon the real case trial run completed. To improve system performance, to provide access to PDA users and fully automate electronic Event Ticketing process are the goals for the feature research and development.

VI. REFERENCES

- [1]. Abdul Mateen Ansari, Aftab Alam, Mohammed Mujahid. Barga "Next Generation E-ticketing System" International Journal of Emerging Research in Management & Technology ISSN: 2278-9359 (Volume-2, Issue-12) December 2013
- [2]. Jef Neefs, Frederik Schrooyen, Jeroen Doggen, Karel Renckens "Paper ticketing vs. Electronic Ticketing based on off-line system Tapango" 2010
- [3]. Bahn Grace Ng-Kruelle, Paul A. Swatman, Oliver Kruelle "e-Ticketing Strategy and Implementation in an Open Access System: The case of Deutsche" March 2006
- [4]. David Madigan, Eiman Elnahrawy, Richard P. Martin, Wen-Hua Ju, P. Krishnan, A.S. Krishnakumar "Bayesian Indoor Positioning Systems" 2005
- [5]. Z. S. Guo, W. I. Siu, C. T. Wong "Full-scale Online Event Ticketing System The Design and Implementation" 2002

