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PROPOSED EFFICIENT METHOD FOR TICKET BOOKING (PEMTB)

K. Ahmed[1,*], M. S. A. Khan[2], O. A. Siddiqui[1], S. A. Iftikhar[3], B. Das[4], M. Khurrum[5]

[1]Assistant professor, Sir Syed University of Engineering & Technology Karachi, Pakistan

[2]Chairman Computer Science Department, University of Karachi

[3]Sir Syed University of Engineering & Technology Karachi, Pakistan

[4]Department of Electronic Engineering, Quaid-e-Awam University of Engineering, Science and Technology, Nawabshah, Sindh, Pakistan

[5]Nizwa college of Technology, Nizwa , Sultanate of Oman

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ABSTRACT

The main purpose of this study is to explore the different platform that influence the client to become social. Our project (GO-tickets) is more easy way to book /buy ticket for all categories of events which is held in our town which includes the movie, festivals, holiday tour, events, sports and much more. This project is based on Cloud computing and we implement the digitalized concept of ticket marketing in which person can buy tickets in digital form and use single platform for all types of events booking. We used angular JS, ionic for a front end and node.js, express.js for a back end and mongo DB for a database. Our application works on both OS platform (IOS and android).Our proposed system is totally softcopy and in digitalized. The project has been successfully in the developing process and the system performance is found satisfactory. The use of computers in this technology era is nonproductive tasks to helps the users to reduce the time and wait. User-friendly menu interface the users can then use the services of the application via to fill a registration form can register themselves for book the tickets.

Author Correspondence, e-mail: kkhanzada@hotmail.com

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This research paper of Go-Ticket application deals with the modern technology development of mobile phone application which is more simple effective, easy way to use and we also introduce QR scanning bar code reader that contain information about ticket in the form of bar-code. Moreover, the authentication of the ticket is checking by another person through QR scanning bar code reader which verify, QR-code detail information with the database and reduces the burden of event manager.

Keywords: Ios, Android, Cloud-database, Quick response code (QR), MongoDB database, QR scanning barcode reader.

I. INTRODUCTION

Nowadays, modern technologies conclude different services i.e email, mobile phones, and the internet etc. However, with the development of new technology, we are faced number of challenges, task, risks are emerging for the many other organizations. Some of the important issues include such as new payment methods, integration of the new technology with the modern device .In this project, the main idea is to utilize the new technologies for our ease, digital tickets are very much common in developed countries.

"Digitalized ticketing system is the ticketing system which uses self-service technology as a base of application helping the user to book a ticket by themselves".

In the modern era the technology is surrounded everywhere everyone is running behind with the time and achieve the goal. The main purpose of moderate technology is to produce a time and cost efficient product which is easy to use and attract the user/client if they use, it is easy to use. Even in the online or digitalized ticketing was introduced for facilitating the users to book/buy ticket through application which is install in your mobile phone. The Mobile ticketing was introduced which sends user pop-up message of tickets for validate and after the successful validation. This facility was never implemented in Pakistan this is the first time introduced in Pakistan. This research paper presents the methods of the online ticket booking system in digitalized form with unique bar code. PEMTB is a way of tickets purchasing for different event platform it is the challenging task to combine all events in single platform. PEMTB is an simple application which enables the users to buy a tickets in an efficiently, with the help of an application with is install in your mobile phone. It can carry tickets in the form of picture which is directly download in mobile gallery with a Quick Response (QR) code in it or in form of

digitalized it is an application that containing the whole details information of the ticket in an encrypted code form. The information about a single/individual user and the digital ticket is stored in database for easy availability everywhere and any time and are easily retrieved when it is required. All information about ticket details information is transferred in a secure manner and the user also check their purchasing history in their account page. PEMTB will be the best solution for all kinds of events selection, holiday planning, weekend visits or educational trips due to which a person can get rid of long queues, fake passes and mismanagement it will minimize the black marketing, ticket sharing will be easy. PEMTB development team are introducing the concept of 'In-App-Ticket Market', this market is for the users of PEMTB where a user can resale its tickets if they want. In-App-Ticket Market will be helpful for money refunding and tickets utilization.

PEMTB is also having the Management Panel for event managers, where a manager can register itself and submit their event publish request to the panel. Event Manager can have fully access to the details of the current or past events. Record of each ticket will be render to the manager and he can also notify the ticket holders for any update or event reminder.

This application Go-Tickets used MongoDB for a database for non-relational database management system. It is query Language which provides a highly-functionality about all secondary indexes. Our ticketing system is online limited for all kinds of events in a single platform where you can search diff categories of events like sports, entertainment, education and vacation trips.

It is a separate application for client and event planner. The clients access the database. The database of the server can access through internet (dbms). For the better results the availability, effective resource and the database uses cloud computing Paas with the tools to test, develop and host the applications in the secure environment and also provide to manage or maintain security, backup send the server software. MongoDB database give the scalability, efficiency and availability for continuously of the system easily, efficiently for durability. Some of the advantages of database are accessibility, recovery, better maintainability and the better good performance. But there are some of the disadvantage, include security and privacy and loss of data in the case of any disaster or any mishap due to some situation. This application is to contact server connect it to directly to receive updated of data for the user or application. To be a

designed for the unique QR code, a set of black modules arrange in encoded The encoded code info may be alphabetic, numeric no, byte/binary and so on the bar-code is unique.

II. LITERATURE REVIEW

The paperis easy toprovide a more easy way to book/reserve tickets for the movie entertainment and also provides an interface for users to manage or maintain a multiplex cinema ticket booking process system. On the front end they used php and sql server on the back end .They design their own back end. It has been developed in php and database has been created in my sql server server. We also study that this projectpaper have some limitations like Customer will not be select their seat number at that system. The customer will only book their tickets on the current day and the Upcoming movies does not include the Advance bookings. In this paper a user finally decides to reserve and grab their tickets, the purchaser's name, email and information, including billing/payment instruction is securely, manageably and permanently stored in the mongoDB database for future visits that has been paid[1].

This paper is based on the existing real-time booking reservation booking system for the meeting of any event and seminar halls of graduate students which studies at sana's university, this paper also conclude the basic comparison between manual booking and the online booking system for the graduate student. In this paper Technology Acceptance Model it was used as a factor in the use of computer modern technologies. In order, the Software Development Life Cycle (SDLC) model was used for designing the proposed online reservation system for the meeting of any event and seminar halls and give online questionnaire among 100 students of the university which evolved two sections; the first represents the usefulness and satisfaction of the manual booking system, while the second represents the usefulness and satisfaction of the Online booking system. The proposed system was tested and the results showed that the student did not like the Manual Booking System as a useful. The majority of the student like online booking system is easy to use and give vote to online booking system[2].

This paper is based on the live music events festivals. The future of the online marketor live music events festivals which holds potential for the growth of the music event festivals continue to rise in popularity. The ticket resale industry as the ticket resale opportunity. As a media communication is increasing day by day through mobile phones is also a leading factor in

growing industry of the popularity of music events festival i.e concert through this it is extremely active on social media while attending live music /concert festivals[3].

This paper propose the dealing with the online event ticketing that will continue to grow among millennial. The enhancement of new technology is a set task and risks .The major and the most important issues include is payment methods system for the integration of the newest technology. This research, shows the challenges of the online event ticketing booking are presented along with solutions. With all the opportunities, to expand their fame, business and provided that they find efficient ways for emerging challenges, task and risk. Due to customer demands the leading companies need to adapt these services in order to make the customer comfort, and give free mobile payments for the newest technology like Apple pay when it comes to customer satisfaction. The event ticketing platform is to provide the most affordable ticket prices discount, increases ticket sales opportunity and the build a trusting relationship with the customer/users/client is increase[4].

This paper proposed the modern ticket system which is strong, high and polarized, stable by those involved in the selling purchasing of the tickets for sports, concerts and theatres, and some of the people go to attend the events. The market in tickets for entertainment and sports events is regarded by the scourge, in addition to see it as a valuable good services ,it is a good way to obtain tickets for oversubscribed events. The tickets can now be bought and sold in a very short time, and it is easy for trade in their spare time. As tickets for many popular events are put on the market at prices which are lower than many consumers are willing to pay for it[5].

This paper propose the easy booking is a system which provides the facilities for booking holiday tour and other accommodations opportunity for customers. In back end they used MySQL, and on the backend side they used sql server, Microsoft Access Oracle. And in front end they used Visual Studio 2010 Adobe Dreamweaver, Notepad, and Notepad++ and others are .net frame work. In other hand this system will have limitations in their system i.e enquiry/emergency the customers send their feedback,. This paper system does not have the separate web page for checking all the customers enquiry/complain and send reply to them as soon as possible. This application will work for both OS Platform (IOS & Android) [6].

This paper proposes to deal with the web based cinema ticket booking system which is time saving for the customers by booking the tickets online in very short period. This system is designed on the bases of modern architecture to cut with the changing requirement. They provide

benefits like checking your booking history, special offers and discounts deals for registered customers. After selecting the show, the user is presented a seating layout so that he can select seats of his choice of required , their system offers a "Pay Later" option, payment at the time of buying tickets is not compulsory. User can pay tickets at the theater itself. The payment process is made extremely secure and manageable. They use trusted payment gateways using SSL encryption technology to protect your personal information. First User make their profile then they can update his profile details, and then they can take a printout of the ticket and also view his booking history. Their system also permits advance ticket booking. They have introduced a mobile app for booking movie tickets through Smart phones application. This works for both Android as well as IOs. And the best part is no need for a printed ticket because they send a ticket on phone that can be produced at the theater as a valid ticket[7].

III. METHODOLOGY

Front end:

We use angular.js and ionic for a front-end .AngularJS is a front-end web application framework and is based on .js open source. It simplifies the enhancement, implementation and the testing of such an applications by providing a framework for client side development. AngularJS is the front-end part of the mean stack generator that consisting of MongoDB as a database, whereas ionic is a complete open-source sdk which is use to provides tools, services for developed the hybrid mobile applications by using the web technologies like Html5,Css and Sass for styling.

***Back end*:**

We use node.js and express.js for a backend. Node.js is an open source platform. Node.js enables the language of java Script to be used for server side scripting, and runs the scripts to produce dynamic web pages content and Express.js is middleware part which provide a web app framework for Node.js, It is designed for building web and Api's. Express.js is the backend part, together with MongoDB database and AngularJS frontend framework.

Database:

MongoDB is use for a database. MongoDB database is uses for the cloud resource which give the scalability, efficiency and availability of the system easily and durability. It is used for a use

cases Mongodb is include Real-Time Analytics etc. MongoDB provides only a document-wide transaction.

MongoDB had a server-wide write lock. It is a perfect isolation mechanism and also in order to achieve it if they want to sacrifice enough performance.

Multi services:

This is sometimes called as a third party services which is mlab, firebase, heroku these all provide services, whereas mlab provide service to Mongodb database. Firebase provide a real time database and give support backend as a service. It also provides an application for developing an Api's that allows application data to be synchronized across the client sideand stored on Firebase, heroku is a cloud that are based on the platform as a service (paas). The heroku platform supports the developing part of the node.js server .

A. Open Architecture

In order to enhance the experience, we have taken our ticket booking system one step further. We have introduced a mobile app for booking movie tickets, festivals, events, seminars etc through Smart phones. This works for both android as well as for ios. This way you can easily find out event related information and book tickets through your phone. And the best part is, no need for a printed ticket because we send you a ticket on your phone that can be produced at the theater, cinema halls, seminar halls etc as a valid ticket. So it ends the user's worries about waiting in long queues at the ticket counter as well. Have a great experience. PEMTB is a web app to provide the customers facility to book tickets for cinema, events and avail best deals in town and the user can select the events per his choice and also pay for ticket, payment at the time of buying tickets is compulsory.

B. System Design

This system design showed the application description with detail information to the product development by defining the architecture, components, model with all possible module and data for a system to satisfy the requirements. The main goal of design phase for the system was to find the best possible design within the required limitations in which the system was to easily operated in efficient manner.

Fig.1. Representation of the ticket purchasing scenario

C. System Implementation

This system implementation involved the building of the various elements of a system where we are having front end device that is connect to node.js server .The process flow in the form of cycle with the front end device the http request to the server of node.js where we using get function to get information to server in which we can be post , delete information functions call .We also use express.js for a endpoint device that is a service serves the middleware and generate query function .this query ask from database to select and find query in database and after that it will give respond back after getting query with the help of return function as a json format in the device.

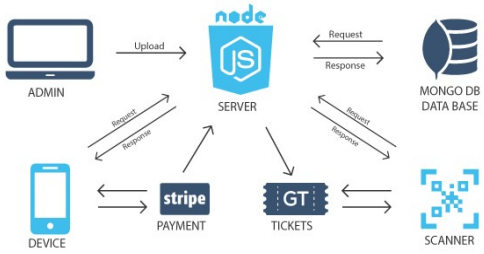


Fig.2. Representation of the system diagram

D. System High Service Availability

The system provide high service availability and backup the periodically and adopting certain redundant approach in order to guarantee the system recovery within the shortest time as soon as

possible, the large amount of customers may purchase or collect their tickets shortly before the time begins. Moreover the requirement is on availability, and only for some of the services and the ticket purchase, issuance and printing are the most common issue in the event ticketing systems mechanism or digitalized ticketing system which to guarantee the high availability and durability of the system.

E. Scalability

This systems are vary from system to system in all event types of categories and geographic locations also being covered. Some of the ticket system sell tickets for various kinds of which held in our town. This paper proposed an architecture of the digitalized ticketing system based on cloud computing implementation, UI interface etc which supports various categories of events, multiple event providers.

F. Functional Requirement of the System

The fundamental functions of the digitalized ticket is to provide mobile-based online ticket purchasing services based on both android and Ios to the individual customers The mobile phone supports Internet for the online purchase or digitalized purchase through application. The single customer/user can buy tickets of different events through the Internet at any time anywhere directly through the application which is install in your mobile phone after that first register yourself then login to the account and after that show the event and easily buy the ticket on your fingertips. The digitalized ticketing system provides services to users, the web plan is only for the event manager to insert their event, details/information about the event, ticket for the customers.

1. Register/login :

The first procedure starting for the user is collect information of the users through registration. In addition if the user is using the smart application for the first time they has to fill the registration form for buying any ticket in registration form give some of his information like name, email, gender, no etc. When a user has already registered he has to enter to the login page. All these information are securely stored in a database and can be accessed easily. These information are necessary during the generation of QR -code of the ticket, validate and for future.

2. Buying of the Ticket

For the buying the ticket you must first register itself after that then book the tickets they have to fill details form like payment method through credit card , No. of ticket which limits is only 5 ticket you can purchase at one time if you are ticket ambassador. Then click the generate ticket options to generating a ticket. Then payment mode has to be selected. They also have an option where you can store the credit card information. This is known as token payment or strip payment method.

3. Generation of the QR code :

After the creation or generation of the ticket QR-code number at the time of buying the ticket from the above mentioned step, QR code is generated from the Api engine. Thus in response a QR code is generated as a http Response against the request sent earlier as possible .

4. QR Reader Check

The QR bar Code is used for retrieve the detail information from the QR code in an encrypted form for validating the details of the ticket including its date ,event category, time etc.

5. Database Checking

The database checking it also called an backup plan for the user's mobile device whether it is damaged or shows any of the problem. It is directly can be checked by the user with the ticket number and ticket purchasing details to get detailed information about the events category etc.

6. Event Management Panel

Our system also provide the event management panel where event manager has required to fill some information details for the publishment of events and then has to request to the admin for publishing the event. Admin will check the event manager's information from admin panel or contact the event manager for the approval and verification. After confirmation the admin will grant access to the manager. After gaining the access for publishment of event, event manager will be able to go to the event panel and can easily manage event. The manager a can check details in the run time and details of the current event or the previously held events or to be in the near future, the details of sold out tickets, how many remaining and can manage cost and count of

the tickets if there is capacity left in the hall. Event manager can also manage the date venue or the time of the event and also change venue or time and can postpone the event too.

7. Event Service provide by Management Subsystem:

The overall system provides event service management. The services are required for all event providers to create events/post event related information details and to manage or arrange the event conveniently via standard Web interface/browser. Event management provides details and can schedule the event, announce the prices, and announce the no of ticket availability and venue. The online updates, reports and news are given to event provider which describes the various statistic report of purchase. After function/services provides details to handle business issues with the administrator (admin).

G. Non Functional Requirement

The application was designed to fulfill the non-functional requirements of the application.

1. Performance Requirements

Performance of the system is dependent on the internet speed with the local host and also the hardware itself.

2. Security Requirements

Every system has a security requirement .There is only one authorized person who can see the Information which is the admin. The information of the customer is only available for the administrator only .

3. Software Quality Attributes

The software quality of the system is vary by the user friendly and flexible requirement.

H. Architecture Design of the Application System

1. Hardware Requirements

Hardware(laptop, mac), Device Smart Phones (Android 5.0 marshmallow), IOS, Xcode.

2. Software Requirement

IDE (Web storm) , IDE(intelli), Language (Java script), Operating System (Windows, Mac, Android), Supporting Device (Android sdk, IOS) , Version of Android is from(SDK 2.2 to 4.1) , Database (Mongodb).

3. Android SDK

Android sdk is the development kit which includes a set of libraries, errors, documentation, tutorials, etc. In addition the developers uses the edit java or xml files with any other text editor we use webstorm. The android project needs a editor to be create dprogram then compiled and then run. All the.apk file is a package of all android applications. This .apk file is stored the app data folder for the Android Operating system.

4. QR Code scanner

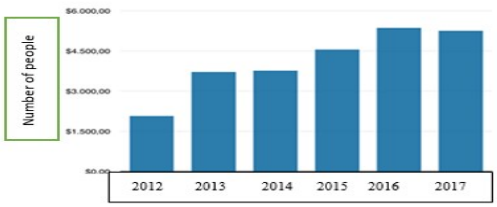
The Quick Response (QR) code the [Figure 3] shows the QR code which is used to store user information and ticket purchasing details in encoded form with black and white and have no restriction of QR size. This QR code can be used to transfer from one mobile to another and can be shown ticket detail to the ticket checker for validation and for invalid ticket.

Fig.3. Qr code

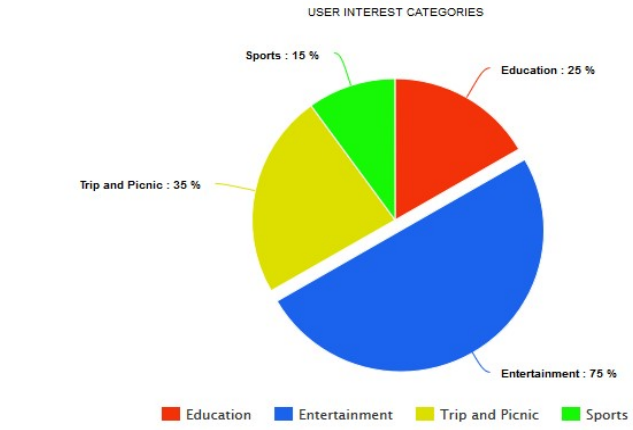
IV. RESULT AND DESCRIPTION

The use of online ticketing application or digitalized ticketing system in the android mobile and Ios mobile which will minimize the overhead of the user to waiting in a long queue and book, purchase the tickets. PEMTB is a system where mobile users can book, pay, purchase, tickets through an mobile phone. The need of Ticketing is increase day by day to overlook with the technologies. This modern application has ample the useful features to make it popular in the modern technology market. First all the user information are stored in an encoded manner and

also providing the maximum/efficient security, flexibility for the customer /user in addition, all the user information is stored in database in an secure manner. Thus Go-Tickets application installed in the mobile phone for booking a ticket as well as for the validating the tickets. It also automatically expire the tickets after the validation of the ticket at event place. Payment can be done through strip payment method .All the required facilities for ticket booking are present in this smart modern application with multiple events category. It also provides the security in the efficient manner.



Event per Interest



Thus the go-tickets application will become popular soon in the market. The below reasons that make this application better than the other application in the modern technology market.

- It resolve the problem for the users stand /waiting in a long queue to book their tickets when they are with family and friends..
- It really enables to the customer comfort to purchase the tickets online, everywhere ,anytime if you have an internet in your mobile phone it is available 24 hour.
- Users information is store in the database and thus the system can access the data anywhere anytime.

- Single platform of all types of events booking all events are categorized in fusible manner, so there will be a single platform for all nature of events booking and getting events detail on a single tap.
- The user of go-tickets application can carry the QR code. This code is generated on the ticket after purchasing the tickets, the ticket is directly save in mobile gallery. It does not worried about the carrying any smart card or a print out of the ticket.
- The encrypted form of QR- code, security is maintained and manageable easily.
- The ticket information is in the database i.e MongoDB, used to accessed to the validate tickets.
- For the payment method go-tickets implement strip payment method.
- Ticket market concept where user can sale its purchase pass or ticket in case of some issues.

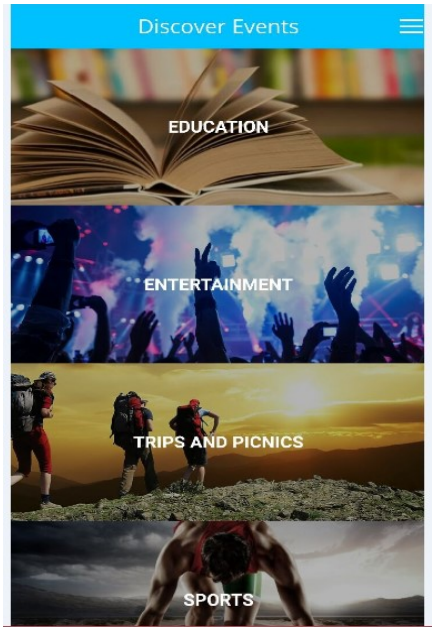


Fig.4. Home page

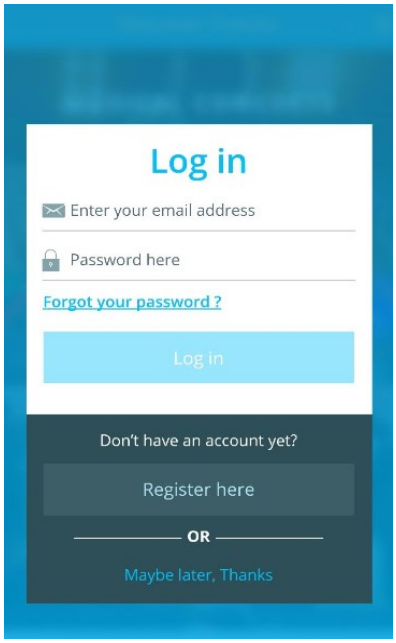


Fig.5. Login page

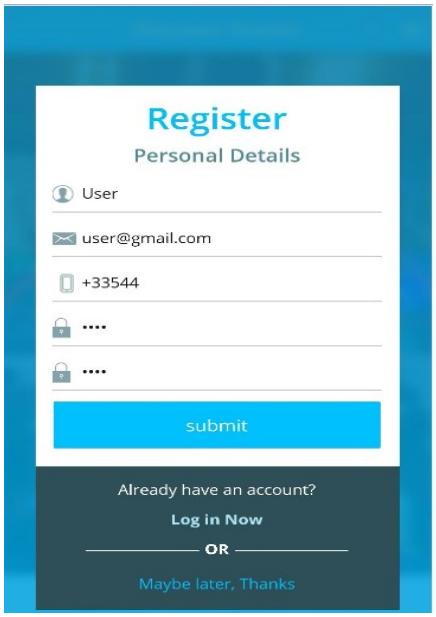


Fig.6. Registration page

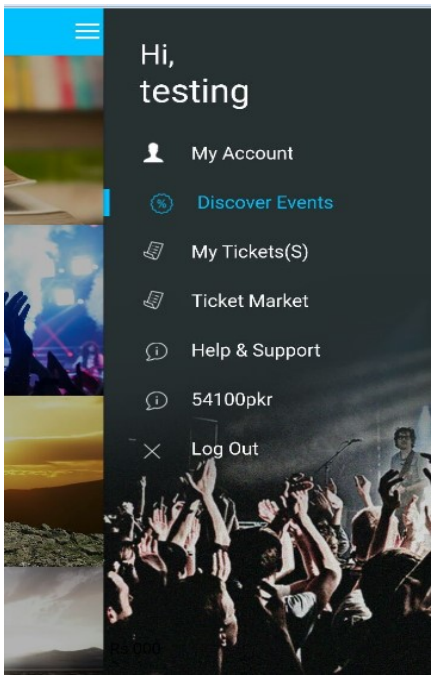


Fig.7. Account page

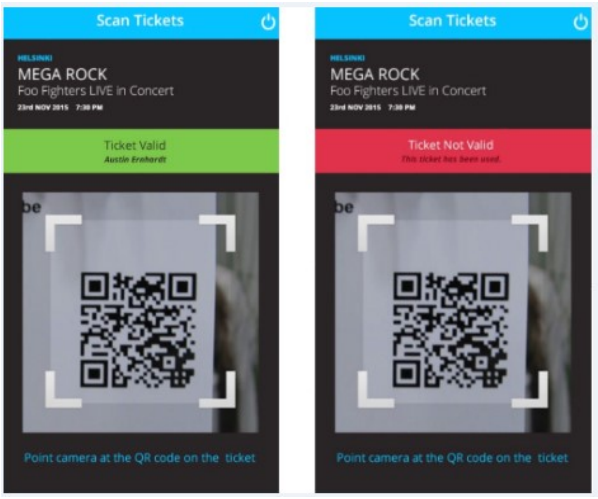


Fig.8. Ticket validation

Figure5 describes the page where an existing user can login and a new user first register itself and can create account with the register here option there is open free to see what show in going on no need to register or login but if you purchase any tickets you must first register and login. Whereas Figure 7 displays the homepage where the users has to show different categories pages

after selecting the ticket it shows the detail of the event time, venue and ticket cost details for buy the ticket after buying the ticket it shown a ticket if available. QR code is attached with the ticket received by the user with the ticket. Figure 8 shows the Validation and invalid of the ticket.

V. CONCLUSION

To conclude this research paper we will like to sum up that the product that will discussed will be revolutionary in this modern era this product encompasses all the necessary details regarding holiday planning like festival, trips, seminars etc. The go-tickets is designed to meet the requirements of all the necessary details regarding a holiday plan. This product will full fill all the required ideas that a user can have and will satisfy user by providing complete knowledge of any event in our town. The advantage of this product is that there is no use of any sort of fraud activities as it encompasses end to end security parameters providing secure environment and there is no restriction for any platform because it is hybrid app. Different event managing companies can meet customer requirement, with this platform we developed and created, we avoid wasting time to reduce misunderstandings. Nowadays, event companies are taking important role in managing event festivals and to make reservation reliable that they will make reservation easier, simple, safer and cost time efficient manageable. It has been developed in HTML5, SCSS as styling, java script and database mongoDB. By using this application, the event company provides information to their customers without the limitation of office hours or man power it available 24 hours. It easily book any trip which available and events around the clock at any location time through internet but it is also designed for the company to manage their business processes, overcoming difficulties and problems and it established time to time that arose in the previous system. On other side this app will be having a commercial value and financial return like all others app are earning these days. We can enhance this concept further in future after the successful deployment.

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