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# USEM: UTHM Student's Event Management System

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**Abstract**: Universiti Tun Hussein Onn Malaysia (UTHM) has over 50 student clubs registered with the Pusat Sukan UTHM (PSU). PSU is the party that is responsible for approving or rejecting each application, it receives, but currently the application process is still manual by the paper filing method. Manual management of the application process using paperwork takes up a lot of time and effort for students to make. Thus, the purpose of this project is to develop a system that effectively manages all data related to the various events taking place at the university. The aim is to keep a central database of all event-related information in the MySQL database. The goal is to support a variety of functions and processes necessary for efficient data management. This system is developed by activities within the evolving software prototyping model where three iterations are involved. UTHM Students' Event Management System (USEM) is a web-based system which has been developed using the PHP programming language to systematise an event application and facilitate event management. The USEM enables minimal input work and easy retrieval of information. It helps reduce mistakes resulting from human intervention. The system has user-friendly interfaces to capture data, quickly search for information and easily accessible anywhere. Test results show that 99% of test cases were carried out as intended. In conclusion, the USEM is useful to manage information on UTHM events in an efficient and effective manner.

**Keywords**: event, management, system

## 1. Introduction

Until 2020, Student Affairs Office (HEP) has recorded more than 50 organizations and societies that are still actively organizing event for UTHM student. The purpose of the organization and societies is to give opportunity to UTHM student to join any program in the organization and societies according to their interest. The program that is organized by these organizations and societies is very important in cultivating the personality and interests of students whether in sports or academics.

The current process of applying the event in UTHM is still manual, which by using paperwork. Firstly, the student has to make a paperwork according to UTHM format and submit to the coordinator.

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Everything that involved with the event have to be stated and clear. Then the paperwork will be checked by the coordinator, which is Pusat Sukan UTHM (PSU) for their approval. PSU has to use their physical space to store those papers, but sometimes it got mixed up with another item. If there is something that is not fulfilled PSU requirement, then the student has to retake their paperwork and redo until they get the approval from PSU. Once agreed, they will have to do promotion to find a participant. Next, the student will make a Google form or opening a station of each of residential college to register a participant. The same method is used to manage event fee and attendance. Students have to list out every information related to their event such participant list, participant attendant, event participation payment and also their promotion using Google form, pamphlet and banner. Lastly, the student will have to send all the information to the PSU to get a certificate of participation for every participant.

These situations contribute to some problems. The current system in event application is still in manual method. The organizer must print out a formal letter and have to send that letter to the office. The unsystematic or manual management to handle the application of an event is giving a difficulty to the student on submitting, retake and redo their letter since they must back and forth to PSU's office and wasting a lot of time. Sometimes, there is some part of the letter that missing because all the application is in the same box. Next, the students have to make a Google form or opening a station on each of residential college to register a participant. The club members are having a hard time waiting and this process will take a lot of time.

Other than that, the students have to promote their event using a banner and social media platform. Social media is the most common platform that had been used to share the information, but sometimes the information does not reach to another student since they are only sending or posting it only once or twice. Students are inactively posting their event which will give a big impact to the program participation. Lastly, the unsystematic payment method to handle the fees. The current method is the organizer make a statement that they will be on certain places and the participants need to come and pay their participation fee for that place. This method is a nuisance to both parties as they have to wait and came to that certain place which is wasting their time and energy.

Thus, USEM were developed to solve the problem. It will consist of computerization of event application, event promotion, event registration, event participation and pay event payment. There are three main objectives of this system which are analyzed and design a system that can manage students' event, develop UTHM event management system using object-oriented approach, and test the system with the potential stakeholders.

This system was utilised by three types of users that is UTHM event planners, such as Pusat Sukan UTHM (PSU), organisers who represent UTHM clubs, and UTHM students. The modules available in this system are event application, event promotion, event registration, event participation registration, pay event payment, interaction space for users, generating and printing reports, feedback of event, filtering, promoting news feed, smart notification, event locater and login. Therefore, UTHM Students' Event Management System (USEM) was established to computerize the process of event application by using digital form. With this system, the management of organization and society that have been established under UTHM can be enhanced. Furthermore, this system can improve the existing club registration system and can be used by students to find the club they are interested in through online information. The following papers will be organized into several sections as follows: Section 2 discusses the related works of the developed system. Section 3 on the other hand, describes the methodology used for SMPMS. Next, in section 4, explain about the results and discussion of the output of SMPMS. Finally, the project discussion and conclusion is discussed in Section 5.

## 2. Related Work

In this section, the topic that are being focusing related to the technology that are used to develop UTHM Students' Event Management System (USEM). USEM is a web-based system that using PHP as a programming language and can be accessed through any device that having internet and browser via HTPP.

### 2.1 Event Management System

Implementing a tried-and-true management system, such as ISO 9001 Quality Certification, may assist a company enhance operations, reduce risk, and boost stakeholder confidence [1]. Event management is a system that encompasses the planning, organization, and execution of live events. Event management services might include a brand or product launch, an exhibition, a performance, or even a conference. This entails organizing a personal or business event. The UTHM Students' Event Management System is a web-based method designed to replace the present manual system. A more systematic management system can achieve by computerizing all the process in event application, event promotion, event registration, event participation and pay event payment.

### 2.2 Programming language for web-based system

According to K. R. Srinath [2], the following are the top three languages that have been utilized for web-based programming. The language is Python, JavaScript and PHP [2]. PHP is an abbreviation for Hypertext Preprocessor. PHP is a widely known open-source general-purpose programming language that is suitable for web development and may be used with HTML (HTML) [3]. This language is used because it is powerful enough to be a core of the biggest blogging system on the web and also deep enough to handle largest social network that is Facebook. Therefore, PHP is more suitable for this project because of its ability on handling data and easy to modify based on the project. PHP is one of the best languages to easily connect securely with the database. Also, the maintenance of USEM is easier because PHP is easy to modify.

### 2.3 MySQL Database

SQL is an abbreviation for Structured Query Language. SQL is the language that is used to communicate with databases [4]. The author can use SQL to construct a database, as well as read, modify, and manipulate data in the database. MySQL is an open-source database server system, according to R. T. Fielding and G. Kaiser [5]. MySQL supports standard SQL and is adaptable to various systems, including Windows, Linux, and Mac OS. MySQL's benefits that entice writers to use it include its high performance, high dependability, and ease of use. MySQL is free to download and use since it is open-source software.

### 2.4 Web Server (Apache HTTP Server)

A web server is software that is placed on a server and is used to serve web pages when they are requested by clients. The Apache License governs the distribution of open-source software such as Apache. Apache is compatible with a broad range of operating systems, including Unix, Linux, Mac OS X, and Microsoft Windows, which is one of the reasons most authors pick it. It's also free, but it works well and is simple to operate.

### 2.5 UTHM Students' Event Management System (USEM)

The current event management system is performed manually by submitting a formal letter of application of an event. Firstly, the paperwork must be submitted by hand to the PSU. Then the paperwork will be checked by the PSU if every component has fulfilled the requirement. The proses will be repeated until students manage to fulfill the PSU requirement on event application. PSU is the coordinator and the party that is responsible in approving or declining any event proposal. Event application is divided into two categories that is below RM1000 and above RM1000. When the event is in below RM1000 category, then their paperwork will be checked and approved by the director while above RM1000 will be approved by Naib Canselor of UTHM and TNC Hepa. In the meantime, Pusat Bendahari UTHM (PBU) will check the budget for the event. If the budget exceeds from the amount that have been set by PBU then the organizer needs to deduct their budget. If there are some mistake and part that does fulfilled any requirement and limit that have been set, the organizer needs to redo their paperwork. But, if the event has approved by PSU, PBU and superiors, then the events can be proceeded.

## 2.6 Study of existing system

A study of the existing system has been conducted on three existing systems in the market. This study is conducted so that the system developer can analyse and identify the advantages and disadvantages of the existing system to use it as a reference when developing the system. The three existing related systems that have been chosen are TicketSource, Idloom-events and EVENTZILLA. Based on the review, the comparison is shown in Table 1.

**Table 1: Comparison of three existing systems and USEM**

| Features | TicketSource [6] | Idloom-events [7] | EVENTZILLA [8] | USEM |
|---|---|---|---|---|
| **Platform** | Web-based | Web-based | Web-based | Web-based |
| **Registration and Login** | 1. Use personal email and password.<br>2. Send activation email to active account. | 1. Use personal email and password.<br>2. Send activation email to active account. | 1. Use personal email and password.<br>2. Send activation email to active account.<br>3. Ask personal information for registration. | 1. Use personal email and password.<br>2. Ask personal information for registration. |
| **Add Event** | Must go through four different interface such as event detail, additional event information, event questionnaire and E-ticket setting. | Must go through one interface that include event detail such as event name, poster, date, category and event url. | 1. Must go through three different interfaces for events detail which including poster, date and category,<br>2. Must include location of event, price ticket and payment method. | 1. Must go through three different interface for events detail which including poster, date and category,<br>2. Must follow UTHM application format. |
| **Event Promotion** | Can promote by copying set of coding to other site. | No features | Can promote by copying set of coding to another site. | 1. Can promote by clicking on social media icon. |
| **Event participator** | 1. Must login as user to booking an event<br>2. Use unique code to record attendance. | No features | Can reserve some spot for early-bird.<br>. | 1. Must login as user to booking an event<br>2. Use payment id and QR code to record attendance. |

**Table 1: (cont.)**

| | | | | |
|---|---|---|---|---|
| **Pay event payment** | Supported payment options such as Online banking or MasterCard | Supported payment options such as Credit Cards with Stripe, PayPal, Hipay, Bambora, Authorize.Net, CASHNet, Bank Transfers, etc | Payment methods accepted include credit or debit cards, invoices, checks, cash, and bank transfers. | Supported payment options such as Credit or Debit Cards, paypal and invoice. |

Based on the comparison in Table 1, it shows that every system has its advantages and disadvantages. Students' Event Management system will exceed in registration and login, add event, event promotion, event participator, pay event payment and event application. In terms of login and registration, it is more suitable for USEM to register and login using student or staff ID because having too much interface that asking user personal data will make user feel uneasy. Add event features in USEM, there is only one form that asks the most important information, such as name of event, event poster, location of event using Google Map, date, price and also category. Next, event promotion features will exceed by using one-click share button that can easily share with social media. Other than that, event participator features were using bar code, unique code and also organizer can manually add you to attendant using USEM system. Moreover, pay event payment features were used MasterCard, online banking, cash and invoice because of its suitability with student life. Students are more preferring these four methods of paying their fee. Lastly, USEM will use an online event application that providing a form that will make student work easier and save time.

## 3. Methodology/Framework

The prototyping model is a systems development approach in which a prototype is built, tested, and changed until an acceptable result is obtained, from which the complete system or product may be created [9]. It's ideal for when the users' requirements aren't apparent. Between the engineers and the users, it is an iterative, trial-and-error process.

In this project, all the activities are based on evolutionary prototyping model. The primary purpose when using evolutionary prototyping is to create a very robust prototype in UTHM organized manner and continuously refine it. By using this evolutionary prototyping model, it enables PSU to get an early description on the system. It will help developer to develop the system fulfil the customer needs. There are 6 main phases need to carry on the process of development of this system. Figure 1 shows the task, techniques and tools involved in each phase.

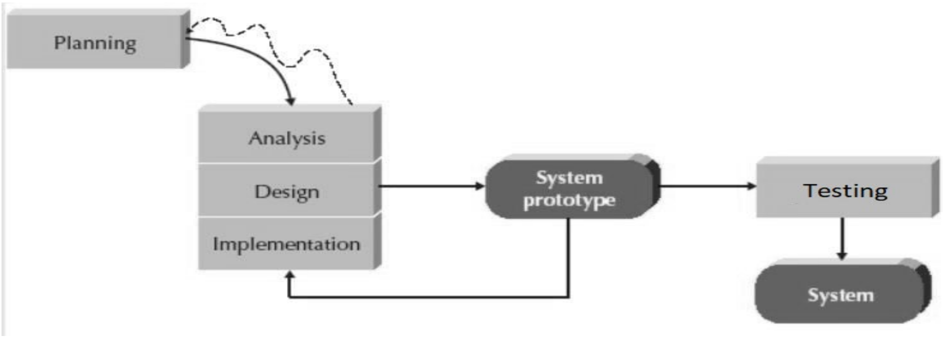


**Figure 1: System Prototyping Model (Dennis, Wixom, & Tegarden, 2016 [10]**

There are 6 main phases of evolutionary prototyping, including planning, analysis, design, implementation, system and testing. After planning phases, three phases that will cycle until the prototype are satisfied by the stakeholder and ready to be implemented on implementation phases.

## 4. Results and Discussion

This section will show the outcome of analysis and design.

### 4.1 Analysis

The outcome of the analysis will be represented in terms of the improved business process, the specification of the developed system and requirements definition.

#### 4.1.1 Use Case Diagram

There are three actors in the system which are Student, Organizer and Coordinator. There are seven main functionalities in this system as shown as use case in the Figure 2.

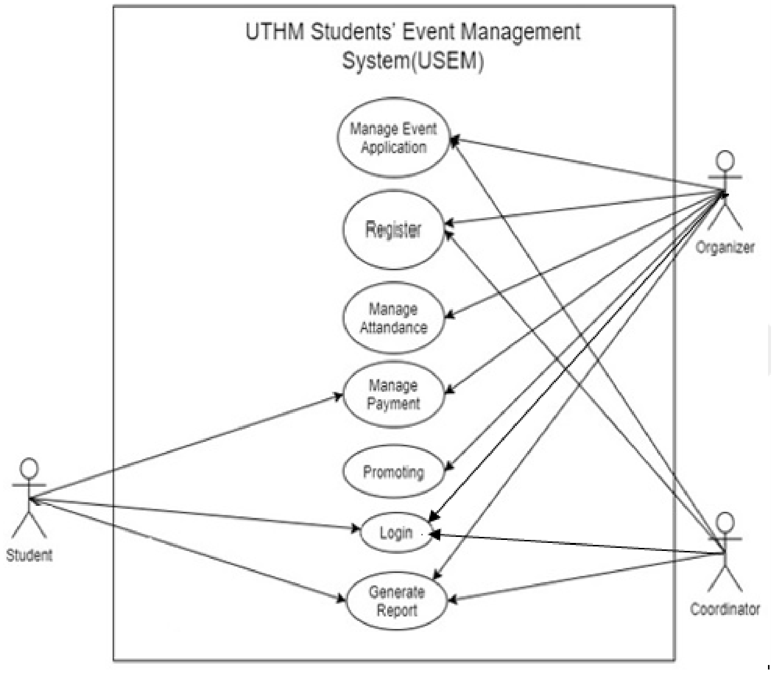


**Figure 2: Use Case Diagram of the USEM**

#### 4.1.2 Class Diagram

There are eight entity classes in this system. They are payment, student, event application, admin, event, organizer, attendance and student event. The class diagram is shown in Figure 3.

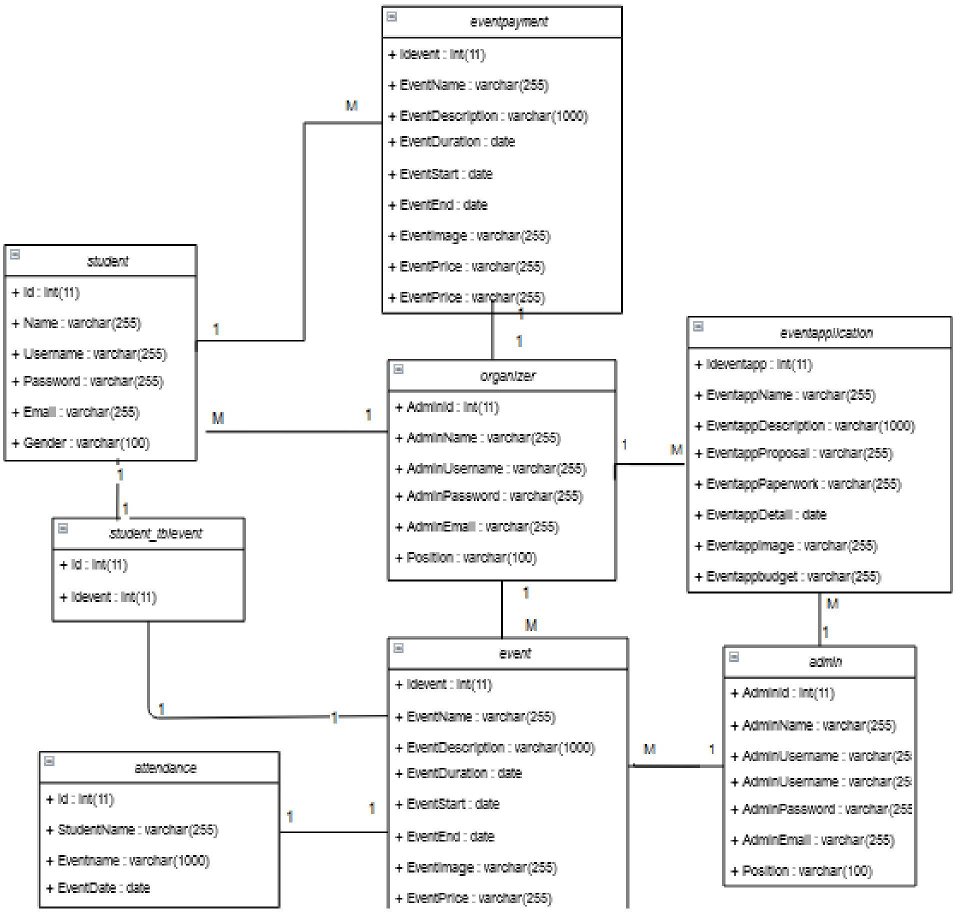

eventpayment
+ Idevent : int(11)
+ EventName : varchar(255)
+ EventDescription : varchar(1000)
+ EventDuration : date
+ EventStart : date
+ EventEnd : date
+ EventImage : varchar(255)
+ EventPrice : varchar(255)
+ EventPrice : varchar(255)
student
+ Id : int(11)
+ Name : varchar(255)
+ Username : varchar(255)
+ Password : varchar(255)
+ Email : varchar(255)
+ Gender : varchar(100)
organizer
+ AdminId : int(11)
+ AdminName : varchar(255)
+ AdminUsername : varchar(255)
+ AdminPassword : varchar(255)
+ AdminEmail : varchar(255)
+ Position : varchar(100)
eventapplication
+ Ideventapp : int(11)
+ EventappName : varchar(255)
+ EventappDescription : varchar(1000)
+ EventappProposal : varchar(255)
+ EventappPaperwork : varchar(255)
+ EventappDetail : date
+ EventappImage : varchar(255)
+ Eventappbudget : varchar(255)
student_tblevent
+ Id : int(11)
+ Idevent : int(11)
event
+ Idevent : int(11)
+ EventName : varchar(255)
+ EventDescription : varchar(1000)
+ EventDuration : date
+ EventStart : date
+ EventEnd : date
+ EventImage : varchar(255)
+ EventPrice : varchar(255)
admin
+ AdminId : int(11)
+ AdminName : varchar(255)
+ AdminUsername : varchar(25
+ AdminUsername : varchar(25
+ AdminPassword : varchar(255
+ AdminEmail : varchar(255)
+ Position : varchar(100)
attendance
+ Id : int(11)
+ StudentName : varchar(255)
+ Eventname : varchar(1000)
+ EventDate : date
M
1
1
1
M
1
1
M
1
1
1
M
M
1
1
1
M
1
1
1

**Figure 3: Class Diagram of the USEM**

### 4.1.3 Requirement Traceability Matrix

Based on the process specified in 4.1.1, the requirements of this system were listed in Table 2.

**Table 2: Functional Requirement of Developed System**

| Requirement ID | Descriptions |
|---|---|
| **REQ_100** | **Login** |
| • REQ_101 | • User required to fill in login form. |
| • REQ_102 | • User required to enter Id and password. |
| • REQ_103 | • System display dashboard for the valid login. |
| • REQ_104 | • System display error message for invalid login. |
| **REQ_200** | **Registration** |
| • REQ_201 | • User required to fill in registration form. |
| • REQ_202 | • User select role. |
| • REQ_203 | • User enter username. |
| • REQ_204 | • User select email. |
| • REQ_205 | • User enter password. |
| • REQ_206 | • System display success massage for the valid information. |
| • REQ_207 | • System display error message for invalid information. |
| • REQ_208 | • System display error message for existing user information. |

**Table 2 (cont.)**

| | |
|---|---|
| **REQ_300** | **Event application** |
| • REQ_301 | • Organizer required to login into the system. |
| • REQ_302 | • System display main page for the valid login. |
| • REQ_303 | • System display error message for invalid login. |
| • REQ_304 | • Create event application form. |
| • REQ_305 | • Organizer select event category. |
| • REQ_306 | • Organizer enter club name. |
| • REQ_307 | • Organizer enter event objective. |
| • REQ_308 | • Organizer enter event committee member. |
| • REQ_309 | • Organizer enter event implication. |
| • REQ_310 | • Organizer enter event budget. |
| • REQ_311 | • Organizer enter event tentative. |
| • REQ_312 | • Organizer submit event. |
| • REQ_313 | • System display success massage for the valid information. |
| • REQ_314 | • System display error message for invalid information or empty form. |
| **REQ_400** | **Event application approval** |
| • REQ_401 | • System display admin information interface. |
| • REQ_402 | • System display total number of application. |
| • REQ_403 | • System display application information. |
| • REQ_404 | • Admin select new event status. |
| • REQ_405 | • Admin enter review. |
| • REQ_406 | • System display update status to admin and organizer. |
| **REQ_500** | **Event participation registration** |
| • REQ_501 | • System display event list interface. |
| • REQ_502 | • Student select an event. |
| • REQ_503 | • System display error message for fully participated event. |
| • REQ_504 | • System display success message for empty event. |
| **REQ_600** | **Payment management** |
| • REQ_601 | • The system display student registered event interface. |
| • REQ_602 | • The student select detail of an event. |
| • REQ_603 | • The student select payment method. |
| • REQ_604 | • The student can pay payment using PayPal, Credit card and MasterCard. |
| • REQ_605 | |
| • REQ_606 | • System display event registered status. |
| • REQ_607 | • System display complete message if payment success. |
| | • System display error message if payment fail. |
| **REQ_700** | **Event attendance** |
| • REQ_701 | • System display student attendance interface. |
| • REQ_702 | • Student scan QR code. |
| • REQ_703 | • Student enter payment id. |
| • REQ_704 | • System display attendance status to student and organizer. |
| • REQ_705 | • System display complete message if success. |
| • REQ_706 | • System display error message if fail. |
| **REQ_800** | **Report** |
| • REQ_801 | • System display student attendance list interface. |
| • REQ_802 | • User click print icon. |
| • REQ_803 | • The system display complete message if success. |
| • REQ_804 | • System display error message if fail. |

**Table 2 (cont.)**

| **REQ_900** | **Promoting** |
|---|---|
| • REQ_901 | • System display event list interface. |
| • REQ_902 | • User click social media icon. |
| • REQ_903 | • The user select social media. |
| • REQ_904 | • The system display complete message if success. |
| • REQ_905 | • System display error message if fail. |

## 4.2 System design

This section will be described the system architecture, database design and interface design of the developed system.

### 4.2.1 Database design

This system has eleven database tables based on the classes in the class diagram. They are `Tblubscriber`, `tblusers`, `tblsponsers`, `tblpages`, `tblnews`, `tblgeneralsettings`, `tblevents`, `tblcategory`, `tblbooking`, `tblappstatus`, and `tbladmin`

## 4.3 Implementation and testing.

### 4.3.1 Implementation

This section consists of implementation and testing that involving the interface, code segment, system requirement and test cases of the system.

#### 4.3.1.1 Login Form

After inserting the username and password into the system (as shown in Figure 4), the system validates the user credential as shown in Figure 5.

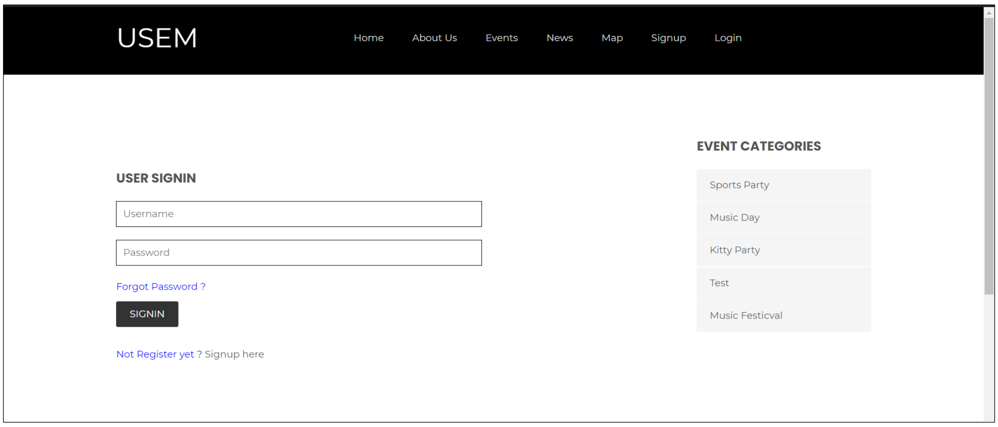
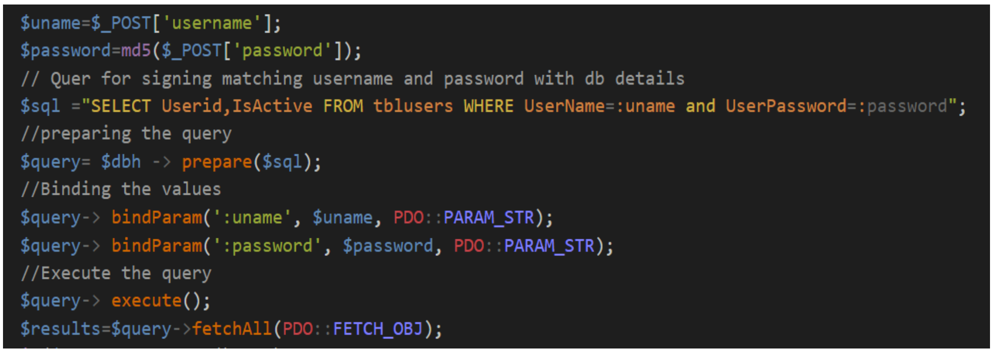


**Figure 4: Login form.**

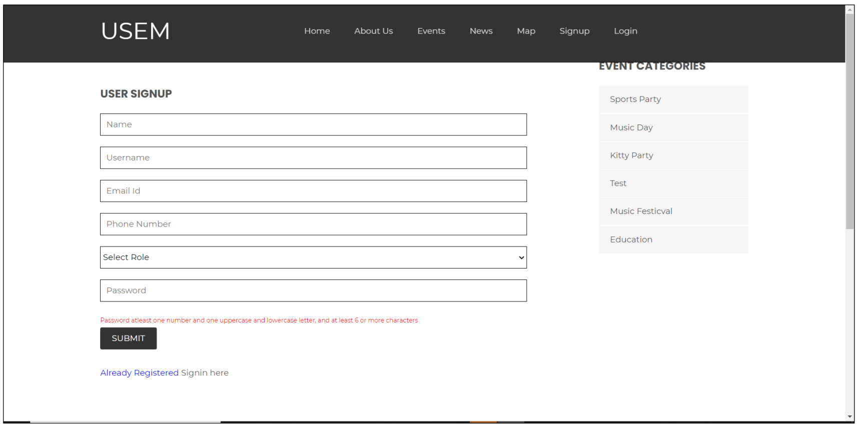


```
$uname=$_POST['username'];
$password=md5($_POST['password']);
// Quer for signing matching username and password with db details
$sql ="SELECT Userid,IsActive FROM tblusers WHERE UserName=:uname and UserPassword=:password";
//preparing the query
$query= $dbh -> prepare($sql);
//Binding the values
$query-> bindParam(':uname', $uname, PDO::PARAM_STR);
$query-> bindParam(':password', $password, PDO::PARAM_STR);
//Execute the query
$query-> execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
```

**Figure 5: Code segment to validate user**

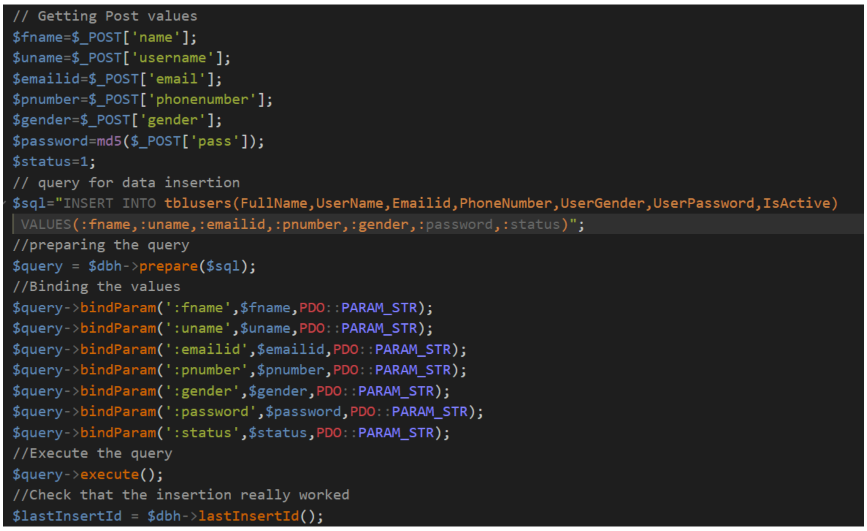
### 4.3.1.2 Register

The student should be able to register into the system by filling the form (as shown in Figure 6), the system will save the user information into the database as shown in Figure 7.



Password atleast one number and one uppercase and lowercase letter, and at least 6 or more characters

**Figure 6: Register form.**

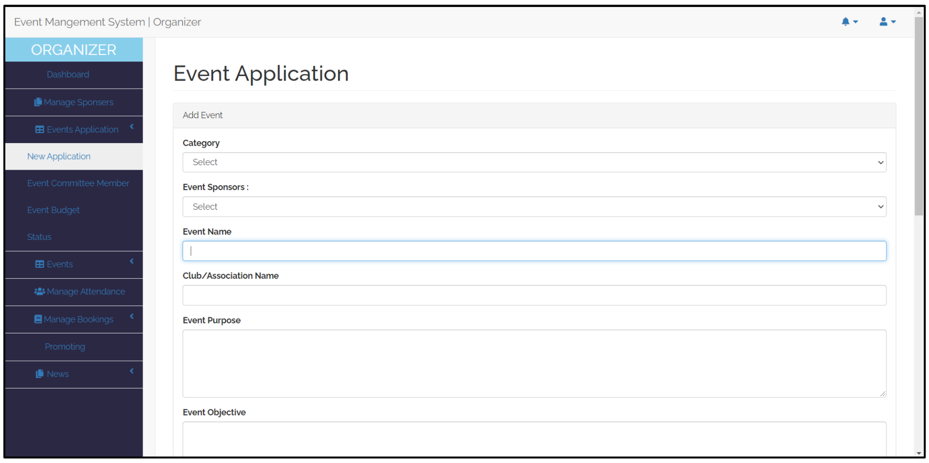


```
// Getting Post values
$fname=$_POST['name'];
$uname=$_POST['username'];
$emailid=$_POST['email'];
$pnumber=$_POST['phonenumber'];
$gender=$_POST['gender'];
$password=md5($_POST['pass']);
$status=1;
// query for data insertion
$sql="INSERT INTO tblusers(FullName,UserName,Emailid,PhoneNumber,UserGender,UserPassword,IsActive)
 VALUES(:fname,:uname,:emailid,:pnumber,:gender,:password,:status)";
//preparing the query
$query = $dbh->prepare($sql);
//Binding the values
$query->bindParam(':fname',$fname,PDO::PARAM_STR);
$query->bindParam(':uname',$uname,PDO::PARAM_STR);
$query->bindParam(':emailid',$emailid,PDO::PARAM_STR);
$query->bindParam(':pnumber',$pnumber,PDO::PARAM_STR);
$query->bindParam(':gender',$gender,PDO::PARAM_STR);
$query->bindParam(':password',$password,PDO::PARAM_STR);
$query->bindParam(':status',$status,PDO::PARAM_STR);
//Execute the query
$query->execute();
//Check that the insertion really worked
$lastInsertId = $dbh->lastInsertId();
```

**Figure 7: Code segment for register.**

### 4.3.1.3 Manage application

The organizer should be able to send application into the system by filling the form (as shown in Figure 8), the system will save the application information into the database as shown in Figure 9.



Event Application

Add Event

Category

Select

Event Sponsors :

Select

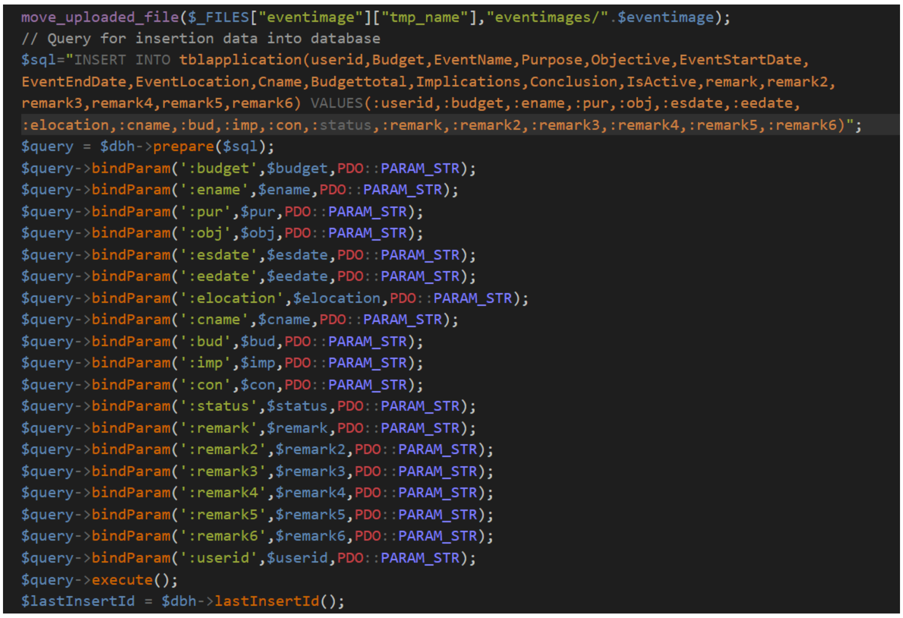
Event Name

Club/Association Name

Event Purpose

Event Objective

**Figure 8: Event application form.**

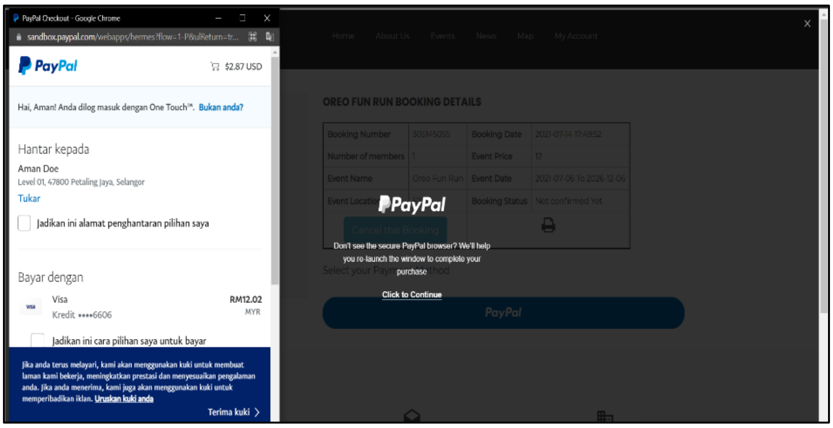


```
move_uploaded_file($_FILES["eventimage"]["tmp_name"],"eventimages/".$eventimage);
// Query for insertion data into database
$sql="INSERT INTO tblapplication(userid,Budget,EventName,Purpose,Objective,EventStartDate,
EventEndDate,EventLocation,Cname,Budgettotal,Implications,Conclusion,IsActive,remark,remark2,
remark3,remark4,remark5,remark6) VALUES(:userid,:budget,:ename,:pur,:obj,:esdate,:eedate,
:elocation,:cname,:bud,:imp,:con,:status,:remark,:remark2,:remark3,:remark4,:remark5,:remark6)";
$query = $dbh->prepare($sql);
$query->bindParam(':budget',$budget,PDO::PARAM_STR);
$query->bindParam(':ename',$ename,PDO::PARAM_STR);
$query->bindParam(':pur',$pur,PDO::PARAM_STR);
$query->bindParam(':obj',$obj,PDO::PARAM_STR);
$query->bindParam(':esdate',$esdate,PDO::PARAM_STR);
$query->bindParam(':eedate',$eedate,PDO::PARAM_STR);
$query->bindParam(':elocation',$elocation,PDO::PARAM_STR);
$query->bindParam(':cname',$cname,PDO::PARAM_STR);
$query->bindParam(':bud',$bud,PDO::PARAM_STR);
$query->bindParam(':imp',$imp,PDO::PARAM_STR);
$query->bindParam(':con',$con,PDO::PARAM_STR);
$query->bindParam(':status',$status,PDO::PARAM_STR);
$query->bindParam(':remark',$remark,PDO::PARAM_STR);
$query->bindParam(':remark2',$remark2,PDO::PARAM_STR);
$query->bindParam(':remark3',$remark3,PDO::PARAM_STR);
$query->bindParam(':remark4',$remark4,PDO::PARAM_STR);
$query->bindParam(':remark5',$remark5,PDO::PARAM_STR);
$query->bindParam(':remark6',$remark6,PDO::PARAM_STR);
$query->bindParam(':userid',$userid,PDO::PARAM_STR);
$query->execute();
$lastInsertId = $dbh->lastInsertId();
```

**Figure 9: Code segment for event application**

### 4.3.1.4 Payment management

By using PayPal, the student can pay the event fee (as shown in Figure 10), the system will record the transaction into the database as shown in Figure 11.



$2.87 USD

Hai, Aman! Anda dilog masuk dengan One Touch™. Bukan anda?

Hantar kepada

Aman Doe
Level 01, 47800 Petaling Jaya, Selangor
Tukar

□ Jadikan ini alamat penghantaran pilihan saya

Bayar dengan

Visa RM12.02
Kredit ••••6606 MYR

□ Jadikan ini cara pilihan saya untuk bayar

Jika anda terus melayari, kami akan menggunakan kuki untuk membuat laman kami bekerja, meningkatkan prestasi dan menyesuaikan pengalaman anda. Jika anda menerima, kami juga akan menggunakan kuki untuk memperibadikan iklan. Uruskan kuki anda

Terima kuki

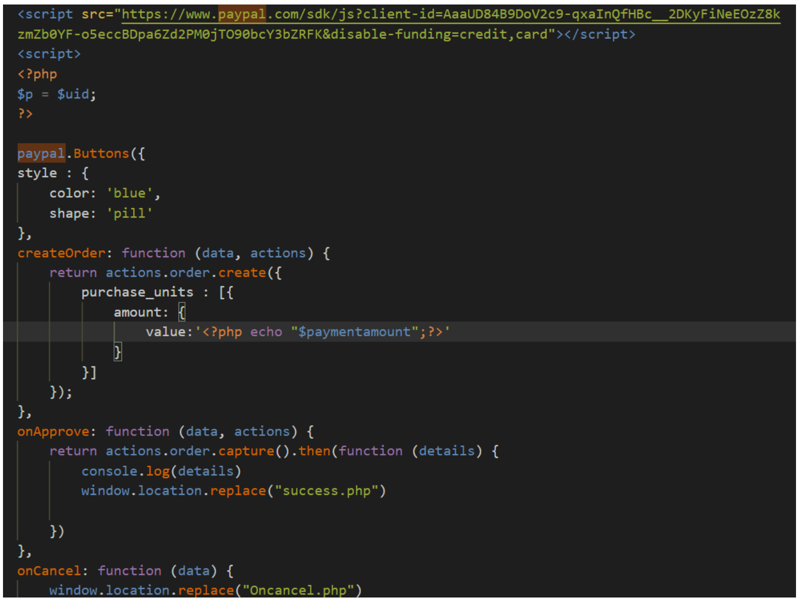
OREO FUN RUN BOOKING DETAILS

| | | | |
|---|---|---|---|
| Booking Number | 305145055 | Booking Date | 2021-07-14 17:49:52 |
| Number of members | 1 | Event Price | 12 |
| Event Name | Oreo Fun Run | Event Date | 2021-07-06 To 2026-12-06 |
| Event Location | [illegible] | Booking Status | Not confirmed Yet |

Don't see the secure PayPal browser? We'll help you re-launch the window to complete your purchase

Select your Payment Method

**Figure 10: Event Payment**



```
<script src="https://www.paypal.com/sdk/js?client-id=AaaUD84B9DoV2c9-qxaInQfHBc__2DKyFiNeEOzZ8k
zmZb0YF-o5eccBDpa6Zd2PM0jTO90bcY3bZRFK&disable-funding=credit,card"></script>
<script>
<?php
$p = $uid;
?>

paypal.Buttons({
style : {
    color: 'blue',
    shape: 'pill'
},
createOrder: function (data, actions) {
    return actions.order.create({
        purchase_units : [{
            amount: {
                value:'<?php echo "$paymentamount";?>'
            }
        }]
    });
},
onApprove: function (data, actions) {
    return actions.order.capture().then(function (details) {
        console.log(details)
        window.location.replace("success.php")

    })
},
onCancel: function (data) {
    window.location.replace("Oncancel.php")
```

**Figure 11 : Code segment for Payment (Paypal)**

### 4.3.1.5 Attendance

By using Qrcode scanner, the student can scan the Qrcode to record their attendance (as shown in Figure 12), the system will record the attendance into the database as shown in Figure 13.

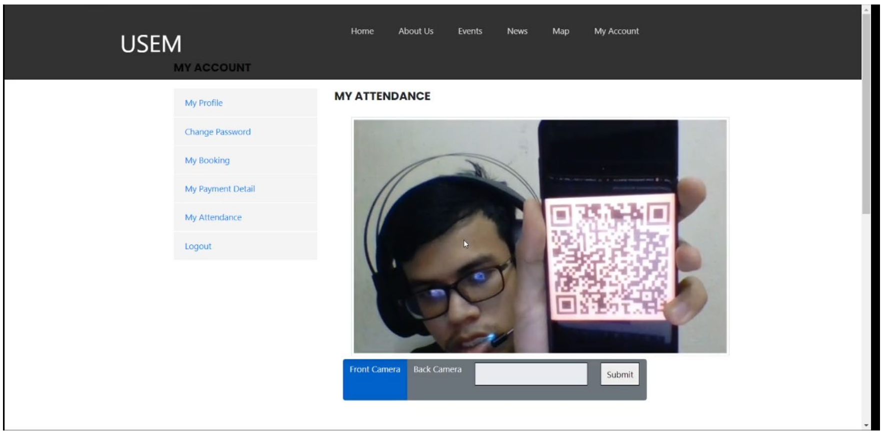
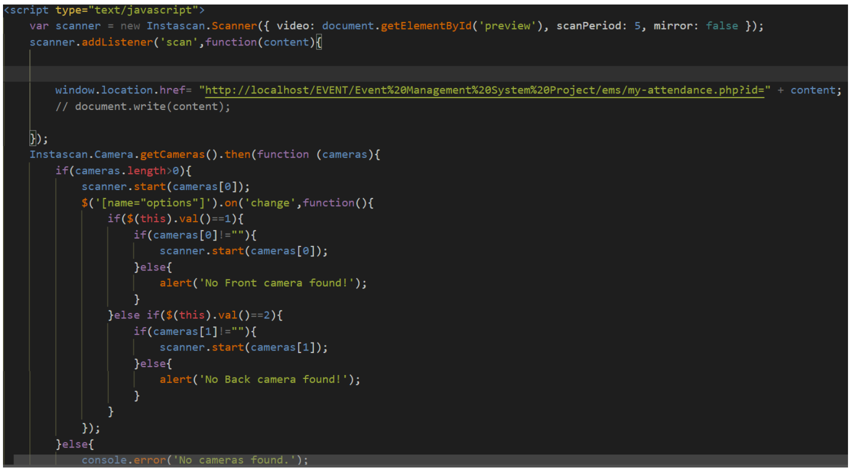


**Figure 12: Event attendance.**

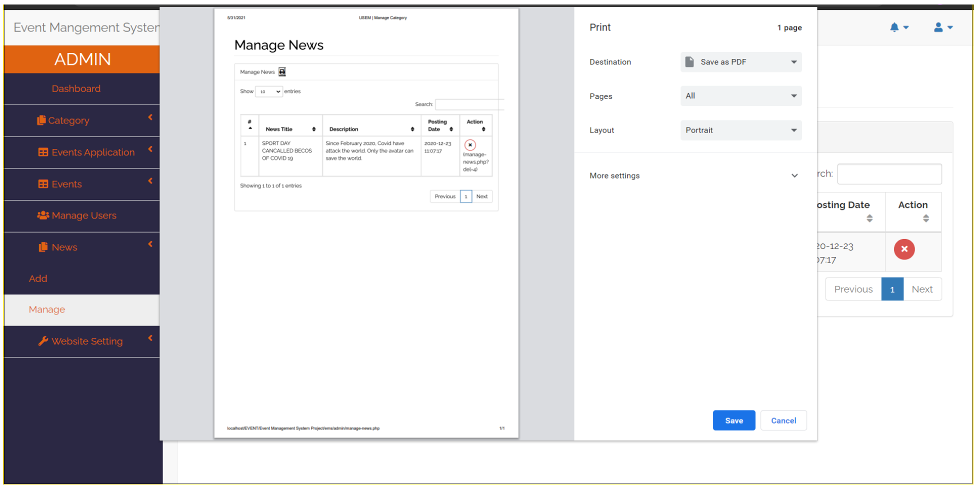


```
<script type="text/javascript">
    var scanner = new Instascan.Scanner({ video: document.getElementById('preview'), scanPeriod: 5, mirror: false });
    scanner.addListener('scan',function(content){


        window.location.href= "http://localhost/EVENT/Event%20Management%20System%20Project/ems/my-attendance.php?id=" + content;
        // document.write(content);

    });
    Instascan.Camera.getCameras().then(function (cameras){
        if(cameras.length>0){
            scanner.start(cameras[0]);
            $('[name="options"]').on('change',function(){
                if($(this).val()==1){
                    if(cameras[0]!=""){
                        scanner.start(cameras[0]);
                    }else{
                        alert('No Front camera found!');
                    }
                }else if($(this).val()==2){
                    if(cameras[1]!=""){
                        scanner.start(cameras[1]);
                    }else{
                        alert('No Back camera found!');
                    }
                }
            });
        }else{
            console.error('No cameras found.');
```

**Figure 13 : Code segment for event attendance**

### 4.3.1.6 Report

The user can print out a report of their desired page by clicking the printer icon (as shown in Figure 14), the system will open the browser default print service as shown in Figure 15.



5/31/2021 USEM | Manage Category

Manage News

Manage News

Show 10 entries

Search:

| # | News Title | Description | Posting Date | Action |
|---|---|---|---|---|
| 1 | SPORT DAY CANCALLED BECOS OF COVID 19 | Since February 2020, Covid have attack the world. Only the avatar can save the world. | 2020-12-23 11:07:17 | (manage-news.php?del=4) |

Showing 1 to 1 of 1 entries

Previous 1 Next

localhost/EVENT/Event Management System Project/ems/admin/manage-news.php 1/1

Print 1 page

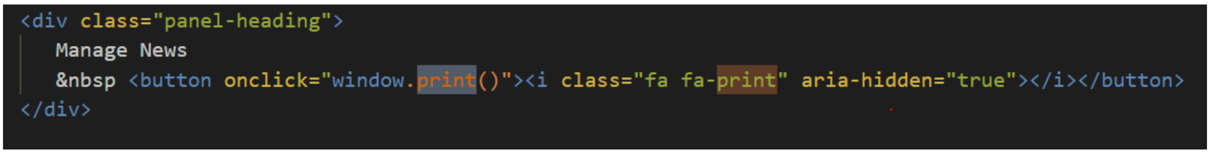
Destination: Save as PDF

Pages: All

Layout: Portrait

More settings

Figure 14: Report

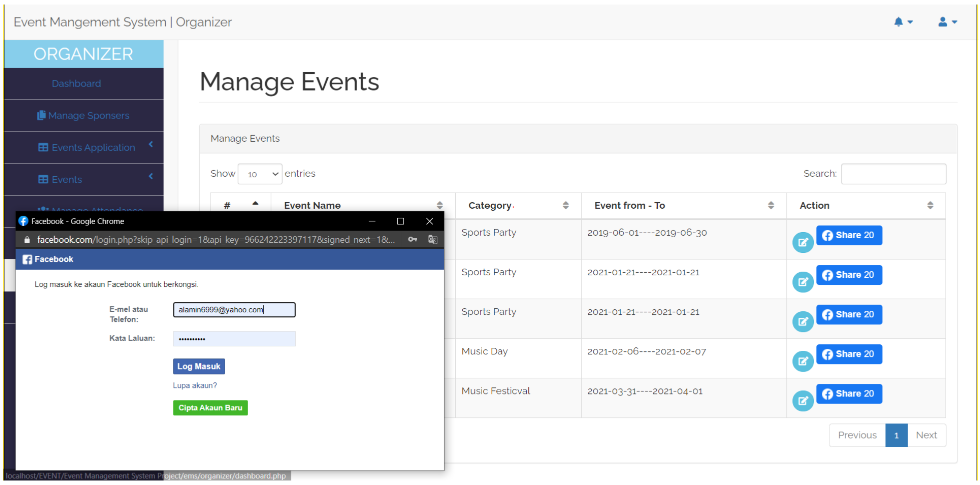


```
<div class="panel-heading">
    Manage News
    &nbsp <button onclick="window.print()"><i class="fa fa-print" aria-hidden="true"></i></button>
</div>
```

Figure 15: Code segment for print out report

### 4.3.1.7 Promoting

The organizer can promote the event by clicking the social media icon (as shown in Figure 16), the system will redirect to a social media page with link of the event as shown in Figure 17.



Manage Events

Manage Events

Show 10 entries

Search:

| # | Event Name | Category | Event from - To | Action |
|---|---|---|---|---|
| | | Sports Party | 2019-06-01----2019-06-30 | Share 20 |
| | | Sports Party | 2021-01-21----2021-01-21 | Share 20 |
| | | Sports Party | 2021-01-21----2021-01-21 | Share 20 |
| | | Music Day | 2021-02-06----2021-02-07 | Share 20 |
| | | Music Festicval | 2021-03-31----2021-04-01 | Share 20 |

Previous 1 Next

Facebook - Google Chrome

facebook.com/login.php?skip_api_login=1&api_key=966242223397117&signed_next=1&...

Facebook

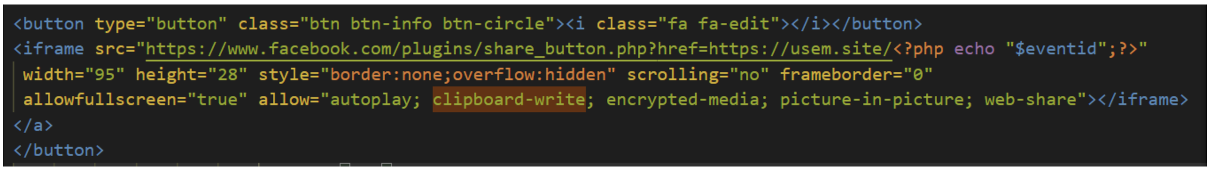
Log masuk ke akaun Facebook untuk berkongsi.

E-mel atau Telefon: alamin6999@yahoo.com

Kata Laluan: ••••••••••

localhost/EVENT/Event Management System Project/ems/organizer/dashboard.php

Figure 16: Event Promoting



```
<button type="button" class="btn btn-info btn-circle"><i class="fa fa-edit"></i></button>
<iframe src="https://www.facebook.com/plugins/share_button.php?href=https://usem.site/<?php echo "$eventid";?>"
 width="95" height="28" style="border:none;overflow:hidden" scrolling="no" frameborder="0"
 allowfullscreen="true" allow="autoplay; clipboard-write; encrypted-media; picture-in-picture; web-share"></iframe>
</a>
</button>
```

Figure 17 : Code segment for event promotion

### 4.3.2 Testing

Software testing, according to the ANSI/IEEE 1059 standard, is the process of examining a software item to discover discrepancies between existing and necessary conditions and evaluating the software item's characteristics. The system's test cases are based on the requirements.

#### 4.3.2.1 Test Cases

The system requirement that involved with the test cases are listed in Table 3.

**Table 3: List of test cases**

| No | Test Cases | System Requirement | Description | Output | Expected result |
|---|---|---|---|---|---|
| | **TEST_100** | | **User login** | **Pass/Fail** | |
| 1. | TEST_100 _001 (valid) | • REQ_101<br>• REQ_102<br>• REQ_103<br>• REQ_104 | 1. The user enters their Id and password into the login box and clicks the login button..<br>2. The system validates the user's email address and password..<br>3. The system directs user to dashboard. | Pass | The user was successful in logging in. |
| 2. | TEST_100 _002 (invalid password or Id) | | 1. The user enters their Id and password into the login box and clicks the login button.<br>2. System is unable to authenticate user Id and password.<br>3. The system show error massage. | Pass | The user is unable to login. |
| | **TEST_200** | | **Register user** | **Pass/Fail** | |
| 1 | TEST_200 _001 (valid) | • REQ_201<br>• REQ_202<br>• REQ_203<br>• REQ_204<br>• REQ_205<br>• REQ_206<br>• REQ_207<br>• REQ_208 | 1. The user enter name, username, email, password and role into register form and click register button<br>2. The system verify and keep data into the database.<br>3. System show success massage. | Pass | The user manage to register |
| 2. | TEST_200 _002 (invalid, registered email) | | 1. The user enter name, username, email, password and role into register form and click register button.<br>2. The system detect email have been registered with the system.<br>3. The system show error massage and asked to login using existing account. | Pass | The user fail to register. |

**Table 3 (cont.)**

| No | Test Cases | System Requirement | Description | Output | Expected result |
|---|---|---|---|---|---|
| 3 | TEST_200_ 003 (invalid, same username) | | 1. The user enter name, username, email, password and role into register form and click register button<br>2. The system detect username have been used by other user.<br>3. The system show error massage and asked to use other username. | Pass | The user fail to register. |
| | **TEST_300** | | **Manage event application** | **Pass/Fail** | |
| 1 | TEST_300_ 001 (Valid submission) | • REQ_301<br>• REQ_302<br>• REQ_303<br>• REQ_304<br>• REQ_305<br>• REQ_306<br>• REQ_307<br>• REQ_308<br>• REQ_309<br>• REQ_310<br>• REQ_311<br>• REQ_312<br>• REQ_313<br>• REQ_314 | 1. Organizer login into the system<br>2. Organizer click on event application button.<br>3. Organizer fill in event application form and submit application by clicking “submit” button.<br>4. Admin receive new event application.<br>5. Admin approve or reject the application and submit.<br>6. System show the status of application to organizer.<br>7. System show success massage | Pass | Organizer manage to submit application. |
| 2 | TEST_300_ 002 (Invalid, empty form) | | 1. Organizer login into the system<br>2. Organizer click on event application button.<br>3. Organizer fill in event application form and submit application by clicking “submit” button.<br>4. Admin receive new event application.<br>5. Admin reject the application and submit.<br>6. System show the status of application to organizer and show success massage | Pass | Organizer fail to submit form. |

**Table 3 (cont.)**

| No | Test Cases | System Requirement | Description | Output | Expected result |
|---|---|---|---|---|---|
| 3 | TEST_300_ 003 (Valid, save form) | | 1. Organizer login into the system<br>2. Organizer click on event application button.<br>3. Organizer fill in event application form and save application by clicking "save" button.<br>4. System show success massage and save data to database | Pass | Organizer manage save the application . |
| 4. | TEST_300_ 004 (Invalid, save form) | | 1. Organizer login into the system<br>2. Organizer click on event application button.<br>3. Organizer not fill one or more input box in event application form and save application by clicking "save" button.<br>4. System show error massage and show previous data. | Pass | Organizer fail to save form. |
| | **TEST_400** | | **Promoting event** | **Pass/Fail** | |
| 1. | TEST_400_ 001 (Valid) | • REQ_901<br>• REQ_902<br>• REQ_903<br>• REQ_904<br>• REQ_905 | 1. The organiser posts their event on the system homepage.<br>2. The organizer click on media social icon.<br>3. Organizer select social media platform.<br>4. The system show success massage and share the event to social media. | Pass | The organizer successful to post their event into the system. |
| 2. | TEST_400_ 002 (Invalid, non-approved event) | | 1. The organizer click on media social icon on an unapproved event.<br>2. The system show error massage | Pass | The organizer fail to post into the system. |

Table 3 (cont.)

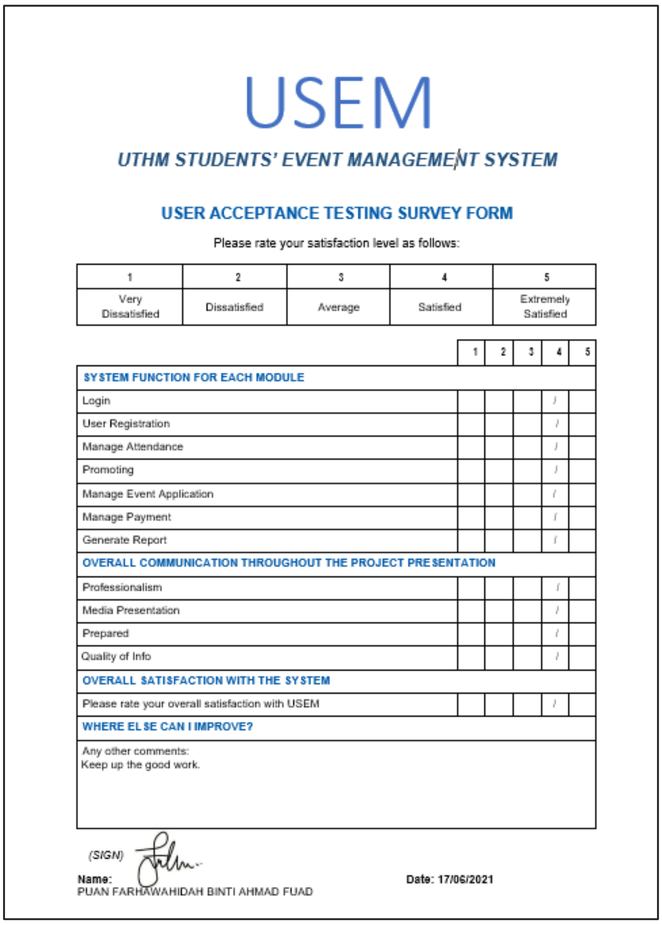
| No | Test Cases | System Requirement | Description | Output | Expected result |
|---|---|---|---|---|---|
| | **TEST_500** | | **Manage payment** | **Pass/Fail** | |
| 1. | TEST_500_ 001 (Valid) | • REQ_501<br>• REQ_502<br>• REQ_503<br>• REQ_504<br>• REQ_601<br>• REQ_602<br>• REQ_603<br>• REQ_604<br>• REQ_605<br>• REQ_606<br>• REQ_607 | 1. The student select an event on event page.<br>2. The system show success massage and redirect to payment interface.<br>3. The student select payment method.<br>4. Student make payment for desired event and system show success massage<br>5. The system notifies the organiser of the payment.<br>6. Organizer see the status of payment. | Pass | The student is able to pay for the event they choose. |
| 2. | TEST_500_ 002 (invalid, Cancel payment) | | 1. The student select an event on event page.<br>2. The system displays a success message and directs you to the payment interface.<br>3. The student select payment method.<br>4. The student cancel payment.<br>5. The system show error massage and redirect to event page. | Pass | Student fail to pay for the event. |
| 3. | TEST_500_ 003 (invalid, Insufficient balance) | | 1. The student selects an event from the event page.<br>2. The system displays a success message upon participation and redirects to the payment page.<br>3. The student selects a payment method and make payment to desired event.<br>4. Account balance is insufficient.<br>5. System show error massage and redirect to event page. | Pass | The student fails to pay for the event. |

**Table 3 (cont.)**

| No | Test Cases | System Requirement | Description | Output | Expected result |
|---|---|---|---|---|---|
| | **TEST_600** | | **Manage attendance** | **Pass/Fail** | |
| 1<br>. | TEST_600_ 001 (Valid) | • REQ_700<br>• REQ_701<br>• REQ_702<br>• REQ_703<br>• REQ_704<br>• REQ_705<br>• REQ_706 | 1. Student go to attendance page<br>2. The student scans the QR code to verify attendance.<br>3. System show attendance obtained to student.<br>4. System show success massage.<br>5. System record all student attendance for organizer | Pass | Students are able to scan their attendance . |
| 2<br>. | TEST_600_ 002 (Invalid) | | 1. Student go to the attendance page.<br>2. Students scan the QR code for an event that they are not attending..<br>3. System show error massage and redirect to attendance page. | Pass | Student fail to scan. |
| | TEST_700 | | Generate event report | | |
| 1<br>. | TEST_700_ 001 (Valid) | • REQ_800<br>• REQ_801<br>• REQ_802<br>• REQ_803<br>• REQ_804 | 1. The user selects a page.<br>2. The user selects the printer icon.<br>3. The system displays the browser's default print page and prints the requested page immediately.<br>4. Page printed.<br>5. System show success massage. | Pass | User manage to print requested content. |
| 2<br>. | TEST_700_ 002 (Invalid) | | 1. The user selects a page.<br>2. The user selects the printer icon.<br>3. Browser fail to open default print page. | Pass | The user is unable to print the requested content. |

#### 4.3.2.2 User Acceptance Testing Result

The user acceptance testing was recorded using the Google Meet platform. In this section, user feedback and satisfaction was rated on a scale of 1 to 5. The users that are involved in this section are Pusat Sukan UTHM, 10 selected UTHM students and organizations. Figure 18 shows the result of the coordinator from Pusat Sukan UTHM.



USEM

UTHM STUDENTS' EVENT MANAGEMENT SYSTEM

USER ACCEPTANCE TESTING SURVEY FORM

Please rate your satisfaction level as follows:

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| Very Dissatisfied | Dissatisfied | Average | Satisfied | Extremely Satisfied |

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| SYSTEM FUNCTION FOR EACH MODULE | | | | | |
| Login | | | | / | |
| User Registration | | | | / | |
| Manage Attendance | | | | / | |
| Promoting | | | | / | |
| Manage Event Application | | | | / | |
| Manage Payment | | | | / | |
| Generate Report | | | | / | |
| OVERALL COMMUNICATION THROUGHOUT THE PROJECT PRESENTATION | | | | | |
| Professionalism | | | | / | |
| Media Presentation | | | | / | |
| Prepared | | | | / | |
| Quality of Info | | | | / | |
| OVERALL SATISFACTION WITH THE SYSTEM | | | | | |
| Please rate your overall satisfaction with USEM | | | | / | |
| WHERE ELSE CAN I IMPROVE? | | | | | |
| Any other comments:<br>Keep up the good work. | | | | | |

(SIGN)

Name:
PUAN FARHAWAHIDAH BINTI AHMAD FUAD

Date: 17/06/2021

Figure 18: User Acceptance Testing Result

## 5. Conclusion And Recommendation

In short, the development of the USEM replacing the current manual system in event management in UTHM has been entirely developed into a complete system. This system provides several benefits. First, it can facilitate the process of event application using the online platform than using paper. Secondly, it may facilitate organizer to promote their event to the social media platform. Third, it is easy to operate and save a lot of time for application processes. Then it facilitates the administration to manage a large quantity of event application. Finally, the budget is effectively segregated. The system supports multiple types of online payment method such as PayPal and MasterCard instead of cash. However, there are certain limitations to the system. The system's interface is not dynamic, and there are few icons. While the attendance QR code cannot be used simultaneously with other platforms that use the camera on a user device such as Google Meet. Furthermore, the PayPal payment method takes a long time to process in the system. This makes it possible to recommend improvements in the future. The first step is to include the "Internet Banking" payment option to make the payment procedure easier. Second, use a more dynamic interface to enhance user satisfaction with the system. Third, include the user manual page to help the user operate the system. Finally, add an alternate method of recording attendance, such as using an attendance code to overcome the weakness of QR code attendance. The use of the USEM should facilitate and improve the existing event management system, including in terms of application, promotion, registration, payment and participation.

## Acknowledgement

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