

**A PROJECT REPORT**  
**ON**  
**“MULTIMEDIA DATA REPOSITORY FOR EVENT INFORMATION**  
**SYSTEM”**

**Submitted to**  
**UNIVERSITY OF MUMBAI**

**In Partial Fulfilment of the Requirement for the Award of**

**BACHELOR’S DEGREE IN**  
**COMPUTER ENGINEERING**

**BY**

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**UNDER THE GUIDANCE OF**  
**PROF. KALPANA R.BODKE**



**DEPARTMENT OF COMPUTER ENGINEERING**

**Anjuman-I-Islam's Kalsekar Technical Campus**  
**SCHOOL OF ENGINEERING & TECHNOLOGY**

Plot No. 2 3, Sector - 16, Near Thana Naka,  
Khandagaon, New Panvel - 410206

**2018-2019**

**AFFILIATED TO**  
**UNIVERSITY OF MUMBAI**

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# **Anjuman-i-Islam's Kalsekar Technical Campus**

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## **CERTIFICATE**

This is certify that the project entitled

### **“MULTIMEDIA DATA REPOSITORY FOR EVENT INFORMATION SYSTEM ”**

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is a record of bonafide work carried out by them, in the partial fulfilment of the requirement for the award of Degree of Bachelor of Engineering (Computer Engineering) at *Anjuman-I-Islam's Kalsekar Technical Campus, Navi Mumbai* under the University of MUMBAI. This work is done during year 2019-2020, under our guidance.

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## **Project I Approval for Bachelor of Engineering**

This project entitled *Multimedia Data Repository For Event Information System* by *Siddiqui Neha Hafiz Neelofar, Khan Aaisha Imtiyaz Shehnaz, Ansari Mohd Saeem Mohd Saleem Farzana, Ansari Mohamadkurban AbdulKayyum Sajma* is approved for the degree of *Bachelor of Engineering in Department of Computer Engineering.*

Examiners

1. ....

2. ....

Supervisors

1. ....

2. ....

Chairman

1. ....

## **Declaration**

We declare that this written submission represents our ideas in our own words and where others ideas or words have been included, We have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that our violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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## **ABSTRACT**

In today's competitive world we have to update our knowledge by attending various events such like conferences, competition, seminars, or training. Those attended events are not just going to upgrade our knowledge but also it help us to update our CVs which is directly connected to our economical side of career. But plenty of times we upgrade ourselves by the knowledge but fail in documenting it. our proposed system is definitely goint to help you to document your knowledge. So we propose a novel approach to replace the manual work of handling the data which sometimes results in misplaced valuable details. The proposed system comes under reository category which will have all the necessary details which is done manually but in digital format. All the details right from the event details upto genretaing a complete report of it.

**Keywords:** Multimedia Data Repository, SHA256,Lz4, Rotativa, Report Generation.

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# **Chapter 1**

## **Introduction**

Digital media support changed radically the way information is consumed. Nowadays, accessing digital contents is a common task, especially through the Web and its overwhelming size. Also, recent trends give the user an active role on producing contents on different media (blogs, photographs, pod-casts, videos) and establishing relations between media components, instead of just passively consuming information. With such a massive amount of information available, new challenges arise. The proposed system promises to reduce the workload and redundancy caused by the manual work.

### **1.1 Purpose**

Being a part of the current institution we have seen many events come and go we participate, some of us win some of us loose. But the main thing that makes an event successful is how it is organized. Now a days the events are managed manually and the work burden is too much to handle even for bulk of people. To reduce the workload we are proposing a repository of a system which will be doing all the work and much more which is done manually , it will not only reduce the time which is consumed but also prove to be an efficient way of handling the organizing part of the event.

### **1.2 Project Scope**

The system mainly deals with data related to all the events say where the event is taking place, who are involved in it, when is it going to happen, etc all minute details of the event which deemed important is stored in the system.

The system is designed in such a way that we will be able to gather the attendance of the attendee while the event is going on, the feedback of the user to improve the event, report consisting of details of how the event went down, what was the total number of participation and much more but the most important part of the system is all the data is stored on cloud server and because of that we will be able to access it

remotely.

## **1.3 Project Goals and Objectives**

### **1.3.1 Goals**

This system is going to use by colleges to organize and manage an event, Following are the main features of this system.

- To store all the detail information and data related to events.
- To take attendance while events are going on.
- Taking feedback about the events.
- Generating report of event
- Upgrade resume by updating the detail of event

### **1.3.2 Objectives**

By looking at the name of the project one can guess the primary objective of it i.e to maintain the details of all the participants attending the event and the event itself. Following are the objective of this system

- The system will come with all the necessary tools to store data in any format be it an image of the event in .jpg format or details in .pdf format in a precise and detailed manner
- To take attendance while events are going on. The system will also consist of an attendance module, not just any other attendance managing system but it will record the attendance while the event is going on.
- To make any event a successful one we must be aware of what the audience feels about it, what are the changes should be made in order to make it more interesting and successful, to get all the necessary data the system will be loaded with feedback module.
- As stated earlier we will be generating a detailed report about the event, so the system will display that report to only those users who have been authorized to see or update it.

## **1.4 Organization of Report**

- Chapter 1: Gives a brief introduction about the project.
- Chapter 2: Describes the literature review of the existing papers and description about the application.
- Chapter 3: Discuss about the project planning and different roles and capability of the team member . Also talks about the budget of the project.
- Chapter 4: Describe the brief description of the SRS and the other requirements of the project.
- Chapter 5: Shows the system design , functional requirement and different diagram of the project.
- Chapter 6: Shows the implementations of the different conference websites and coding.
- Chapter 7: Shows the different testings performed and the problem faced. It also shows snapshots of the current working application.
- Chapter 8: Describes the closure to book and tries to conclude the work in the project and also mention the future scope as to where it would be used.
- Chapter 9: Describes a step guide about using the final product.

# **Chapter 2**

## **Literature Survey**

### **2.1 Science Db :A Public Multidisciplinary Research Data Repository for E-science**

Science DB is a multidisciplinary data repository aiming to promote the preservation, publication and reuse of research data. [1] use it for storing, managing and sharing their research data and it helps journal publishers host data underlying articles without buying more infrastructure. Moreover it allows research projects or teams to preserve and share their data according to their flexible demands.

#### **2.1.1 Advantages of Paper**

- a. Data Collaboration : Data Collaboration can be define as "Visualization of data from many data source to right user in the correct format."

#### **2.1.2 Disadvantages of Paper**

- a. Security : This paper has not mention any security algorithms or protocol to secure the user's password and encrypting the researcher paper. This can be count as a big issue.
- b. Platform Dependent : This proposed idea is only implemented in web.

#### **2.1.3 How to Overcome The Problems Mentioned In Paper**

- a. Security : In our System we are using SHA256 for hashing the user's password and RSA to encrypt the generated report of any event.
- b. Cross Platform : We are implementing our system in xamarin which is a cross platform development. Using xamarin we can develop apps that run natively on different devices.

## **2.2 Multimedia Repository for Online Education Content.**

This paper proposes an architecture of a multimedia repository for online educational content, that helps to manage the continuously growing amount of electronic learning material[2]. It is designed to manage a large amount of interactive multimedia learning material, provides a centralized access to all stored content

### **2.2.1 Advantages of Paper**

- a. Remote Access Facility : This system can be access by anywhere anytime.
- b. Distributed Database : This system have distributed database which increases the efficiency.

### **2.2.2 Disadvantages of Paper**

- a. Security : This paper has not mention any security algorithms.
- b. Compression : Data Compression is necessary because it increases response time and make system slower.This paper does not mention how to handle large file.
- c. Encryption : All Study material should be in encrypted form so any other man in middle will be unable to access the material.

### **2.2.3 How to Overcome The Problems Mentioned In Paper**

- a. Security : In our System we are using SHA256 for hashing the user's password.
- b. Compression : To handle large file and making system faster we are using LZ4 compression algorithm that compress large file into smaller one in order to decrease processing time.

## **2.3 Design Implementation of Multimedia Repository System Based on Middle Tier Structure.**

This paper summarizes the current mainstream web file Upload methods and presents difficulties realizing the Cloud repository media resource management System on large file upload. It proposes specific solution[4].In which they uses the FileList interface and Blob of File API to segment a single large file before upload to server, making the upload of media files without restrictions . It uses Python as its middle tier Provides better system scalability and the core middle Module is only responsible for monitoring and transferring the socket command from the server-side request.

The Socket command between PHP program and task allocation.Core middle tier module makes transaction between different languages possible and lowers the coupling between the various system modules.That means, specific Processes in the server are assigned into corresponding modules, making tasks for each module relatively independent and specific, thus the maintainability and Responsibility of the system are able to be guaranteed.

### **2.3.1 Advantages of Paper**

- a. Security : While uploading the File It provides Security , it opens the File in read only Mode.
- b. Distributed Database : This system have distributed database which increases the efficiency.

### **2.3.2 Disadvantages of Paper**

- a. Upload File Size Restriction : This system won't allow you to upload larger file.

### **2.3.3 How to overcome the problems mentioned in Paper**

- a. Upload File Size Restriction : We are using Compression algorithm LZ4 so we can handle large.

## 2.4 Browsing A Structured Multimedia Repository

The browsing user interface for the structured multimedia repository was implemented with Web-based technologies[3]. As most users are comfortable on interacting with the Web, this will ease interaction with the browsing user interface. Simple multitasking is also leveraged just by opening a new window or tab in the browser,enabling its fast response. Another direct consequence is the instant availability of the user interface (no software installed on the client side),increasing its dissemination and usage. The repository was implemented on top of exist , a native XML database. This decision allows using XML formats for document structures , meta data and relations. Also, using an XML database allows for volatile data schemes, as opposed to relational databases. Consequently, any ontology instance can be inserted on multimedia fragments meta data, thus enforcing extensible to any knowledge inference mechanism. Executing queries on the repository is performed with XQuery. Different abstraction layers on information retrieval have been implemented, and may be used in the future as basic constructs for smarter mechanisms. On top of XQuery modules,the browsing interface has been implemented as a thin layer returning XHTML. On top of the user interface, a set of unobtrusive javascript functionality were added to improve the usability of its browsing characteristics. This way, tasks that require high computational resources (e.g., complex searching within the repository) can be triggered asynchronously, leveraging the user interface responsiveness.

### 2.4.1 Advantages of Paper

- a. Using XML as your database will work fine as long as your datasets stay relatively small. Meaning, it can all fit in memory and stay there comfortably.

### 2.4.2 Disadvantages of Paper

- a. Once your data grows to the point where it will not all fit in memory, you will probably start seeing serious performance degradation.
- b. The system requires large memory to store large content.
- c. In this system we can't directly search the required content

### 2.4.3 How to Overcome The Problems Mentioned In Paper

- a. We are using LZ4 compression algorithm for compressing the large content.
- b. Implementing a interactive search bar one can search the required content directly.

## 2.5 Online-based Continuous Assessment Repository for Lecturers and Students

The system allows the lecturers to upload their students' continuous-assessment marks to an online repository via Microsoft Excel file . Microsoft Excel file is purposely being used as the client application since grading or marks-entry practice is commonly being done by the lecturers into Excel files. Having the data online allows the online-system to analyze the students' marks and generate appropriate reports. The system consists of two main parts, namely the client and the server. For the lecturer's uploading purpose, the client application is a data collector component that is able to upload the course details and students' marks via the Microsoft Excel file to the online database. As for the viewing purpose, the client application is running on the web-browser that shows the web-interface of the system for both lecturers and students. On the server side, there are two components, specifically the online database and the online web-interface. The database permits remote access by allowing reception of incoming data from the data-collector component that runs on the client terminal. The online web interface provides means for users to view data extracted from the database.

### 2.5.1 Advantages of Paper

- a. Keeps the record of student
- b. Student and lecturers can access it anytime anywhere

### 2.5.2 Disadvantages of Paper

- a. GUI is not user friendly
- b. No security mechanism

### 2.5.3 How to Overcome The Problems Mentioned In Paper

- a. We are using LZ4 compression algorithm for compressing the large content.
- b. Implementing a interactive search bar one can search the required content directly.

## **2.6 Technical Review**

Our System is basically based on multimedia data Repository technique, where the system is going to store plural form of data which include:

- a. Compression
- b. Security
- c. Data Warehouse

### **2.6.1 For Compression we have used following algorithm:**

- a. LZ4 Compression Algorithm

### **2.6.2 For Front-end Design we have used following Technology:**

- a. Xaml

### **2.6.3 For Front-end Design we have used following Technology:**

- a. Asp MVC Web Api
- b. C#
- c. Microsoft Sql Server Management Studio

### **2.6.4 Advantages of Technology**

- a. Xamarin :

- Native applications : The preferred solution for any application is native design. Code sharing across platforms is a breeze with Xamarin, helping you shorten that development cycle.
- Shared Application Logic: Apart from native UI, the way app logic is shared across multiple platforms makes Xamarin a must-use cross-platform development tool.

- b. ASP MVC WebApi :

- Internal serialization: WebAPI has an internal serialization, which makes returning specific data much more easier, without own extension method or making controller dependent on the serialization framework library.
- Action result helpers: There are plenty of action result helpers like Ok(), NotFound(), InternalServerError(), which all return IHttpActionResult, what makes code easier to read and maintain and clearly state intention.

- Native attribute routing: WebAPI has implemented attribute routing which makes all routing configuration much more easier(and helps when using feature-based architecture).

c. Microsoft Sql Server Management Studio :

- Improved Performance: MS-SQL server contains excellent compression and encryption capabilities that result in improved data storage and retrieval functions.
- Security MS-SQL is considered one of the most secure database servers with complex encryption algorithms making it virtually impossible to crack the security layers enforced by the user. MS-SQL server is not an open source database server which reduces the risk of attacks on the database server.

### **2.6.5 Reasons to Use this Technology**

a. Xamarin :

- Native User Experience : Xamarin has full access to native APIs and toolkits used on Android, iOS and Windows platforms. Consequently, it can provide native (or near-native) design and performance for every application.
- Single Technological Stack : One of the main pros of Xamarin cross-platform application is that a single language C# creates all kinds of solutions.

b. ASP MVC WebApi :

- Light Weight Restfull Api : Based on light weight RESTful architecture and good for devices which have limited bandwidth like smart phones.
- Simple Http Requests : Based on HTTP and so easy to define, expose and consume in a RESTful way.

c. Microsoft Sql Server Management Studio :

- Data Recovery Support : Microsoft SQL Server uses its Data Protection Manager(DPM) for data restoration and recovery. Enterprises can use DPM as part of the Microsoft System Center, an integrated client-to-cloud management tool for private and public servers that offers continuous data protection.
- It's an Industry Standard : In a bit of a chicken/egg type situation, the widespread popularity and use of MS SQL databases has created a demand and supply for Microsoft SQL professionals. In other words, the fact that MS SQL servers are so common means that a lot of database administrators and developers have experience with them, therefore companies have an enormous base of talent from which to choose when hiring

# **Chapter 3**

## **Project Planning**

### **3.1 Members and Capabilities**

**Table 3.1:** Table of Capabilities

SR. No	Name of Member	Capabilities
1	Siddiqui Neha Hafiz Neelofar	C#,Python,XML
2	Khan Aaisha Imtiyaz Shehnaz	XML,Python
3	Ansari Mohd Saeem Mohd Saleem Farzana	C#,Python,XML,Sql,ASP
4	Ansari MohamadKurban AbdulKayyum Sajma	C#,Python,Sql,ASP

### **3.2 Roles and Responsibilities**

**Table 3.2:** Table of Responsibilities

SR. No	Name of Member	Role	Responsibilities
1	Siddiqui Neha	Team Leader	UI & UX Design , Documentation
2	Khan Aaisha	Member	UX Design , Documentation
3	Ansari M.Saeem	Member	UI Design , Compression , Restfull Api
4	Ansari Kurban	Member	Security , Restfull Api , Database

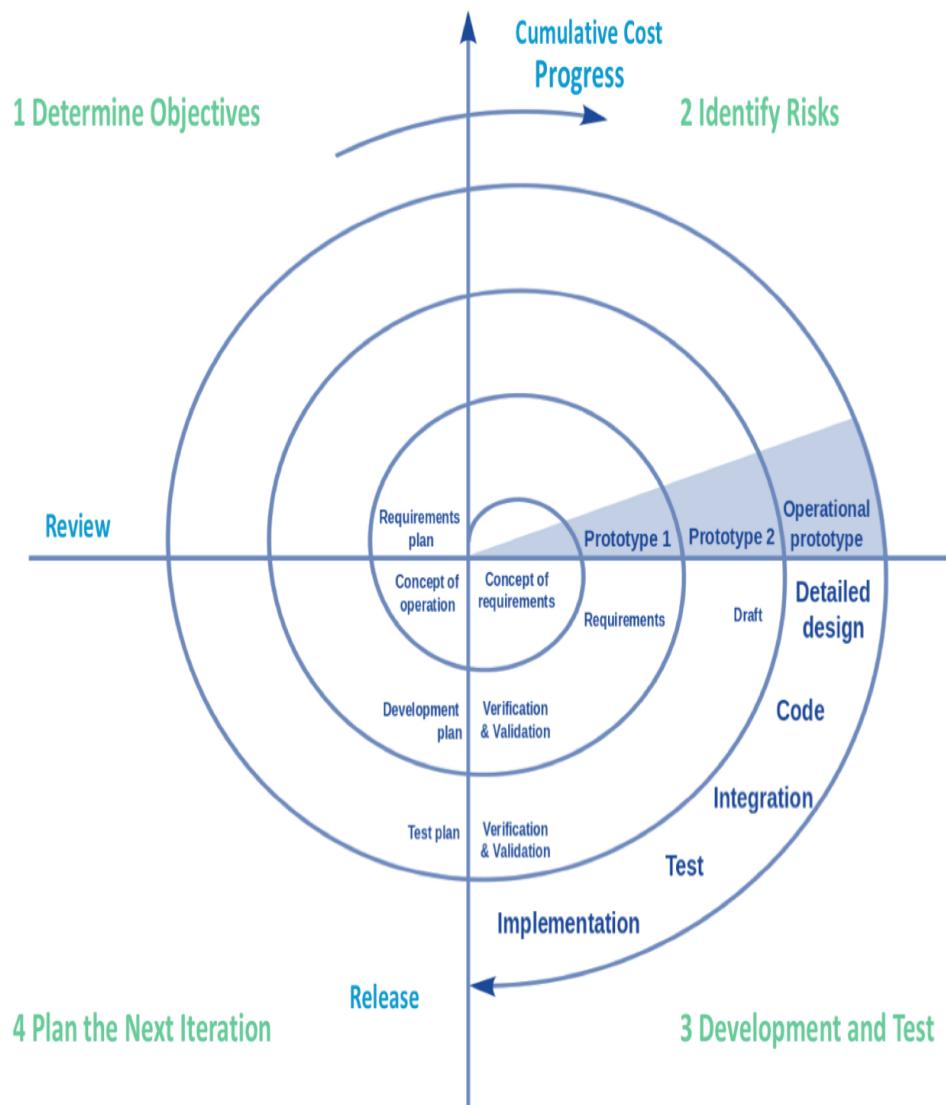
### **3.3 Assumptions and Constraints**

Assumption:User must provide genuine and authenticated data of the event ,if not so the system may not work properly.

Constraints:The major constraint is if Web Api crashes or stops responding ,then the system may go down.

### 3.4 Project Management Approach

We have used Spiral methodology for the development of this project. Spiral Model is a combination of a waterfall model and iterative model. Each phase in spiral model begins with a design goal and ends with the client reviewing the progress.



The services provided by spiral model of software development satisfies to the dynamic change in requirement of the system. This is the main reason why we chose spiral model for software development as it grants various services like determine objectives, Identify risks, development and test, plan the next iteration and these services can be changed according to the changing environment.

### **3.5 Ground Rules for the Project**

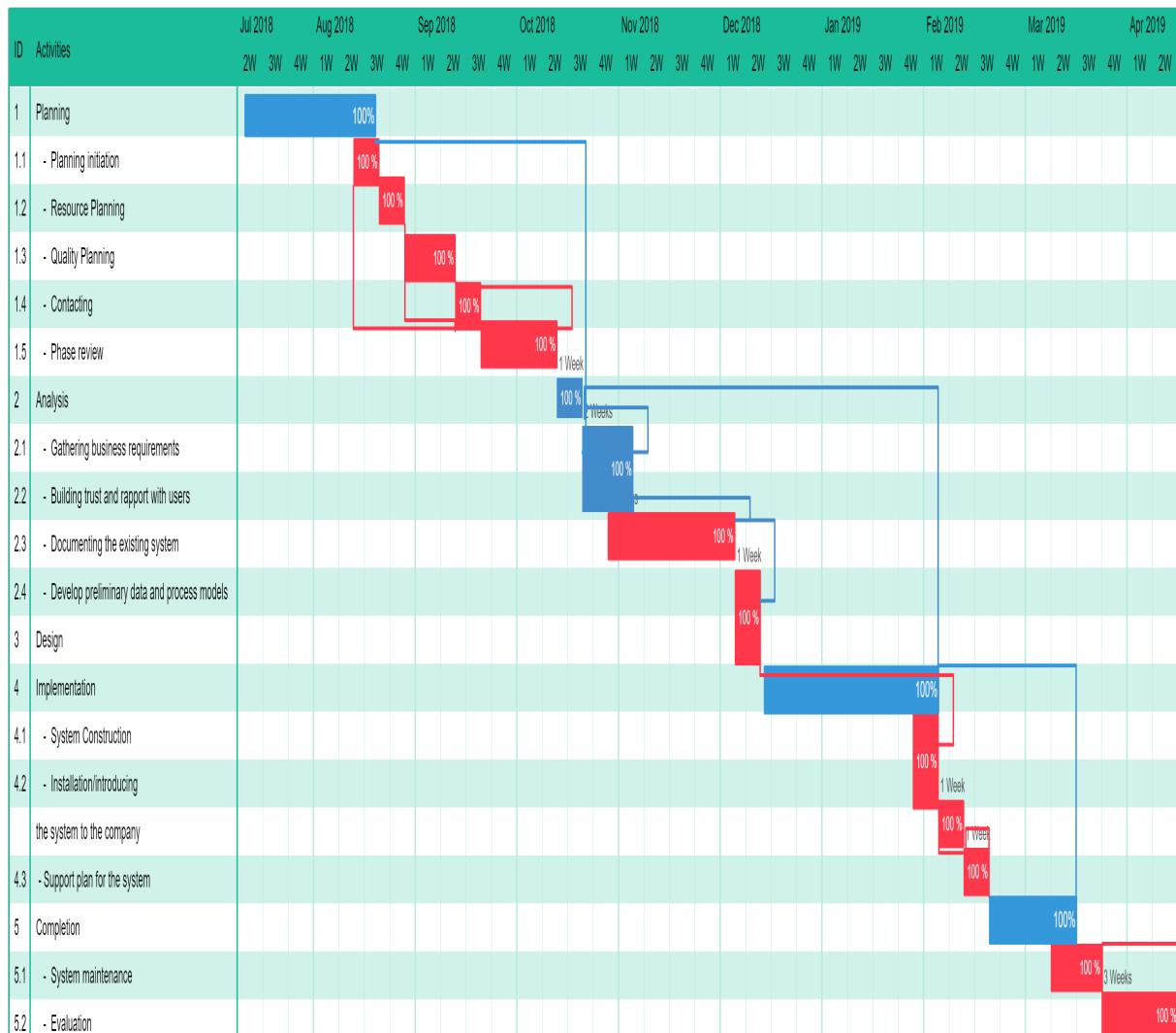
We Consider the following ground rules:

1. Project should also be build from users prospective.
2. We will keep positive attitude towards Project and team members and everyone will respect each other.
3. Everyone will take initiative by sharing ideas telling improvements in each other.
4. We will be honest and take our responsibility , we will try our best to complete our project before deadline .
5. If any member got stuck at something he or she should ask for help to one another.

### **3.6 Project Budget**

- Xamarin : Open Source
- ASP Web Api : Open Source
- Requested libraries : Open Source
- Sql Server Management : Open Source

### 3.7 Project Timeline



# **Chapter 4**

## **Software Requirements Specification**

### **4.1 Overall Description**

#### **4.1.1 Product Perspective**

As now a days almost all the institutions focuses on both curricular and extra-curricular activities and managing these activities can be quite tedious. As it comes under institute level and under a single institute there are n number of students let alone inter-institute managing those documents manually can be hectic. So we propose a novel approach to replace the manual work of handling the data which sometimes results in misplaced valuable details. The proposed system comes under repository category which will have all the necessary details which is done manually but in digital format right from event details up to generating a complete report of it.

#### **4.1.2 Product Features**

The System feature is described as follows:

- Cross Plate-form : This is one of the major advantage of our project. Our system will be available for all native app like Android and IOS.
- Compression : Proposed System uses LZ4 algorithm for compressing Event Report.LZ4 is a file format and a software application used for file compression and decompression. It is a free software replacement for the compress program used in early Unix systems.
- Security : System proved security through hashing the credentials of user by SHA-256.SHA-256 is one of the successor of hash functions to SHA-1 (collectively referred to as SHA-2),and it is one of the strongest hash functions available.The 256-bit key makes it a good partner-function for AES
- Report : Proposed system generates the report by taking the input of all the modules present in the system and then the report is generated.

#### **4.1.3 User Classes and Characteristics**

Different users will use the product differently depending on their needs and hence, the user class will change according to the need of the user. But the basic characteristics of the classes will remain the same where the user will primarily interact with main four products that are Search of the event, Feedback, Attendance and Report Generation. The main class of product is organize and attendee event.

#### **4.1.4 Operating Environment**

The environment in which the system will operate is cross platform. So, the iOS, android and windows user can access our app. The only important software that the user will need is our app.

#### **4.1.5 Design and Implementation Constraints**

The main decision was to select that which language and software we used for our system. Since most of the programming languages are very time consuming when it comes to develop Native and Cross Platform application so the complete system is made by using Xamarin which is very efficient for cross platform application as compared to others frameworks which are currently available in market. Since it provides various libraries to do our work simple.

### **4.2 System Features**

The System feature is described as follows:

- Authentication:
- Event list
- Event Upload
- Event Classification as attended or organized
- Attendances
- Feedback

### **Description and Priority**

- Event Upload : This features allow the user to upload the detail of any event.
- Attendees : This feature helps the organizers to take the attendance of attendees of any event.
- Report : This feature take input from all other module and generate a report which can be download as pdf.

### **Stimulus/Response Sequences**

- The user need to login into the system.
- The user need to upload event details , poster and permission letter.
- Attended users can give feedback and attendances.

### **Functional Requirements**

Once report is generated the content of the report won't change.

## **4.3 External Interface Requirements**

### **4.3.1 User Interfaces**

- Login & Register : User must register and log-in into the system.
- Event list : Users can see all the events and its detail present in repository.
- Upload Event : System provides good graphical interface for the user to create any event which can be view by other users.
- Profile : Users can see or update his/her information.
- Attended Event List : Users can see the list of event he/she attended.
- Organized Event List : Users can see the list of event he/she Organized.
- Feedback : Users can give the feedback about any specific event.

### **4.3.2 Hardware Interfaces**

We don't required any hardware interface in our project.So we required only software interface in our project.

#### **4.3.3 Software Interfaces**

- Operating System:Android,ios,windows
- Database:Mysql
- Tools:Xamarin

#### **4.3.4 Communications Interfaces**

### **4.4 Nonfunctional Requirements**

#### **4.4.1 Performance Requirements**

The system must be interactive and delays involved must be less. When we connecting to the server the delay is less because the data is stored or manage online very safely and securely. The data is reliable to the user to see this data very correctly.

#### **4.4.2 Safety Requirements**

The data that use for implementation which concerned with the possible loss or harmful use of the data. The data is stored online in very secure because these data is access by only authorized user by providing user name and password to the app. The external policies and safety issue that the product design must be satisfied

#### **4.4.3 Security Requirements**

The server on which the data is stored will have its own security to prevent unauthorized write/delete access. There is no restriction on read access. For Security we are using SHA256 algorithm so user credentials cannot harm.

# **Chapter 5**

## **System Design**

### **5.1 System Requirements Definition**

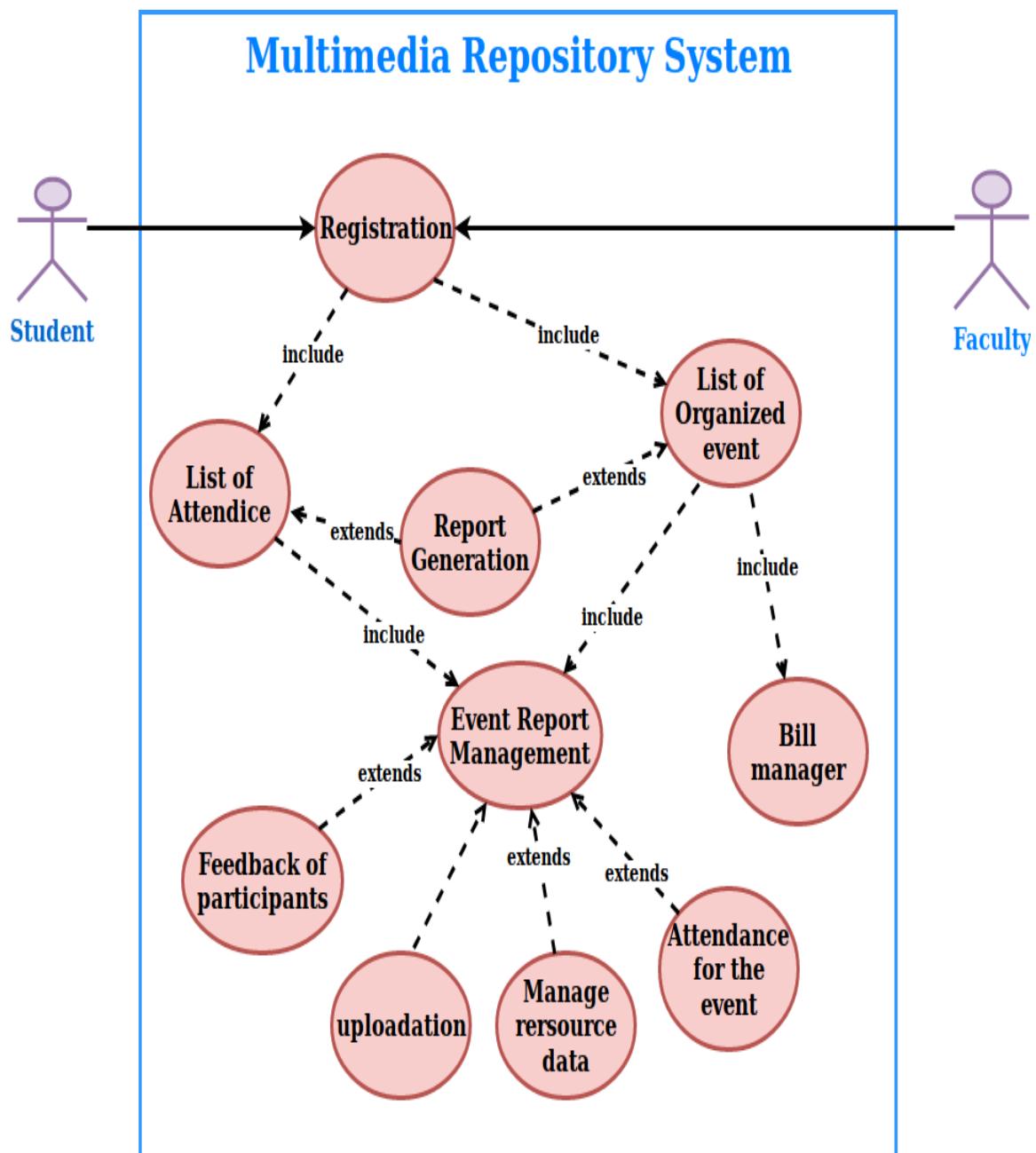
In this project, we address the problems faced by the institute while uploading the report of the events held in college. For this, the system will generate the digital document of the events. We need Event poster, budget, permission letter, study material, no of participants attendance and feedback. After that the system will generate the proper document of it and applying compression algorithm the report is stored into database.

#### **5.1.1 Functional Requirements**

They define the basic functions that the system must provide and focus on the needs and goals of the end users.

#### **Use-case Diagram**

The system is mainly divided in two views, which is directly related to the type of the user logged in. The first view is if the user is logged in as an organizer then he/she will have the privileges of uploading the details of his/her events. Second condition is if the user is logged in as an attendee then he/she needs to upload the necessary details as a proof of attending the event. If the user is an attendee then to validate the user's participation in a particular event he/she needs to upload the necessary details of that particular event. At the end a detailed report will be generated which will be consisting all the necessary details of the event. The report will consist of modules like feedback of the user, resources of the event, attendance of that particular event etc.

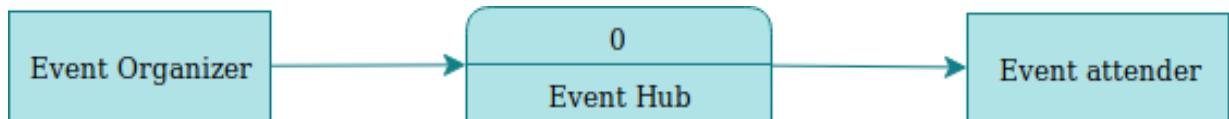


**Figure 5.1:** Use Case of 'Multimedia Data Repository for Event Information System'.

### Data-flow Diagram

Data flow diagram explains how data is transferred through system. Data from which module flowing where can be recognized by this diagram. Data flow diagram helps to identify inputs, outputs for modules. We have 2 level of DFD as follows:

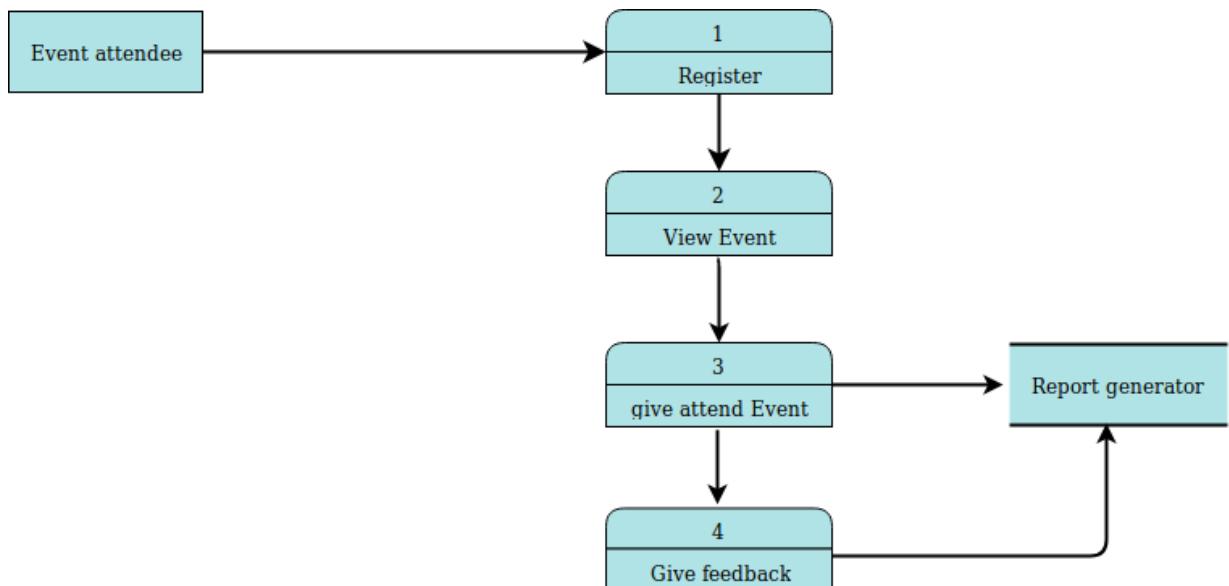
- DFD Level 0 : It contains total no of 3 process in our DFD level 0 diagram. It has Event-Hub , Event-Organizer and Event Attender.



**Figure 5.2:** DFD level 0

- DFD level 1 :

- In DFD level1 the data flow of event attendee is explored. First user has to register in order to participate the event. In which they can give feedback and mark the attendance. At the event report will be generate.



**Figure 5.3:** DFD Level 1 for Event Attendee

- In DFD level1 the data flow of organize event is explored. First user has to register in order to organize the event. In which they can give feedback and mark the attendance. At the event report will be generate.

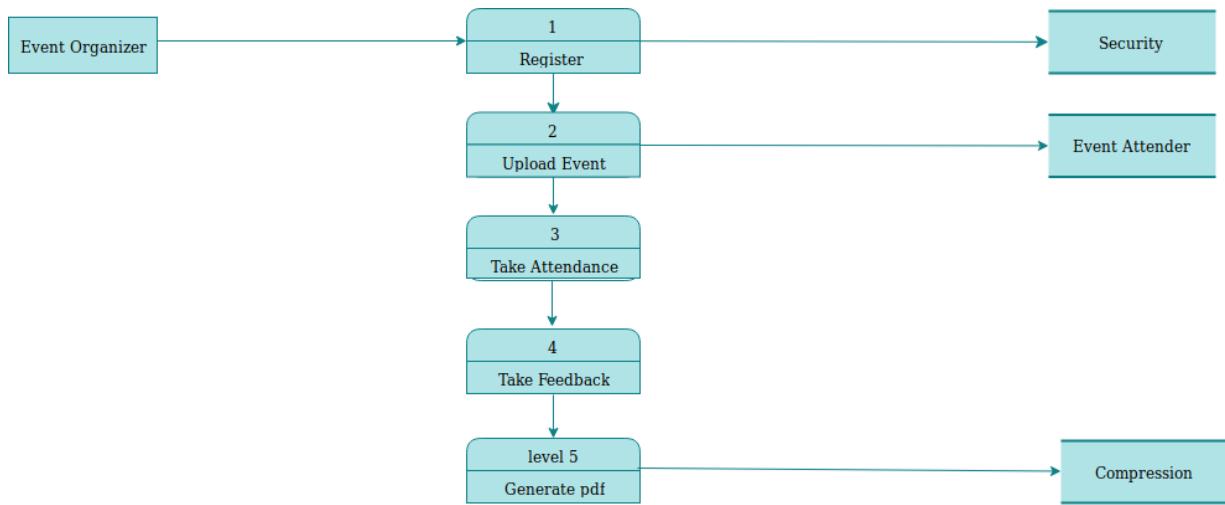


Figure 5.4: DFD level 1 for Event Organizer

### 5.1.2 System requirements (non-functional requirements)

### 5.1.3 Performance Requirements

The system must be interactive and delays involved must be less. When we connecting to the server the delay is less because the data is stored or manage online very safely and securely. The data is reliable to the user to see this data very correctly.

### 5.1.4 Safety Requirements

The data that use for implementation which concerned with the possible loss or harmful use of the data. The data is stored online in very secure because these data is access by only authorized user by providing user name and password to the app. The external policies and safety issue that the product design must be satisfied

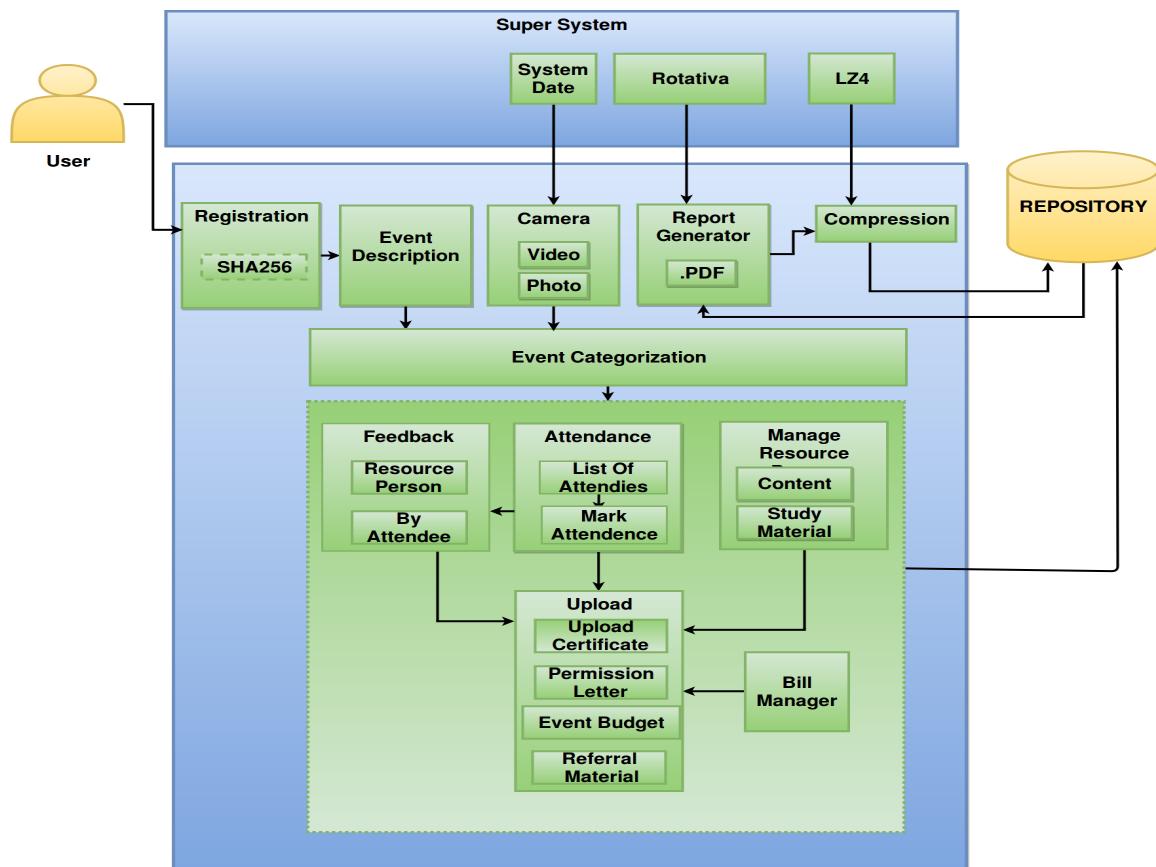
### 5.1.5 Security Requirements

The server on which the data is stored will have its own security to prevent unauthorized write/delete access. There is no restriction on read access. For Security we are using SHA256 algorithm so user credentials cannot harm.

## 5.2 System Architecture Design

First user will Register then it will go into event categorizer where we have categorized the event into two parts. One is organized and second one is attendee after that its up to user what he/she want to do. Suppose user select organized event for that first user need to upload the budget and approval letter of that event. In between event feedback and attendance will be taken through our module. For attendance user click the photo and upload the photo after that our system fetch system and location

if both the match with event date and location the attendee mark as a present.The list of attendees and source person will go into feedback module and in feedback it also mark as present.Bill of that event, study material and , attendance and feedback will go into database .Report generator module will take these input and generate the report in the form of .pdf or .docx with the help of itextsharp..For comprising the file With LZ4 file will store into database



**Figure 5.5:** System Architecture of Multimedia Data Repository for Event Information System.

## 5.3 Sub-system Development

### 5.3.1 User Registration

In the system, we are having multiple roles of users like participants (In-house or Outer ), faculty, event coordinators and event organizer. In order to maintain data confidentiality, the details of the users will be converted into hash using SHA256 algorithm.

### 5.3.2 Upload:

In this module, users will upload data which will be either a picture or a video related to events as the data can be of huge volume and can occupy a huge amount of space so to evade this bump data will be compressed and stored into the database.

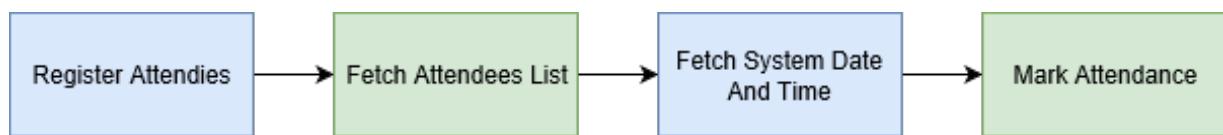


**Figure 5.6:** Modular Diagram of Upload

### 5.3.3 Attendance:

Attendee and organizer both have to upload picture of the event and along with it date-time and location will also be uploaded which will be generated using camera module; to mark the attendance of the attendee and organizer the uploaded date-time, location of the event and the actual date-time, location of the event will be compared if the data satisfies the condition then a list of all the attendees will be displayed and according to that attendance will be marked this all will be done in ATT-08 format.

#### Modular Diagram For Attendee attendance:



**Figure 5.7:** Attendee attendance Module

After successfully registering attendee into the system they will upload live event pictures through camera module and with that system date-time, location will also be uploaded. The actual date-time, location and uploaded date-time, location will be compared, if it comes up true then attendee is marked as present else absent

#### Modular Diagram For Attending The Event:

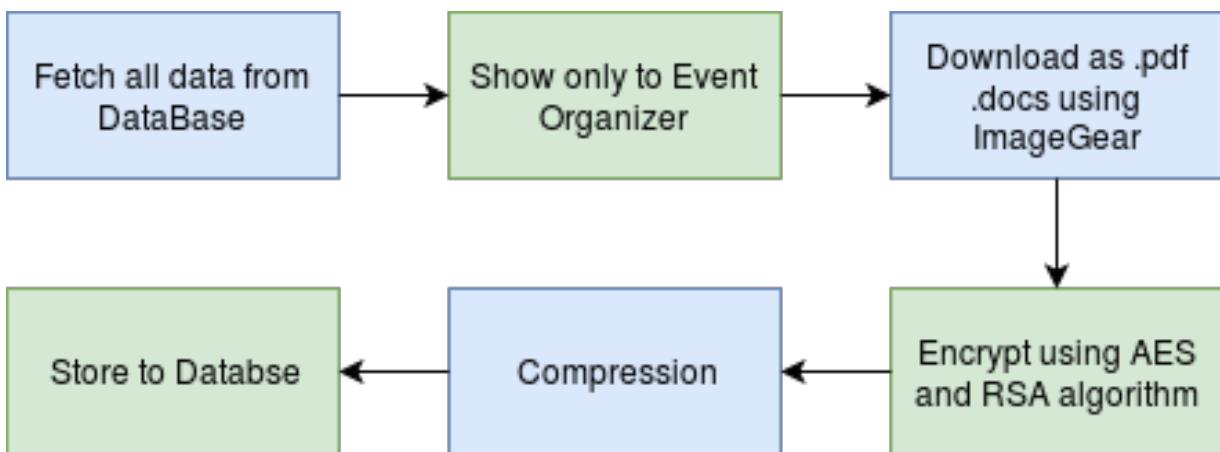
This module comes in with the same functions as that of Attendee attendance module but along with some modifications like: the details will be displayed in ATT-08 format mark the attendance of both the organizer as well as the attendee



**Figure 5.8:** Event Attendee Module

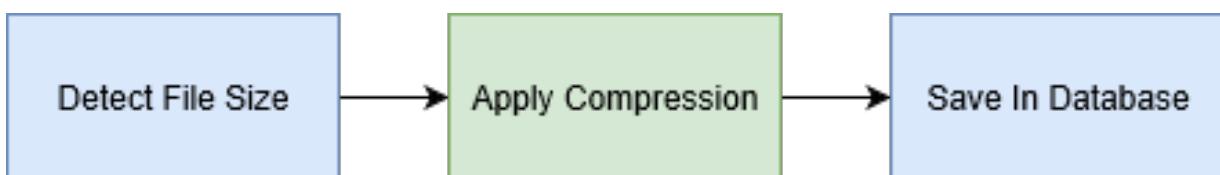
#### 5.3.4 Report Generator

Report Generation is the most important module of the system. Firstly all the details of the event is fetched from the database, the fetched data will only be visible to the event organizer only. The fetched data is later on downloaded and saved in .pdf format using Rotativa library. at the end it is compressed using GZIP and stored into the database



**Figure 5.9:** Modular Diagram of Report

#### 5.3.5 Compression



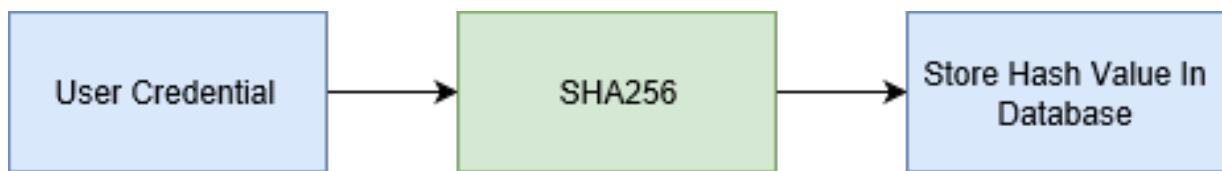
**Figure 5.10:** Modular Diagram of Compression

Compression is a technique used to reduce the size of the file and the data which the system is storing in the database is mainly images and videos which in time will

occupy more space. So to deal with this ambiguity compression technique is used. It will directly increase the speed and efficiency of the system

### **5.3.6 Security**

As in a repository system the main thing is how the data confidentiality is maintained. There are many techniques/algorithm to attain the same the most popular and safe is SHA-256 algorithm; what it does is that it converts data into one way hash code which is in hexadecimal format, in the system mostly user credentials are passed through SHA-256 algorithm

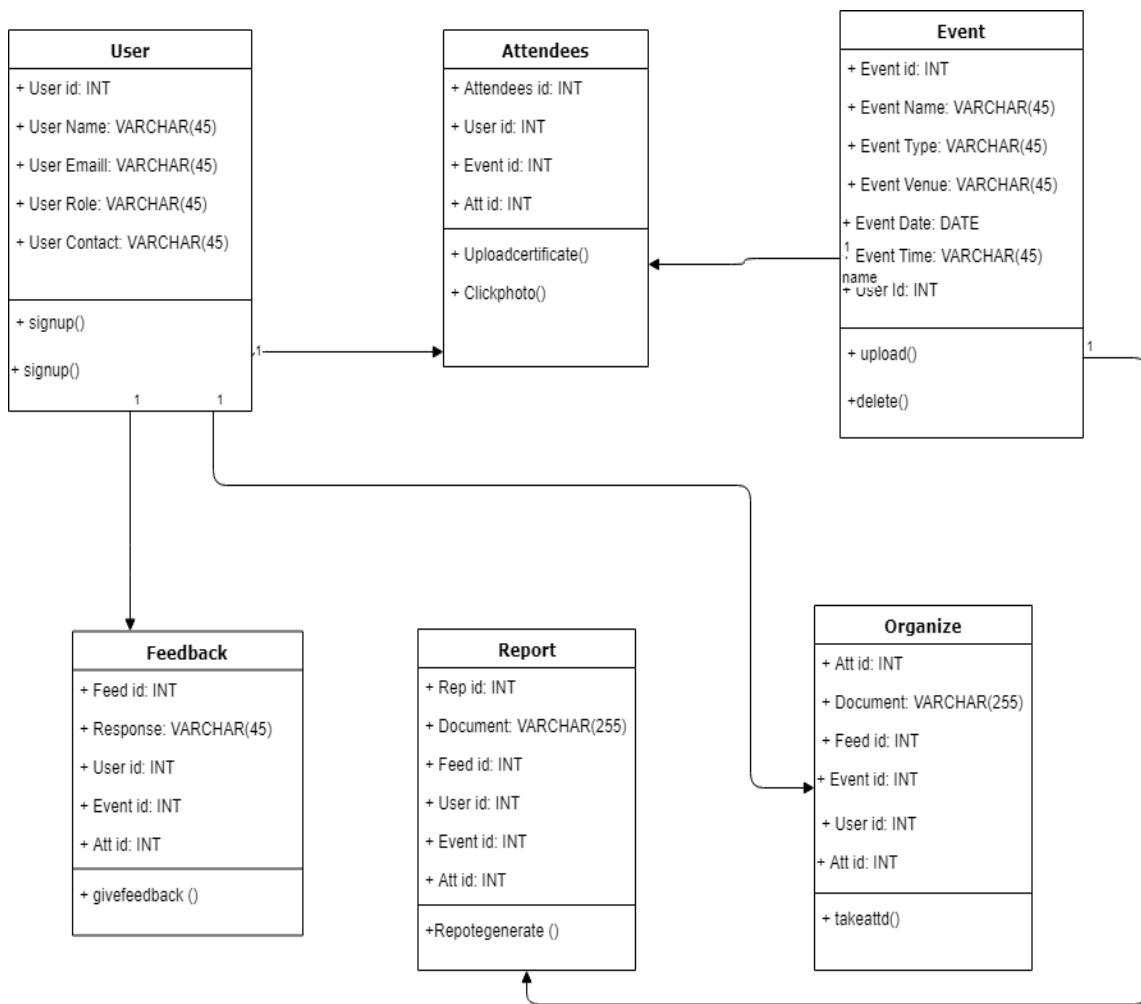


**Figure 5.11:** Security Module

## 5.4 Systems Integration

### 5.4.1 Class Diagram

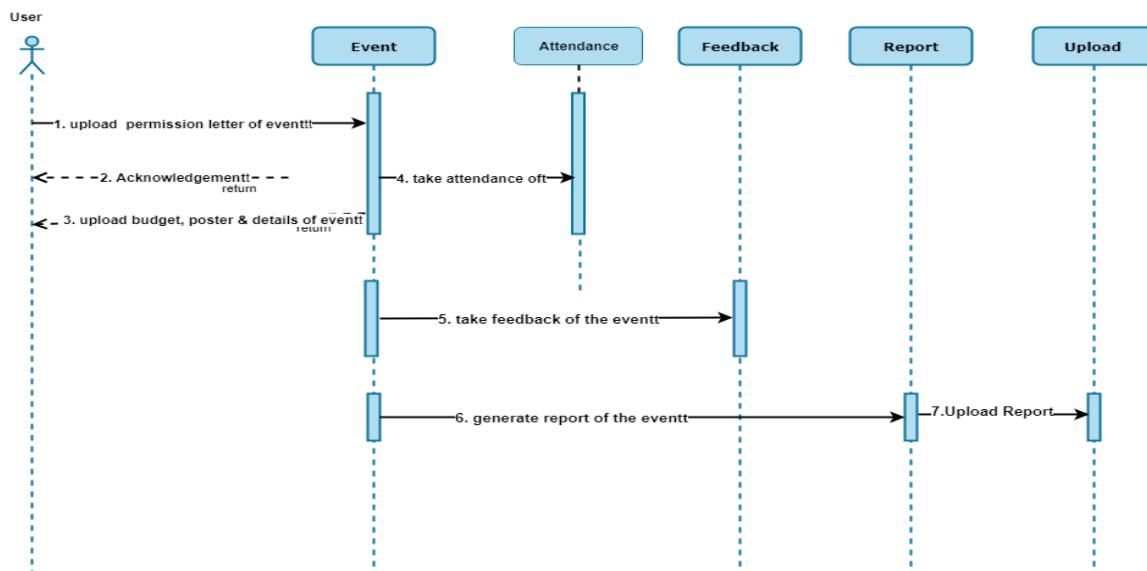
Class diagram gives attributes, operations of module. This class diagram is an illustration of the relationships and source code dependencies among classes in our system. In our system there are this classes: User,Attendees,Event,Organize,Feedback and Report. The functions of each class is given. The organizer can upload the event and can take attendance and feedback. At the Report is form.



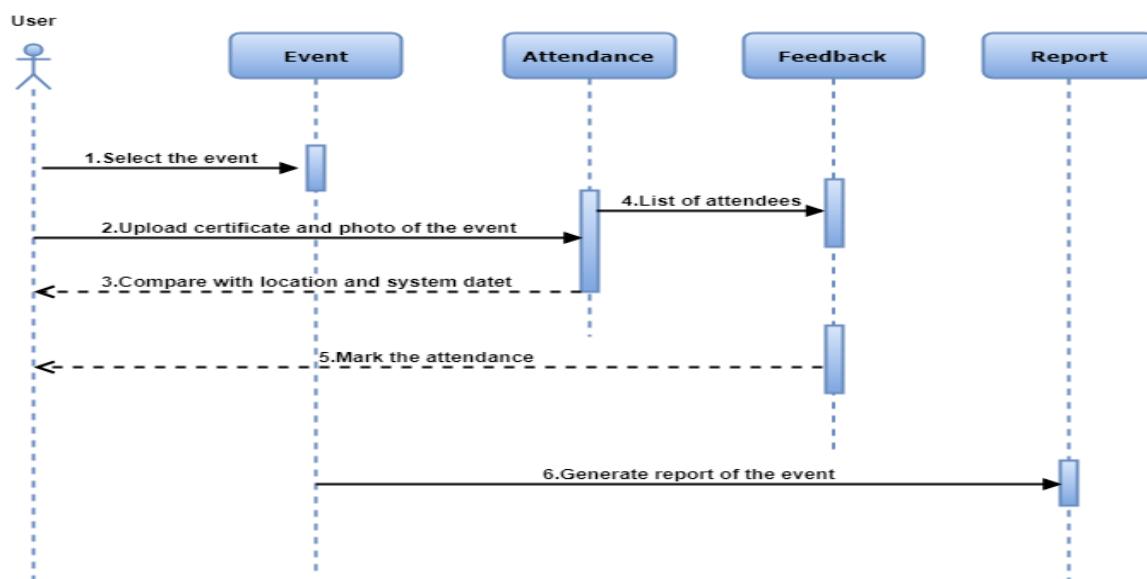
**Figure 5.12:** Class diagram of Multimedia Data Repository for Event Information System.

### 5.4.2 Sequence Diagram

Sequence diagrams are a kind of interaction diagram, because they describe how and in what order a group of objects works together. These diagrams are used by software developers and business people alike to understand requirements for a new system or to document an existing process. Sequence diagrams are sometimes known as event diagrams or event scenarios.



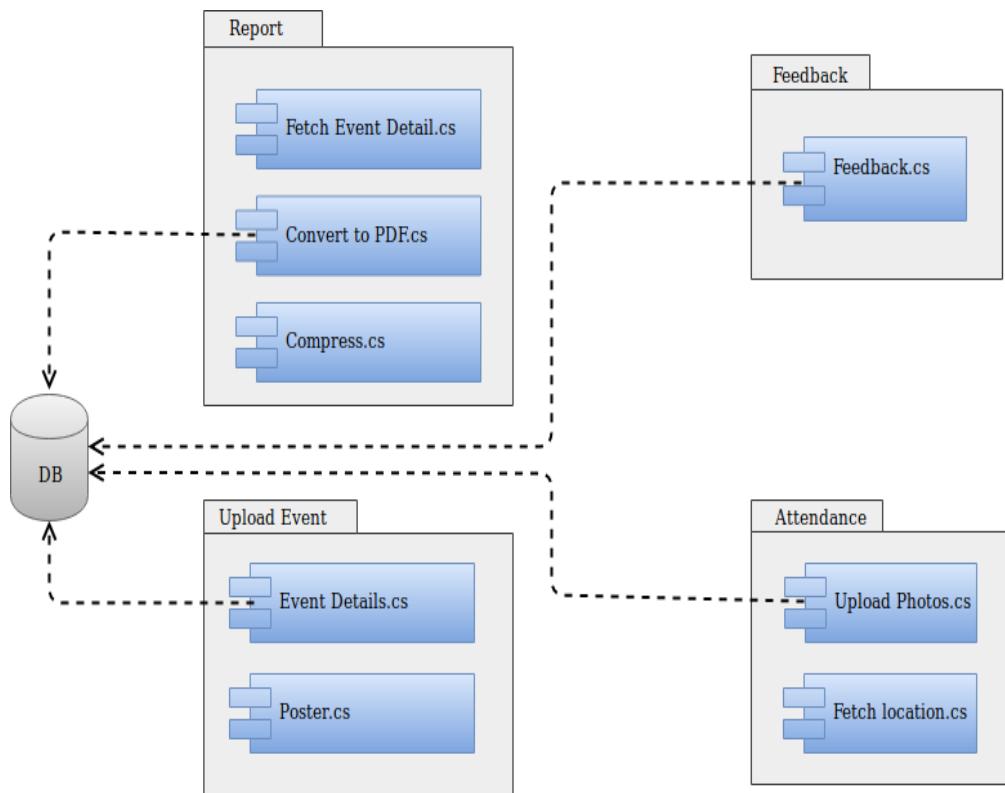
**Figure 5.13:** Sequence diagram of Multimedia Data Repository for Event Information System.



**Figure 5.14:** Sequence diagram of Multimedia Data Repository for Event Information System.

### 5.4.3 Component Diagram

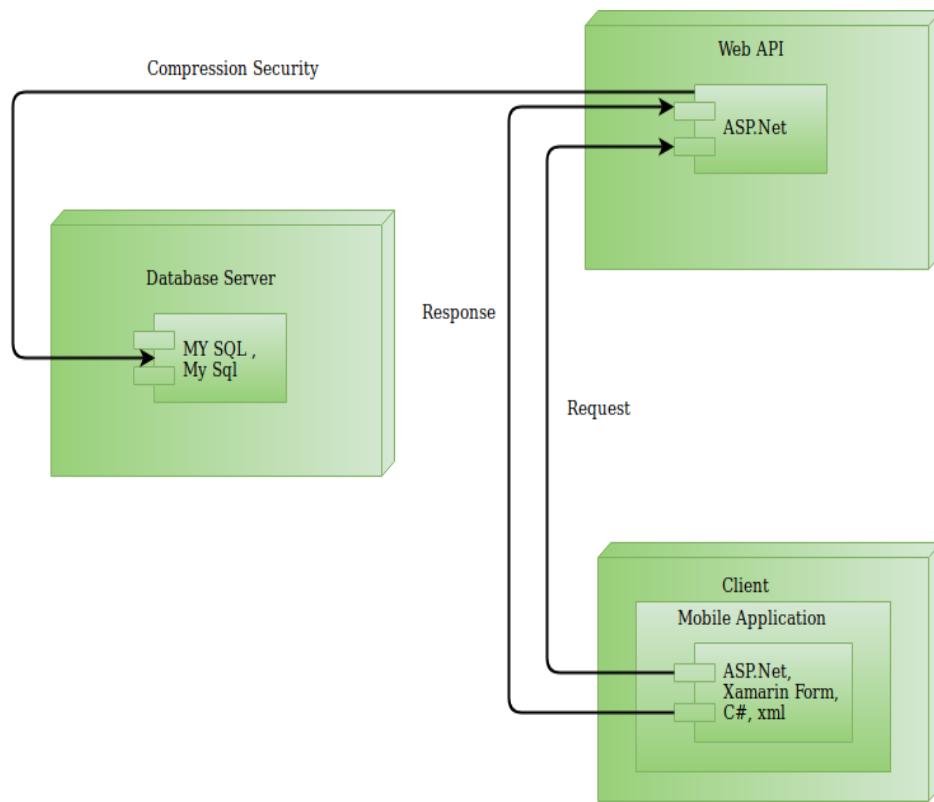
Component diagram shows how all component of system is connected. Component is nothing but subsystem. In our system registration component is necessary for all user. All the details of users are stored in database. Data uploaded in Upload module is stored in Uploads database.



**Figure 5.15:** Component diagram for Multimedia Data Repository for Event Information System.

#### 5.4.4 Deployment Diagram

Using deployment diagram you can understand how the system will be physically deployed on the hardware. A deployment diagram is a diagram that shows the configuration of run time process. We use android, ios and windows mobile for deployment of system. Application consist of xml files. Database used is Microsoft Sql. Execution environment is Android, ios and windows phone only.



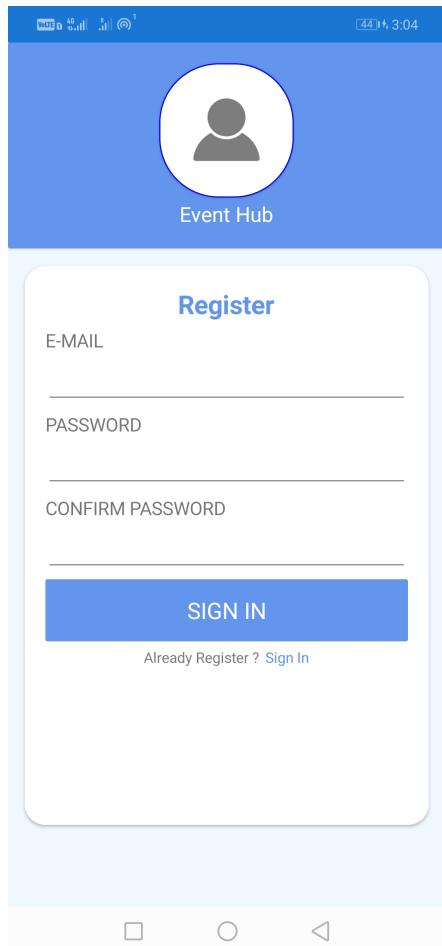
**Figure 5.16:** Deployment diagram for Multimedia Data Repository for Event Information System.

# Chapter 6

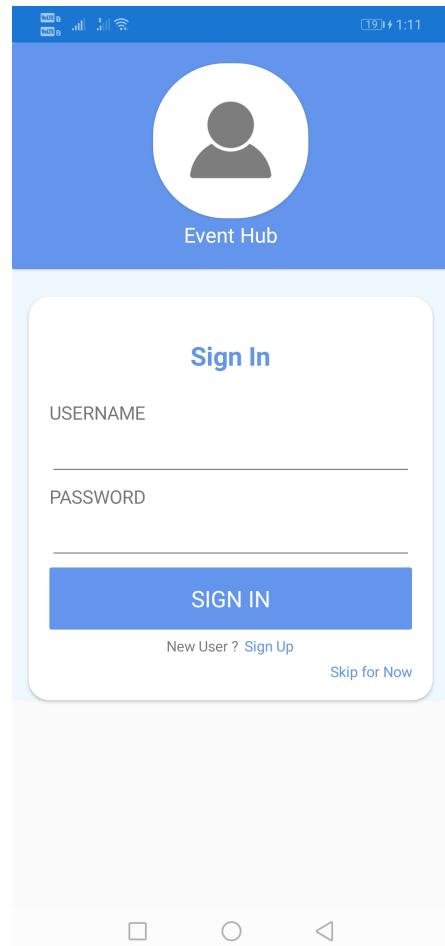
## Implementation

### 6.1 Registration and Log in

The Register and log in module is first module on our system through which they can access system features.



**Figure 6.1:** User Registration Activity



**Figure 6.2:** User Log in Activity

```

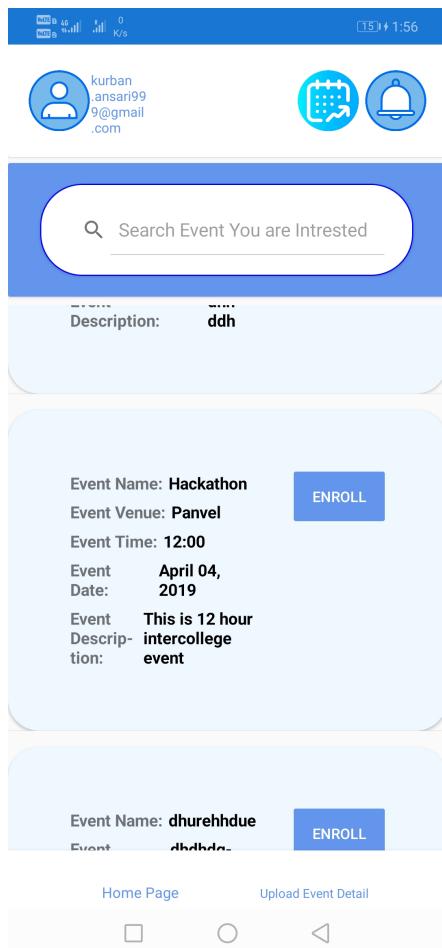
1 public async Task<HttpResponseMessage> RegisterAsync(string email, string
2     password, string confirmPassword)
3     {
4         var client = new HttpClient();
5         var model = new RegisterBindingModel
6         {
7             Email = email,
8             Password = password,
9             ConfirmPassword = confirmPassword
10        };
11        var json = JsonConvert.SerializeObject(model);
12        HttpContent content = new StringContent(json);
13        content.Headers.ContentType = new System.Net.Http.Headers.
14            MediaTypeHeaderValue("application/json");
15        var response = await client.PostAsync("https://backendapi2.conveyor.
16            cloud/api/Account/Register", content);
17        return response;
18    }
19 }
```

```

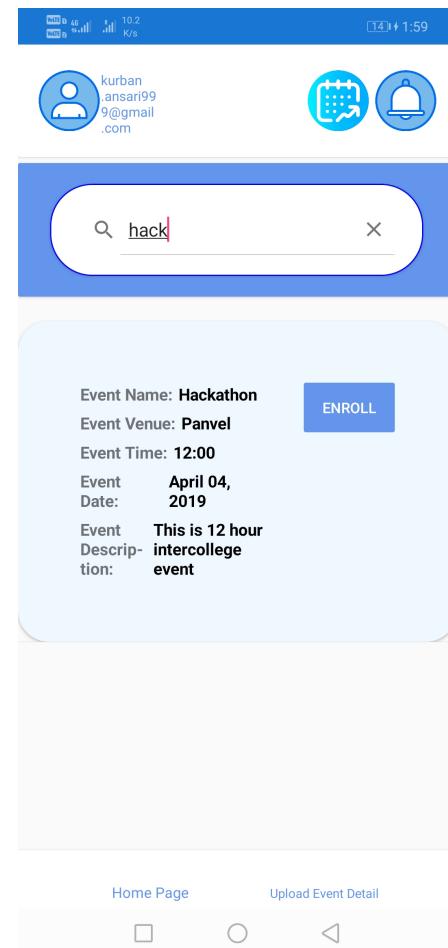
1 public async Task<string> LoginAsync(string userName, string password)
2     {
3         var keyValues = new List<KeyValuePair<string, string>>()
4         {
5             new KeyValuePair<string, string>("username", userName),
6             new KeyValuePair<string, string>("password", password),
7             new KeyValuePair<string, string>("grant_type", "password")
8         };
9
10        var request = new HttpRequestMessage(HttpMethod.Post, "https://
11            backendapi2.conveyor.cloud/Token");
12
13        request.Content = new FormUrlEncodedContent(keyValues);
14
15        var client = new HttpClient();
16        var response = await client.SendAsync(request);
17        var content = await response.Content.ReadAsStringAsync();
18        JObject jwt = JsonConvert.DeserializeObject<dynamic>(content);
19        var accessToken = jwt.Value<string>("access_token");
20        var username = jwt.Value<string>("userName");
21
22        return accessToken;
23    }
24 }
```

## 6.2 Home Activity

After log in first user will see this home page and search for the event. User can also see the events.



**Figure 6.3:** Home Activity



**Figure 6.4:** Search

```
1 public List<EventUpload> Content { get; set; }
2 public Home ()
3 {
4     InitializeComponent();
5 }
6 protected override async void OnAppearing()
7 {
8     var client = new HttpClient();
9     AuthenticationHeaderValue("Bearer", accessToken);
10    var json = await client.GetStringAsync("https://backendapi2.conveyor
11        .cloud/api/Deatails");
12    Content = JsonConvert.DeserializeObject<List<EventUpload>>(json);
13    listView.ItemsSource = Content.OrderByDescending(item => item.date);
14    Progress.IsRunning = false;
15    Progress.Visible = false;
16 }
17 public async Task<List<EventUpload>> GetEventsAsync(string searchText = null)
18 {
19     var client = new HttpClient();
20     //client.DefaultRequestHeaders.Authorization = new
21     //AuthenticationHeaderValue("Bearer", accessToken);
22     var json = await client.GetStringAsync("https://backendapi2.conveyor
23         .cloud/api/Deatails");
24     Content = JsonConvert.DeserializeObject<List<EventUpload>>(json);
25     if (string.IsNullOrWhiteSpace(searchText))
26         return Content;
27     return Content.Where(c => c.EventName.ToLower().Contains(searchText.
28         ToLower())).ToList();
29 }
```

### 6.3 Upload Event

All the important details of the event i.e permission letter budget and poster of the event will be upload.

Upload Your Event Detail

Event Title

Event Venue

Hosted College

Date  
01-01-2000

Time  
00:00

Category

Event Description

NEXT

← Upload Resource

Upload Required Resources of Your Event

Human Resources

Sr. NO	Designated	Name
1	Faculty Co-ordinator	_____
2	Student Co-ordinator	_____
3	Sponsor	_____
4	Tech-Support	_____
5	Guest	_____
6	Resource Person	_____

Expected Event Outcome

Event Budget

FINISH

**Figure 6.5:** Upload Event Activity 1

**Figure 6.6:** Upload Event Activity 2

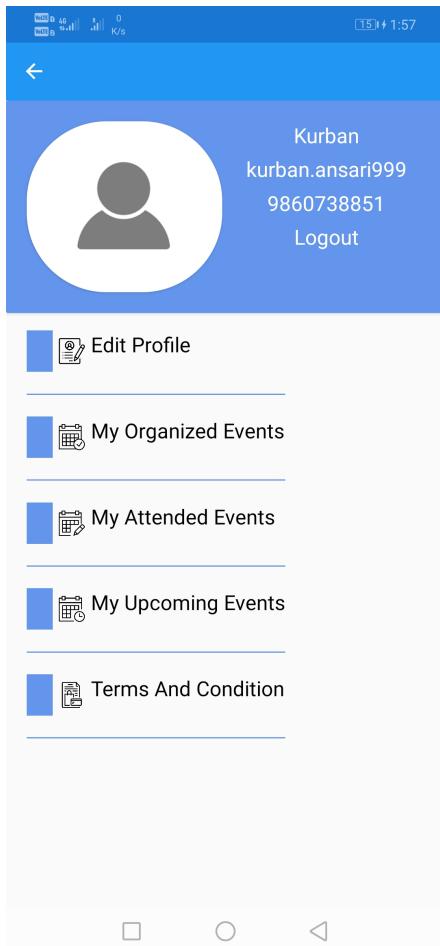
```

1  public async Task<string> PostEventAsync(EventUpload eventUpload, string
2    accessToken)
3    {
4      var client = new HttpClient();
5      client.DefaultRequestHeaders.Authorization = new
6        AuthenticationHeaderValue("Bearer", accessToken);
7      var json = JsonConvert.SerializeObject(eventUpload);
8      HttpContent content = new StringContent(json);
9      content.Headers.ContentType = new MediaTypeHeaderValue("application/
10       json");
11     var response= await client.PostAsync("https://backendapi2.conveyo.
12       cloud/api/Deatails", content);
13     string res = await response.Content.ReadAsStringAsync();
14     return res;
15   }

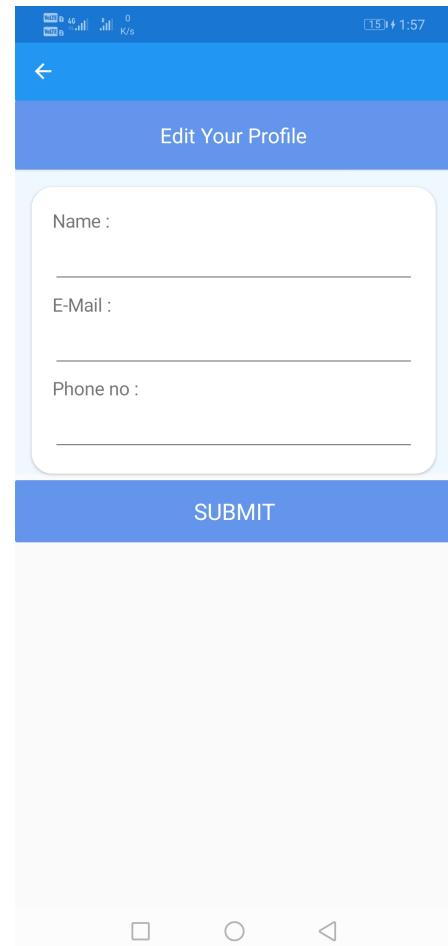
```

## 6.4 Profile

User of the system have their separate profiles where they can upload the events and edit their profiles.



**Figure 6.7:** Profile Activity



**Figure 6.8:** Edit Profile Activity

```

1  public async Task<List<UserDetails>> GetEventsAsync(string accessToken)
2  {
3      var client = new HttpClient();
4      client.DefaultRequestHeaders.Authorization = new
5          AuthenticationHeaderValue("Bearer", accessToken);
6      var json = await client.GetStringAsync("http://https://backendapi2.
7          conveyor.cloud/api/UserDetails");
8      var content=JsonConvert.DeserializeObject<List<UserDetails>>(json);
9      return content;
}

```

```
1   public async Task<string> PostUserDetailsAsync(UserDetails userdetail ,  
2     string accessToken)  
3   {  
4     var client = new HttpClient();  
5     client.DefaultRequestHeaders.Authorization = new  
6       AuthenticationHeaderValue("Bearer", accessToken);  
7     var json = JsonConvert.SerializeObject(userdetail);  
8     HttpContent content = new StringContent(json);  
9     content.Headers.ContentType = new MediaTypeHeaderValue("application /  
10      json");  
11     var response= await client.PostAsync("https :// backendapi2.conveyor.  
12       cloud/api/UserDetails", content);  
13     string res = await response.Content.ReadAsStringAsync();  
14     return res;  
15   }  
16 }
```

## 6.5 Report

At the all the end all the details came into one module that is Report and and .pdf file of the event will generate.



Figure 6.9: Report

```

1  public async Task<List<Reports>> GetEventsAsync(string accessToken)
2  {
3      var client = new HttpClient();
4      client.DefaultRequestHeaders.Authorization = new
5          AuthenticationHeaderValue("Bearer", accessToken);
6      var json = await client.GetStringAsync("http://https://backendapi2.
7          conveyor.cloud/api/Reports");
8      var content=JsonConvert.DeserializeObject<List<Reports>>(json);
9      return content;
10 }

```

# Chapter 7

## System Testing

Everything which is developed should get tested. Because if developed software has some errors that may cost users business. System testing is the testing in which fully integrated software are tested. Basically system testing is process of checking if developed software is working as per users requirements it fully observed by computer based system. Testing is important because in Software Development Life Cycle the system is perform as the first level of testing where system is tested as a whole .During testing validation and verification both are require.

### 7.1 Test Cases and Test Results

Test ID	Test Case Title	Test Condition	System Behavior	Expected Result
T01	Security	Password Cracking	Preventing Login Bypass	Success full

### 7.2 Security

**Title:** Security – Preventing leakage of user's credentials.

**Description:** As the password is converted into hashed code, Sql injection attack do no harm to the system.

*Precondition:* User must be register into system.

*Assumption:* Brute force attack must be prevented.

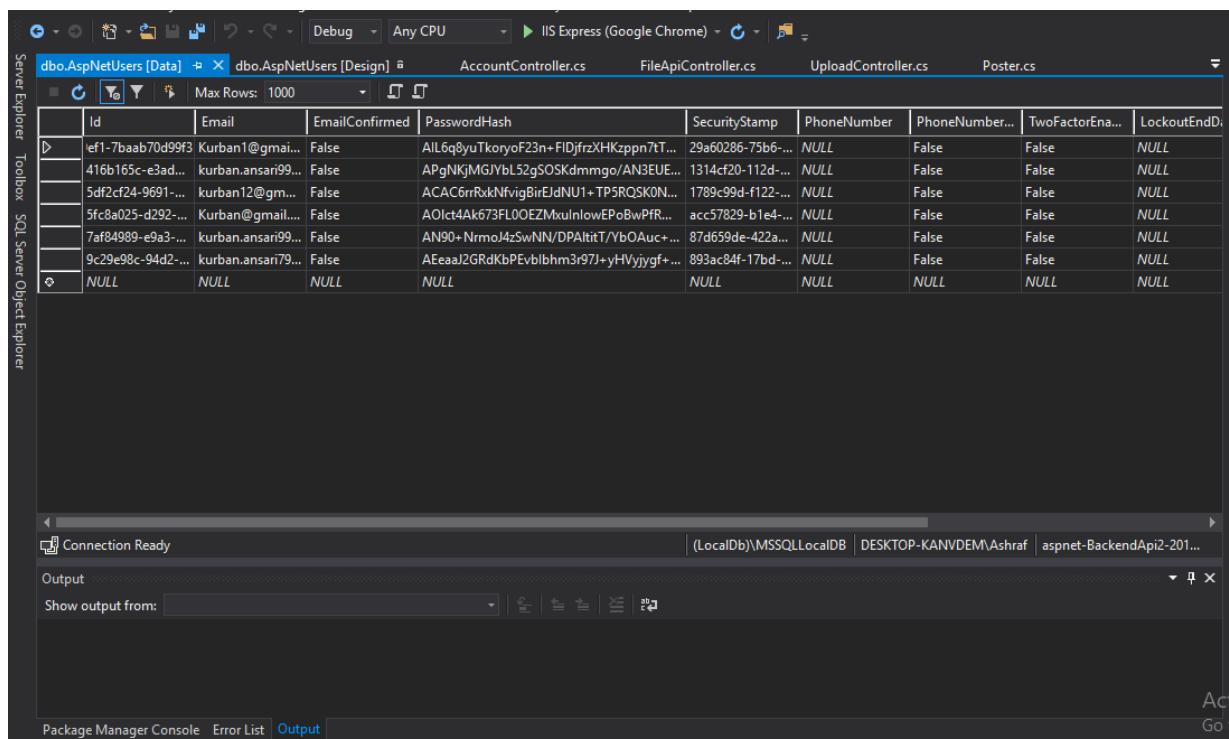
#### Test Steps:

1. From the user table of our database we are taking the hashed password and by using Hashcat tool we will be trying to crack the hashed password.

2. For cracking the hashed password we are using the command  
hashcat64 -m1400 -a3 -o cracked.txt hash.txt wordlist.txt
3. we are using this command in which -m is a type of hashing algorithm -a is a type of attack in our case -m is 1400 which is SHA256 and -a is Bruteforce Attack cracked.txt is the output file and hash.txt is input file.
4. In this step we are regularly checking the status of whether the password is cracking or not.
5. After 1 hour 24 mins we had stopped and the status is that password is not yet cracked.

**Expected Result:** Hashed password should not be cracked.

**Actual Result:** The hashed password were not cracked.



The screenshot shows the Microsoft SQL Server Management Studio (SSMS) interface. The central window displays the 'dbo.AspNetUsers [Data]' table. The table has columns: Id, Email, EmailConfirmed, PasswordHash, SecurityStamp, PhoneNumber, PhoneNumber..., TwoFactorEna..., and LockoutEndD... . There are 8 rows of data. The 'Output' pane at the bottom shows 'Connection Ready' and the connection details '(LocalDb)\MSSQLLocalDB | DESKTOP-KANVDEM\Ashraf | aspnet-BackendApi2-201...'.

	Id	Email	EmailConfirmed	PasswordHash	SecurityStamp	PhoneNumber	PhoneNumber...	TwoFactorEna...	LockoutEndD...
1	ef1-7baab70d99f3	Kurban1@gmail.com	False	A116q8yuTkoryoF23n+FlDjfrzXHKzppn7tT...	29a60286-75b6-...	NULL	False	False	NULL
2	416b165c-e1ad...	kurban.ansari99...	False	APgNkjMGjYBL52gSOSKdmmg0/AN2EUE...	1314cf20-112d-...	NULL	False	False	NULL
3	5df2cf24-9691...	kurban12@gmail...	False	ACAC0rrRxkNfvgbirUdNU1+TP5RQSK0N...	1789c99d-f122-...	NULL	False	False	NULL
4	5fc8a025-d292-...	Kurban@gmail....	False	AOlct4Ak673FL0EZMxulnlowEPoBwPR...	acc57829-b1e4...	NULL	False	False	NULL
5	7af84989-e9a3...	kurban.ansari99...	False	AN90+Nrm04zSwNN/DPAlrtT/YbOAuc+...	87d659de-422a...	NULL	False	False	NULL
6	9c29e98c-94d2...	kurban.ansari79...	False	AEeaJ2GrdKbPEvblbhm3r97j+yHIVyygf...	893ac84f-17bd...	NULL	False	False	NULL
7	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

**Figure 7.1:** UserTable HashedPassword

```
C:\Users\SUPER-COMPUTER.IS7\Downloads\hashcat-5.1.0>hashcat64 -m1400 -a3 -o cracked.txt hash.txt
hashcat <v5.1.0> starting...

* Device #1: This hardware has outdated CUDA compute capability <3.5>.
  For modern OpenCL performance, upgrade to hardware that supports
  CUDA compute capability version 5.0 <Maxwell> or higher.
* Device #1: WARNING! Kernel exec timeout is not disabled.
  This may cause "CL_OUT_OF_RESOURCES" or related errors.
  To disable the timeout, see: https://hashcat.net/q/timeoutpatch
* Device #2: Intel's OpenCL runtime <GPU only> is currently broken.
  We are waiting for updated OpenCL drivers from Intel.
  You can use --force to override, but do not report related errors.

  nVmlDeviceGetCurrPcieLinkWidth(): Not Supported
  nVmlDeviceGetClockInfo(): Not Supported
  nVmlDeviceGetFanSpeed(): Not Supported
  nVmlDeviceGetClockInfo(): Not Supported
  nVmlDeviceGetTemperatureThreshold(): Not Supported
  nVmlDeviceGetTemperatureThreshold(): Not Supported
  nVmlDeviceGetUtilizationRates(): Not Supported

OpenCL Platform #1: NVIDIA Corporation
=====
* Device #1: GeForce 920M, 512/2048 MB allocatable, 2MCU

OpenCL Platform #2: Intel(R) Corporation
=====
* Device #2: Intel(R) HD Graphics 5500, skipped.
* Device #3: Intel(R) Core(TM) i3-5005U CPU @ 2.00GHz, skipped.

Hashes: 1 digests; 1 unique digests, 1 unique salts
Bitmaps: 16 bits, 65536 entries, 0x0000ffff mask, 262144 bytes, 5/13 rotates
```

Figure 7.2: BruteForce Step1

```
nVmlDeviceGetUtilizationRates(): Not Supported
OpenCL Platform #1: NVIDIA Corporation
=====
* Device #1: GeForce 920M, 512/2048 MB allocatable, 2MCU

OpenCL Platform #2: Intel(R) Corporation
=====
* Device #2: Intel(R) HD Graphics 5500, skipped.
* Device #3: Intel(R) Core(TM) i3-5005U CPU @ 2.00GHz, skipped.

Hashes: 1 digests; 1 unique digests, 1 unique salts
Bitmaps: 16 bits, 65536 entries, 0x0000ffff mask, 262144 bytes, 5/13 rotates

Applicable optimizers:
* Zero-Byte
* Early-Skip
* Not-Salted
* Not-Iterated
* Single-Hash
* Single-Salt
* Brute-Force
* Raw-Hash

Minimum password length supported by kernel: 0
Maximum password length supported by kernel: 256

ATTENTION! Pure <unoptimized> OpenCL kernels selected.
This enables cracking passwords and salts > length 32 but for the price of drastically reduced performance.
If you want to switch to optimized OpenCL kernels, append -O to your commandline.

Watchdog: Temperature abort trigger set to 90c

The wordlist or mask that you are using is too small.
This means that hashcat cannot use the full parallel power of your device(s).
Unless you supply more work, your cracking speed will drop.
For tips on supplying more work, see: https://hashcat.net/faq/morework

Approaching final keyspace - workload adjusted.
```

Figure 7.3: BruteForce Step2

```

ATTENTION! Pure <unoptimized> OpenCL kernels selected.
This enables cracking passwords and salts > length 32 but for the price of drastically reduced performance.
If you want to switch to optimized OpenCL kernels, append -O to your commandline.

Watchdog: Temperature abort trigger set to 90c

The wordlist or mask that you are using is too small.
This means that hashcat cannot use the full parallel power of your device(s).
Unless you supply more work, your cracking speed will drop.
For tips on supplying more work, see: https://hashcat.net/faq/morework

Approaching final keyspace - workload adjusted.

Session.....: hashcat
Status.....: Exhausted
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0fea3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:51:03 2019 <3 secs>
Time.Estimated.: Fri Apr 19 07:51:06 2019 <0 secs>
Guess.Mask...: ?1 ?1?
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 1/15 <6.67%>
Speed.#1....: 7466 H/s <0.15ms> @ Accel:32 Loops:15 Thr:640 Vec:1
Recovered....: 0/1 <0.00%> Digests, 0/1 <0.00%> Salts
Progress.....: 62/62 <100.00%>
Rejected.....: 0/62 <0.00%>
Restore.Point.: 1/1 <100.00%>
Restore.Sub.#1.: Salt:0 Amplifier:60-62 Iteration:0-15
Candidates.#1.: U -> X
Hardware.Mon.#1.: Temp: 50c

The wordlist or mask that you are using is too small.
This means that hashcat cannot use the full parallel power of your device(s).
Unless you supply more work, your cracking speed will drop.
For tips on supplying more work, see: https://hashcat.net/faq/morework

Approaching final keyspace - workload adjusted.

```

Figure 7.4: BruteForce Step3

```

[s]tatus [p]ause [b]ypass [c]heckpoint [q]uit =>

Session.....: hashcat
Status.....: Running
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0fea3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:52:16 2019 <11 mins, 13 secs>
Time.Estimated.: Fri Apr 19 08:44:53 2019 <41 mins, 24 secs>
Guess.Mask...: ?1?2?2?2?2?2?2?2 [?]
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 7/15 <46.67%>
Speed.#1....: 41974.2 KH/s <12.92ms> @ Accel:32 Loops:16 Thr:640 Vec:1
Recovered....: 0/1 <0.00%> Digests, 0/1 <0.00%> Salts
Progress.....: 30681989120/134960504832 (22.73%)
Rejected.....: 0/30681989120 <0.00%>
Restore.Point.: 368640/1679616 <21.95%>
Restore.Sub.#1.: Salt:0 Amplifier:25888-25904 Iteration:0-16
Candidates.#1.: S8dev65 -> H5d68ua
Hardware.Mon.#1.: Temp: 83c

[s]tatus [p]ause [b]ypass [c]heckpoint [q]uit =>

Session.....: hashcat
Status.....: Running
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0fea3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:52:16 2019 <13 mins, 59 secs>
Time.Estimated.: Fri Apr 19 08:51:07 2019 <44 mins, 52 secs>
Guess.Mask...: ?1?2?2?2?2?2?2?2 [?]
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 7/15 <46.67%>
Speed.#1....: 36518.8 KH/s <20.28ms> @ Accel:32 Loops:16 Thr:640 Vec:1
Recovered....: 0/1 <0.00%> Digests, 0/1 <0.00%> Salts
Progress.....: 36628725760/134960504832 (27.14%)
Rejected.....: 0/36628725760 <0.00%>
Restore.Point.: 450560/1679616 <26.83%>
Restore.Sub.#1.: Salt:0 Amplifier:10368-10384 Iteration:0-16
Candidates.#1.: 2na3ehj -> ypekuufy
Hardware.Mon.#1.: Temp: 82c

[s]tatus [p]ause [b]ypass [c]heckpoint [q]uit =>

```

Figure 7.5: BruteForce Step4

```

Restore.Sub.#1...: Salt:0 Amplifier:10368-10384 Iteration:0-16
Candidates.#1...: 2na3ehj -> ypekufy
Hardware.Mon.#1...: Temp: 82c

[Is]tatus [Pause [B]ypass [C]heckpoint [Q]uit =>

Session.....: hashcat
Status.....: Running
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0feaa3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:52:16 2019 <30 mins, 19 secs>
Time.Estimated.: Fri Apr 19 08:57:33 2019 <34 mins, 58 secs>
Guess.Mask...: ?1?2?2?2?2?2?2?2 [?]
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 7/15 <46.67%>
Speed.#1...: 30911.1 kH/s <9.34ms> @ Accel:32 Loops:16 Thr:640 Vec:1
Recovered....: 0/1 <0.00%> Digests, 0/1 <0.00%> Salts
Progress....: 700078955520/134960504832 <51.93%>
Rejected....: 0/700078955520 <0.00%>
Restore.Point.: 860160/1679616 <51.21%>
Restore.Sub.#1...: Salt:0 Amplifier:23504-23520 Iteration:0-16
Candidates.#1...: 0aidzsp -> wncnsm?
Hardware.Mon.#1...: Temp: 83c

```

Figure 7.6: BruteForce Step5

```

Session.....: hashcat
Status.....: Running
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0feaa3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:52:16 2019 <1 hour, 24 mins>
Time.Estimated.: Sat Apr 20 14:00:00 2019 <1 day, 4 hours>
Guess.Mask...: ?1?2?2?2?2?2?2?2 [?]
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 7/15 <46.67%>
Speed.#1...: 586.3 kH/s <8.56ms> @ Accel:32 Loops:16 Thr:640 Vec:1
Recovered....: 0/1 <0.00%> Digests, 0/1 <0.00%> Salts
Progress....: 74340761600/134960504832 <55.08%>
Rejected....: 0/74340761600 <0.00%>
Restore.Point.: 901120/1679616 <53.65%>
Restore.Sub.#1...: Salt:0 Amplifier:47200-47216 Iteration:0-16
Candidates.#1...: ny2tsm? -> zuuz53t
Hardware.Mon.#1...: N/A

[Is]tatus [Pause [B]ypass [C]heckpoint [Q]uit =>

Session.....: hashcat
Status.....: Running
Hash.Type...: SHA2-256
Hash.Target.: 46108de75ad829f0feaa3f436648019dcd543920eae9468292c...df9658
Time.Started.: Fri Apr 19 07:52:16 2019 <1 hour, 24 mins>
Time.Estimated.: Fri Apr 19 09:33:29 2019 <16 mins, 24 secs>
Guess.Mask...: ?1?2?2?2?2?2?2 [?]
Guess.Charset.: -1 ?1?d?u, -2 ?1?d, -3 ?1?d*!$@_, -4 Undefined
Guess.Queue...: 7/15 <46.67%>

```

Figure 7.7: BruteForce Step5

### **7.2.1 Software Quality Attributes**

1. Availability: The system will be available 24/7 as application is totally based on internet ,whenever the user use the system the specific data should be available to the user.
2. Correctness: As per user search correct data should be fetched from database and shown to user.
3. Reliability: The system should be reliable for producing correct output so that user can reliable on system.
4. Extensibility: The system is capable to be modified by changing some modules or by adding some features to the existing system.

# Chapter 8

## Screenshots of Project

### 8.1 Register

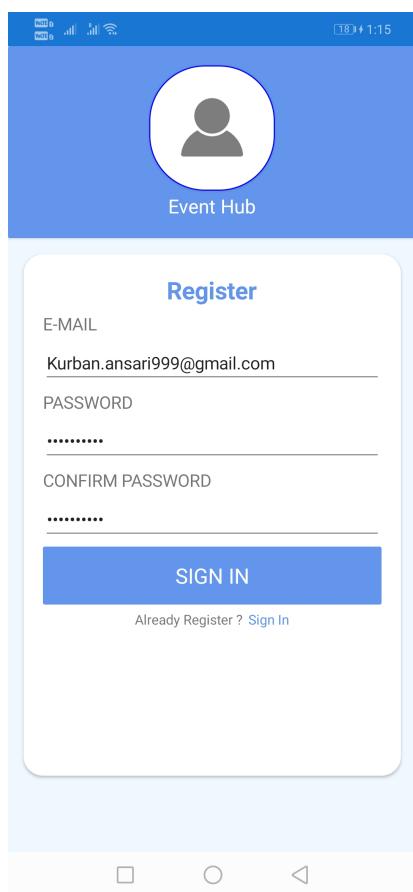


Figure 8.1: Register Activity

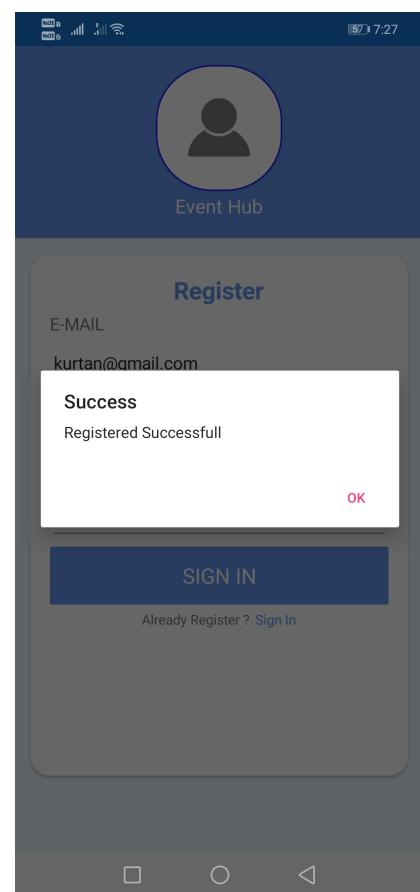
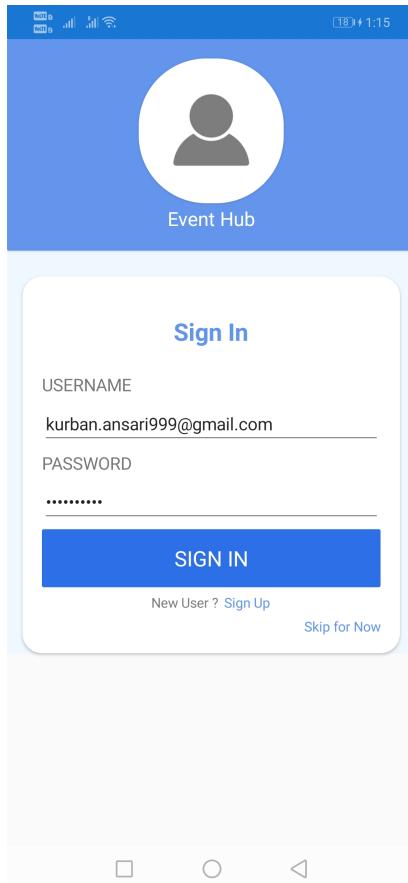
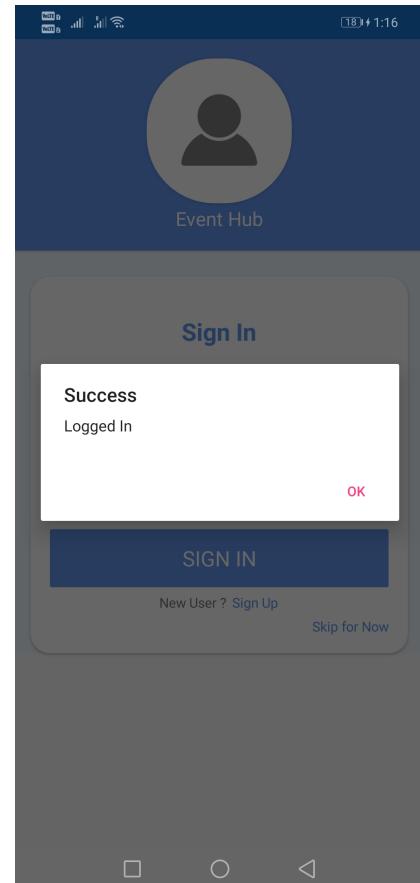


Figure 8.2: Register successful

## 8.2 Log in



**Figure 8.3:** Log in Activity



**Figure 8.4:** Log in Successful

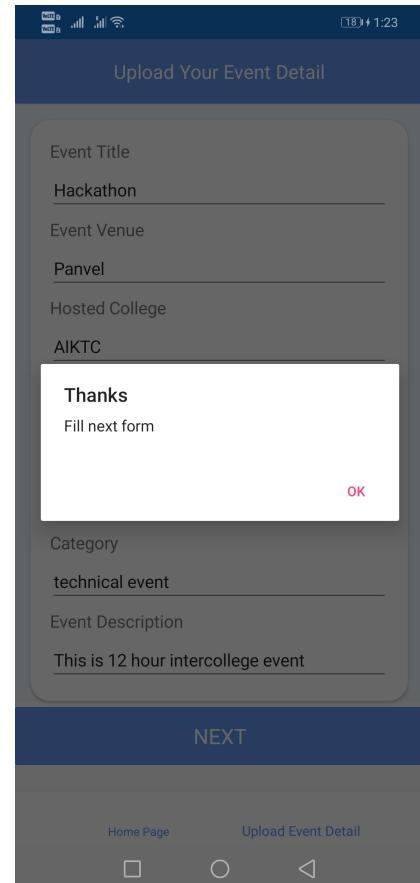
### 8.3 Event Upload

The screenshot shows a mobile application interface titled "Upload Your Event Detail". The form contains the following fields:

- Event Title: Hackathon
- Event Venue: Panvel
- Hosted College: AIKTC
- Date: 04-04-2019
- Time: 09:00
- Category: technical event
- Event Description: This is 12 hour intercollege event

A blue "NEXT" button is at the bottom.

**Figure 8.5:** Upload Event First Activity



**Figure 8.6:** First Activity Successful

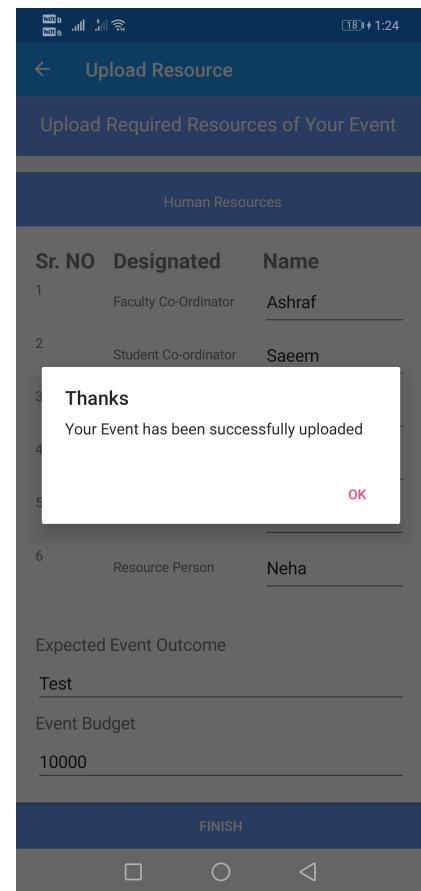
Sr. NO	Designated	Name
1	Faculty Co-Ordinator	Ashraf
2	Student Co-ordinator	Saeem
3	Sponsor	Asim
4	Tech-Support	Huzaifa
5	Guest	Zaid
6	Resource Person	Neha

Expected Event Outcome  
Test

Event Budget  
10000

**FINISH**

**Figure 8.7:** Upload Event Second



**Figure 8.8:** Upload Event Successful

## 8.4 Report

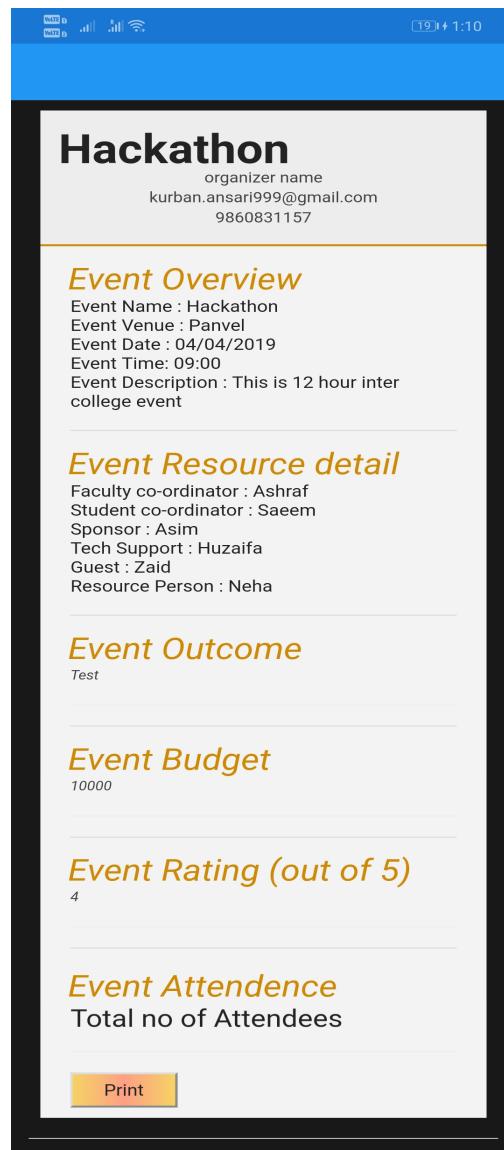


Figure 8.9: Report Of the Event

# **Chapter 9**

## **Conclusion and Future Scope**

### **9.1 Conclusion**

This system promises to replace the manual work of maintaining and updating the data at the time, before and after the event. It will include almost everything right from sign-up/log-in up-till feedback, User's attendance is recorder along with the location and date-time, confidentiality of the data is maintained and much more features. The most important and stand alone feature of this system is generating a detailed and precise report of the event. All of this data is maintained and stored on cloud server.

### **9.2 Future Scope**

- Predict the Success of held Event in future: In future we will implement this module to predict the success rate of any event which was previously held
- Unique QR code for each report This features will give unique QR code to every report so it can share and access easily.

## References

- [1] *ScienceDB: a public multidisciplinary research data repository for eScience* ; Li Chengzan, Hou Yanfei, Li Jianhui, Zhang Lili, IEEE 13th International Conference on eScience , 2017
- [2] *A multimedia repository for online educational content* ; Thomas Kleinberger, Lutz Schrepfer tecmath AG Kaiserslautern, IEEE 13th International Conference on eScience , 01 June 2014.
- [3] *Browsing a Structured Multimedia Repository.* ; Lopes, Rui and Carriço, Luís ,Citeseer , 2007
- [4] *Design and implementation of multimedia repository system based on middle tier structure* ; LiXiao, Lingzi and Cao, Sanxing,6th IEEE International Conference , 2015
- [5] *eXist: An open source native XML database* ; Meier, Wolfgang, Springer , 2002
- [6] *DocBook: the definitive guide* ; Walsh, Norman and Muellner, Leonard, O'Reilly Media, Inc. , 1999
- [7] *XQuery 1.0: An XML query language* ; Boag, Scott and Chamberlin, Don and Fernández, Mary F and Florescu, Daniela and Robie, Jonathan and Siméon, Jérôme and Stefanescu, Mugur , 2002

# Achievements

## 1. Publications

- (a) *Multimedia Data Repository For Event Information System*; SIDDIQUI NEHA HAFIZ, KHAN AAISHA IMTIYAZ SHENAZ, ANSARI MOHD SAEEM MOHD SALEEM, ANSARI MOHAMAD-KURBAN ABDULKAYYUM SAJMA, IEEE 2019, March 2019

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## CERTIFICATE OF PARTICIPATION

This is to certify that

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of

Anjuman-I-Islam's Kalsekar Technical Campus

has participated in

**Avalon 2019, A National Level  
( Technical Paper Presentation / Project Competition )**  
conducted on 5<sup>th</sup> & 6<sup>th</sup> March, 2019  
at Terna Engineering College, Nerul



**Prof. D.M. Bavkar**  
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**Dr. L.K. Ragha**  
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## CERTIFICATE OF PARTICIPATION

This is to certify that

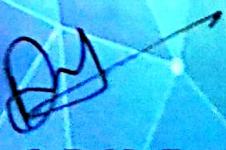
Ansari Mabd Kurban

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Aijuman-I-Islam's Kalsekar Technical Campus  
has participated in

**Avalon 2019, A National Level**  
( Technical Paper Presentation / Project Competition )  
conducted on 5<sup>th</sup> & 6<sup>th</sup> March, 2019  
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# Analysis of Multimedia Data Repository For Event Information System

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**Abstract—**In today's competitive world we have to update our knowledge by attending various events such like conferences, competition,seminars, or training. Those attended events are not just going to upgrade our knowledge but also it help us to update our CVs which is directly connected to our economical side of career. But plenty of times we upgrade ourselves by the knowledge but fail in documenting it. our proposed system is definitely goint to help you to document your knowledge.

**Index Terms—**Multimedia Data Repository, SHA256, AES, RSA, Gzip, ImageGear, Report Generation

## I. INTRODUCTION

Digital media support changed radically the way information is consumed. Nowadays, accessing digital contents is a common task, especially through the Web and its overwhelming size. Also, recent trends give the user an active role on producing contents on different media (blogs, photographs, pod-casts, videos) and establishing relations between media components, instead of just passively consuming information. With such a massive amount of information available, new challenges arise [1]. The proposed system promises to reduce the workload and redundancy caused by the manual work. It mainly resides on two modules , organizing and attending the event [2]. The first module i.e organizing the event will have the functions like the user will ask for the permission of organizing a particular event of his/her choice and the necessary paper work that comes with organizing an event will be done in this module itself therefore eliminating the manual work which takes quite a bit of time. After all the permission work is done a report will be generated whether the proposed event is accepted or not, the main thing that comes in mind during generating the report is how the confidentiality of the report will be maintained, if not anyone can make desired changes which is redundant. To avoid this redundancy we will be providing different user privileges.

Other module is of attending an event, user must be logged in in order to be marked as present we are trying to uses

location services and photo captured by the user for double authentication of the user present in that particular event.

### A. MOTIVATION

Being a part of the current institution we have seen many events come and go we participate, some of us win some of us loose. But the main thing that makes an event successful is how it is organized. Nowadays the events are managed manually and the work burden is too much to handle even for bulk of people. To reduce the workload we are proposing a repository of a system which will be doing all the work and much more which is done manually , it will not only reduce the time which is consumed but also prove to be an efficient way of handling the organizing part of the event. [1]. The proposed system promises to reduce the workload and redundancy caused by the manual work. It mainly resides on two modules , organizing and attending the event [2]. The first module i.e organizing the event will have the functions like the user will ask for the permission of organizing a particular event of his/her choice and the necessary paper work that comes with organizing an event will be done in this module itself therefore eliminating the manual work which takes quite a bit of time. After all the permission work is done a report will be generated whether the proposed event is accepted or not, the main thing that comes in mind during generating the report is how the confidentiality of the report will be maintained, if not anyone can make desired changes which is redundant. To avoid this redundancy we will be providing different user privileges.

Other module is of attending an event, user must be logged in in order to be marked as present we are trying to uses location services and photo captured by the user for double authentication of the user present in that particular event.

### B. Objective

By looking at the name of the project one can guess the primary objective of it i.e to maintain the details of all the participants attending the event and the event itself.

Some other objectives are as follows:-

- The system will come with all the necessary tools to store data in any format be it an image of the event in .jpg format or details in .pdf format in a precise and detailed manner
- To take attendance while events are going on. The system will also consist of an attendance module, not just any other attendance managing system but it will record the attendance while the event is going on.
- To make any event a successful one we must be aware of what the audience feels about it, what are the changes should be made in order to make it more interesting and successful, to get all the necessary data the system will be loaded with feedback module.
- As stated earlier we will be generating a detailed report about the event, so the system will display that report to only those users who have been authorized to see or update it.
- As the system is handling the data from cloud server back and forth the main concern is that it should maintain the confidentiality and integrity of the data.

### C. SCOPE

The system mainly deals with data related to all the events say where the event is taking place, who are involved in it, when is it going to happen, etc all minute details of the event which deemed important is stored in the system.

The system is designed in such a way that we will be able to gather the attendance of the attendee while the event is going on, the feedback of the user to improve the event, report consisting of details of how the event went down, what was the total number of participation and much more but the most important part of the system is all the data is stored on cloud server and because of that we will be able to access it remotely

## II. METHODOLOGY

We are going to implement this project using xamarin which is cross-platform Mobile development use to develop all the native app simultaneously. For making repository database we are using Azure cloud which is faster and can remotely access. Designed for the modern business, the flexible Azure cloud platform allows small and medium sized businesses to build, deploy, and manage applications by leveraging the power of Microsoft's global network of datacenters. The flexibility provides businesses with both Platform as a Service (PaaS) and Infrastructure as a Service (IaaS) capabilities. Microsoft Azure cloud services are easily integrated with existing IT environments which allows businesses to leverage the power and scalability of a hybrid cloud IT infrastructure. For hashing the password we are using the SHA256 algorithm. SHA-256 provides better prevention against collision, meaning the same input data always has a different hash

value. For compression, we are using Gzip library. The GZip file is roughly 80 Percentage smaller in size than the text file, but the write and read times have nearly doubled. Still, the GZip is writing to the file at a rate of just over a millisecond per file, which includes the compression time. for Report we are using ITEXTSHARP library. iTextSharp is a free and open source assembly that helps to convert page output or HTML content in a PDF file. Last thing we are using AES, RSA for encrypting and decryption the reports to provide full security.

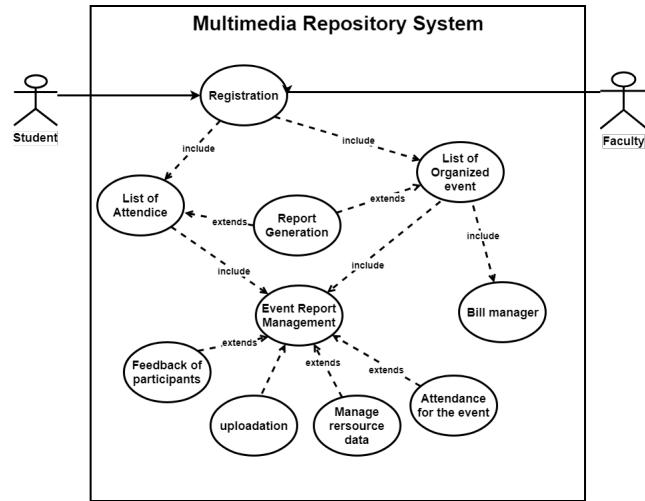


Fig. 1. Use Case

### A. Use Case

The system is mainly divided in two views, which is directly related to the type of the user logged in. The first view is if the user is logged in as a organizer then he/she will have the privileges of uploading the details of his/her events. Second condition is if the user is logged in as a attendee then he/she need's to upload the necessary details as a proof of attending the event. If the user is an attendee then to validate the user's participation in a particular event he/she needs to upload the necessary details of that particular event. At the end a detailed report will be generated which will be consisting all the necessary details of the event. The report will consist of modules like feedback of the user, resources of the event, attendance of that particular event etc.

## III. OVERVIEW OF THE SYSTEM

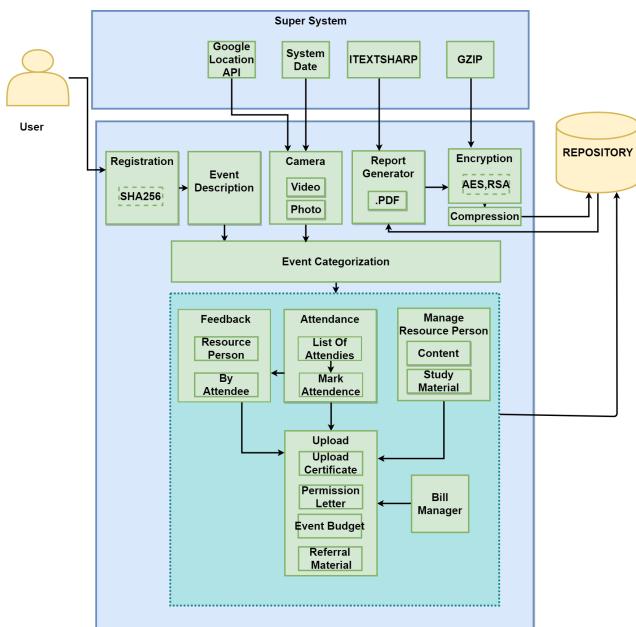


Fig. 2. System Architecture

In order to access / log-into the system the user must be registered and once the user has completed registration the entered data is converted into hash value using SHA-256 algorithm to maintain data confidentiality. After registration process the user might be an organizer or a attendee, say a user is an organizer then that user has the privileges to update, delete or upload a event but before uploading the event user must fill permission letter which is mandatory, if permission is granted then only organizer can upload a new event along with all the necessary details like what type of event it is, budget of it, event poster, etc If the user is an attendee then the user has to upload either the certificate of that event or the picture of the event itself and along with it date-time and location will also be uploaded which will be generated using camera module; to mark the attendance of the attendee the uploaded date-time, location of the event and the actual date-time, location of the event will be compared if the data satisfies the condition then a list of all the attendees will be displayed and according to that attendance will be marked this all will be done in ATT-08 format.

#### A. User Registration

In the system, we are having multiple roles of users like participants (In-house or Outer ), faculty, event coordinators and event organizer.In order to maintain data confidentiality, the details of the users will be converted into hash using SHA256 algorithm.

#### B. Upload:

In this module, users will upload data which will be either a picture or a video related to events as the data can be of huge volume and can occupy a huge amount of space so to evade this bump data will be compressed and stored into the database



Fig. 3. Modular Diagram of Upload

#### C. Attendance:

Attendee and organizer both have to upload picture of the event and along with it date-time and location will also be uploaded which will be generated using camera module; to mark the attendance of the attendee and organizer the uploaded date-time, location of the event and the actual date-time, location of the event will be compared if the data satisfies the condition then a list of all the attendees will be displayed and according to that attendance will be marked this all will be done in ATT-08 format.

1) *Modular Diagram For Attendee attendance::* After successfully registering attendee into the system they will upload live event pictures through camera module and with that system date-time, location will also be uploaded.The actual date-time, location and uploaded date-time,location will be compared, if it comes up true then attendee is marked as present else absent



Fig. 4. Attendee attendance Module

2) *Modular Diagram For Attending The Event::* This modules comes in with the same functions as that of Attendee attendance module but along with some modifications like:the details will be displayed in ATT-08 format mark the attendance of both the organizer as well as the attendee



Fig. 5. Event Attendee Module

#### D. Report Generator

Report Generation is the most important module of the system. Firstly all the details of the event is fetched from the database, the fetched data will only be visible to the event organizer only. The fetched data is later on downloaded and saved in .pdf format using ImageGear library. the report will be encrypted using AES algorithm to maintain data confidentiality and at the end it is compressed using GZIP and stored into the database

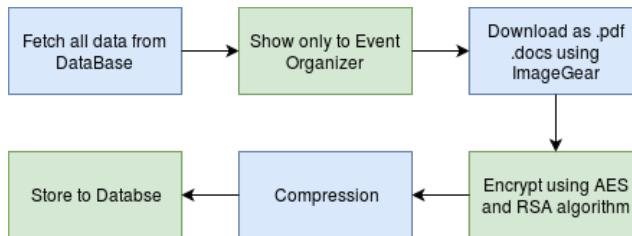


Fig. 6. Modular Diagram of Report

#### E. Compression

Compression is a technique used to reduce the size of the file and the data which the system is storing in the database is mainly images and videos which in time will occupy more space. So to deal with this ambiguity compression technique is used. It will directly increase the speed and efficiency of the system

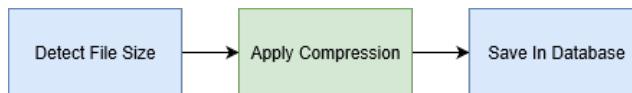


Fig. 7. Modular Diagram of Compression

#### F. Security

As in a repository system the main thing is how the data confidentiality is maintained. There are many techniques/algorithm to attain the same the most popular and safe is SHA-256 algorithm; what it does is that it converts data into one way hash code which is in hexadecimal format, in the system mostly user credentials are passed through SHA-256 algorithm

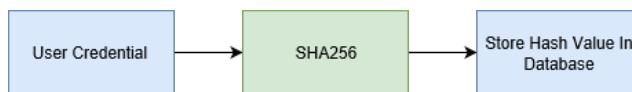


Fig. 8. Security Module

## IV. CONCLUSION

This system promises to replace the manual work of maintaining and updating the data at the time, before and after the event. It will include almost everything right from sign-up/log-in up-till feedback, User's attendance is recorder along

with the location and date-time, confidentiality of the data is maintained and much more features. The most important and stand alone feature of this system is generating a detailed and precise report of the event. All of this data is maintained and stored on cloud server.

## REFERENCES

- [1] T. Kleinberger, L. Schrepfer, A. Holzinger, and P. Müller, "A multimedia repository for online educational content," 2001.
- [2] L. Xiao and S. Cao, "Design and implementation of multimedia repository system based on middle tier structure," in *Software Engineering and Service Science (ICSESS), 2015 6th IEEE International Conference on*, pp. 179–182, IEEE, 2015.

## V. ACKNOWLEDGMENT

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