COLLEGE EVENT MANAGEMENT SYSTEM

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DECLARATION

I hereby declare that this project report entitled

COLLEGE EVENT MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized
without citations.

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DEDICATION

ACKNOWLEDGEMENTS

ABSTRACT

College Event Managment System (CEMS) is a system that develop for Majlis Felo Merbauan, Residential College Tun Hussein Onn, University Technology Malaysia (UTM). This system will be used for felo and students. Every semester they need to organize some event for their collage. The current system that they use now is more to manually such as they need to write paperwork for every event with the same format. Other than that, they also need to take attendance and get some feedbacks for every event based on every slot in the event. Basically, they just take the attendance and feedback using paper and will key in the data after finishing the event. It will takes a long time to key in the data into system because they need to typing and check the data first and get back the feedback from participants. Other than that, they also need to promote and spread the information of event to get paticipants.

CEMS is developed to help them generate paperwork automatically with correct format. Then, this system also can help to generate the event attendance into excel file to easily insert the data into academic system UTM (myutm.my). It also will help them to send email to the other to promote and spread event information for user notification.

The first objective of this system is to allow CEMS user to generate paperwork automatially with correct format. Next is to accommodate CEMS user to ganerate the attendance into excel file base on every event attendance. Next, this system is allowing to CEMS user to spread the information about every event using spread email or user notification. Lastly, this system also can allow CEMS user to ganerate report for each event automatically.

Agile Development methodology approach is going to be used for the System Development Life Cycle (SDLC). There are going to be many testing conducted as this project is being developed to detect the defects of earlier system. As for the database methodology on Database Development Life Cycle (DBLC), it is going to be developed as a top down approach and implemented together with SDLC.

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CHAPTER 1
INTRODUCTION

1.8 **Project Background**

College Event Managment System (CEMS) is a system that is developed for Majlis Felo Merbauan, Residential College Tun Hussein Onn, University Technology Malaysia (UTM). This system will be used for collage wardens and students. Every semester they need to organize some events for their collage. The current system that they are using now is manual such as they need to write paperwork for every event with the same format. Other than that, they also need to take participants attendance and get feedbacks for every event for on every slot in the event. Basically, they just take the attendance and feedback using paper and will key in the data into academic system UTM (myutm.my) after finishing the event. It will takes a long time to key in the data into system because they need to typing and checking the data first and get back the feedback forms from participants. Other than that, they also need to promote and spread the information of event to get paticipants.

CEMS is developed to help them generate event paperworks automatically with correct format. Then, this system also can help to store the event attendance into database and can generate into excell file that can be use by UTM academic system (myutm.my). It also will help them to send email to the other to promote and spread event information for user notification.

The expected output of this CEMS is that it is very useful to the collage wardens and students to write the paperwork, manage the event attendance information and spread all the event information to the others student easily using email.

1.9 Problem Statements

i)   Repeating process of writing paperworks.
     The current system that they are using now is a manual system as they need to write paperwork for every event with the same format.

ii) Using paper to take event attendance
     Currenly they just take the participants attendance using paper and will key in the data after the event finish. It will take a long time to key in the data into the system because they need to collect from participants and type attendance into system.

iii) Difficulty to spread event information to get participants

They need to promote and spread the information of event using poster to get paticipants.

iv) No reporting function

They need to write the report after the event finish based on the event feedback they get form participant. It will take a long time to write the report because they have to key in the feedback data first and do analysis manualy.

1.3 Objective

i) To generate paperwork automatically with correct format.

The system will help CEMS user to generate paperwork automatically with correct format for each event. It will help them to write paperwork faster and easily.

ii) To stor attandance in database and export into an excel file.

The system will easily help CEMS user to manage attandance for each event. It also allow CEMS user to export the list of attendance into excell file and keep track all attendance of each event participant.

iii) To send email to promote and spread event information for notifying user about the event.

The system will use email to spread the event information. It will help CEMS user to promote their event.

iv) To generate report for each event automatically.

The system will allow CEMS user to generate report for each event base on feedbacks and attendance of every event participant. It will help residance collage admin to know the performance level for every events.

1.4 Scope

1.4.1 User Scope

i) Staff

- Collage Warden
  - Privilege to check and write the form to create paperwork.
  - Able to insert, delete and update the event information.
  - Able to manage participant's attendance and feedback event.
  - Able to view all report of every event.
  - Able to send email to all users to notify users.

- Top Management
  - Check the paperwork
  - Approve the paperwork
  - Able to view all report of every event.

ii) Student

- Committee
  - Privilege to check and write the form to create paperwork.
  - Able to insert, delete and update the event information.
  - Able to manage participant's attendance and feedback event.
  - Able to create and view all report of every event.
  - Able to send email to all users to notify users.

iii) Participants

- Staff
  - Able to view event information
  - Able to register as participant event.
- Student
  - Able to view event information
  - Able to register as participant event.
- Other
  - Able to view event information
  - Able to register as participant event.

1.4.2 Information Event

i) User authentication

The system has three kinds of user which is staff (collage warden, top management), student (committee) and participant (staff, student, other). Each user has different privilege.

ii) Event information

This module enable organizer (collage warden and committee) to insert, delete and update the detail of event information.

iii) Generate paperwork

The system enable user to generate paperwork's base on the event information inserted form event information module. The paperwork will be generated with

the correct format. This module also generates the paperwork into the pdf format.

iv) Attendance event

The system enable participants to insert attendance into system. Then the attendance can be export the attendance list into excel format base on the attendance that content the list of participant information. It will have three type of attendance.

v) Feedback event

This module enable participants to give feedback based on event.

vi) Generate report

This system can generate reports based on the feedbacks from participant and event attendance after finish event. The report will be generated with the correct format. It also will export the report into the pdf format. The feedback is based on few questions that cover on the hole event activities such as management and utilities. The report that are generated by the system are the numbers of participants male and female by event.

1.5 Project Significance

This system will be used by two type of user which is staff (collage warden, top management), student (committee) and participant (staff, student, other). Each user has different types of privilege. This system will give many benefits to the users. Firstly, it will help users to manage the event easily by generating the paperwork's automatically for every event. The user also can easily manage the attendance for every event without using any manual method. The system also can automatically generate reports that can be used by top management decision making.

1.6 Expected Output

i)   Produce paperworks automatically with correct format.

ii)   Generate event attendence in file excel formate

iii)   Send email to promote and spread event information for user notification.

iv)   Attendance and feedback report required by top managment.

1.7 Conclusion

For the conclusion, his chapter explains more detail about this system such as background of the system, problem statements of the system and objectives to solve the problems. This chapter also briefly explains every scope of the system with the detail description. It also shows the project significance to briefly explains who and what the benefit of the system. This chapter also discusses the expected result that will be produced by the CEMS system.

CHAPTER 2
PROJECT METHODOLOGY AND PLANNING

2.5 Introducion

This project will be using Agile Development methodology for its System Development Life Cycle (SDLC) approach. There are going to be many testing conducted as this project is being developed to detect the defects of system earlier. This is to ensure that our system meets all the requirements and to avoid wasting of time and cost.
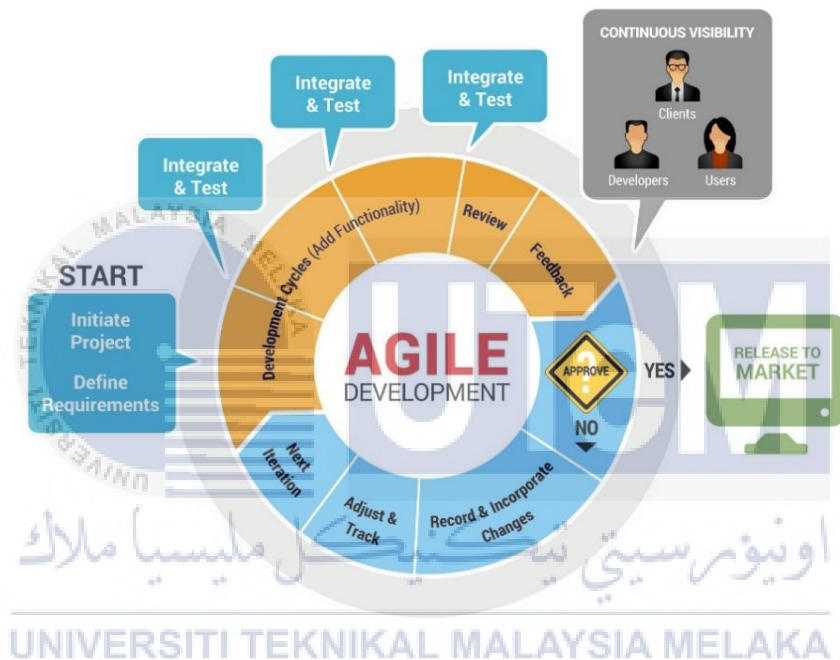
Figure 1: Agile Development diagram for SDLC.

2.6 Project Methodology

Database Life Cycle contains six phases which is database initial study, database design, implementation, and loading, testing and evaluation, operation, maintenance and evaluation.

i.   Database initial study
   a) Analyse the current system situation to get the requirements
   b) Analyse the current general operating environments of the system
   c) Justify and specify the problems that have in a current system
   d) Justify need for new data and database in support of management

ii. Database Design
   a) Analyse the transaction, forms, displays and inquiries required by the management functions supported by the database

b) Design the conceptual design like ERD, logical design like data dictionary and physical design like DDL statement

c) Integrate database views into conceptual data model

d) Define entities, attributes, primary keys and foreign keys

e) Identify data integrity and security requirements and populate repository

f) Create the table and well-defined structure for the database

iii. Implementation and loading

a) Install the requirement software for the development process

b) Design database system

c) Convert the data from the current system to the new system

iv. Testing and evaluation

a) Code and test database processing programs

b) Evaluate the database and its application programs

v. Operation

a) The beginning of the operational phase invariably starts the process of system evolution

b) Produce the required information flow

vi. Maintenance and evaluation

a) Introduce changes

b) Make enhancements
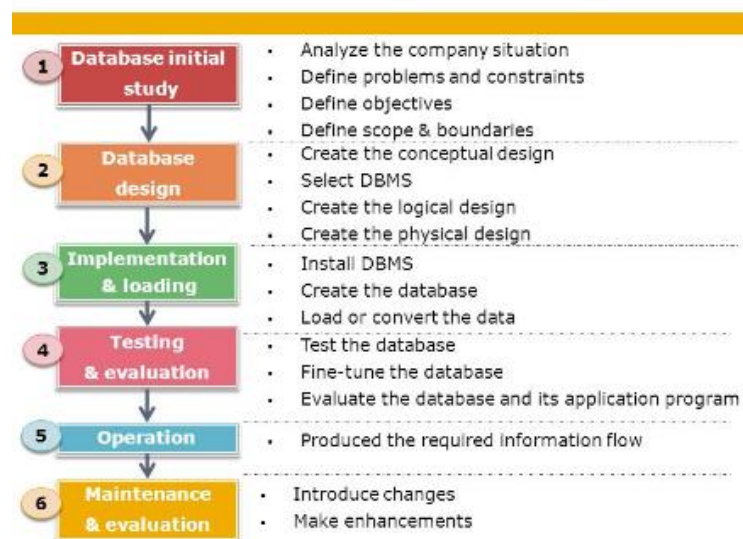
Figure 2: Diagram for DBLC.

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2.7 Project Schedule and Milestons

2.3.1 Project Schedule
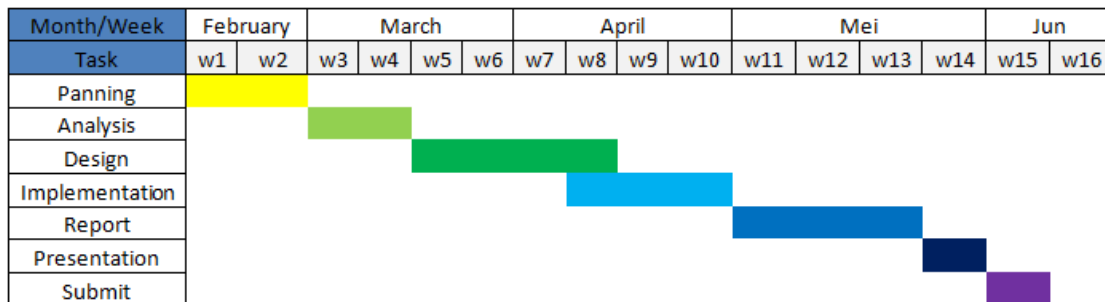
Figure 3: Gantt Chart of CEMS

2.3.2 Milestons

Milestones	Expected Documents	Week
Proposal Corretion And Submission	Proposal	(Week 1 - Week 2)
Chapter 1	Objectives, Scope, Project Significance	(Week 2 - Week 4)
Chapter 2	Project Methodology, Project Schecdule And Milestones	(Week 4 - Week 6)
Chapter 3	Function Requrements, Non-Functional Requirements	(Week 6 - Week 7)
Project Demo	-	(Week 7)
Chapter 4	ERD, Data Dictionary, Normalization, Queries, Graphical User Interface (GUI)	(Week 7 – Week 10)
Project Demo	-	(Week 9 – Week 14)
Psm Report	Chapter 1 – Chapter 4	(Week 12 – Week 14)
Final Presentation	-	(Week 15)
Correction Draff Report	Chapter 1 – Chapter 4	(Week 16)

Table 1: Milestones and Dates

2.8 Conclusion

As a conclusion, this chapter is discussing about the literature project methodology and planning that are using to define the planning of the project. We will see the agile model to develop our Collage Event Management System. During analysis phase, we analyse the problems of the current manual system. Then, we try to design the solutions for the problem in the design phase. After that, we will start our implementation phase by implement database and interfaces for our system. After completing our system, we will test our system by unit testing and system testing during testing phase. Lastly, we will maintain our system as in the maintenance phase.

CHAPTER III

ANALYSIS

3.6 Introduction

Database system analysis is one of the process in developing the system. In database system analysis explain about the current system and the new system that will be developed. Database system analysis will be detailed in terms of the flowchart for the current system. It will be easily determining the weakness of the current system so that can be improve in the new system that will be develop. In this report also provide the context diagram and data flow diagram for the to be system. Analysis phase is the process that identify the needs for the system in term of users, organizations, or others.

3.7 Problem Analysis

i) Repeating process of writing paperworks.

The current system that they are using now is a manual system as they need to write paperwork for every event with the same format.

ii) Using paper to take event attendance

Currently they just take the participants attendance using paper and will key in the data after the event finish. It will take a long time to key in the data into the system because they need to collect from participants and type attendance into system.

iii) Difficulty to spread event information to get participants

They need to promote and spread the information of event using poster to get paticipants.

iv) No reporting function

They need to write the report after the event finish based on the event feedback they get form participant. It will take a long time to write the report because they have to key in the feedback data first and do analysis manualy.

3.8 The proposed improvements/soluions

Context diagram
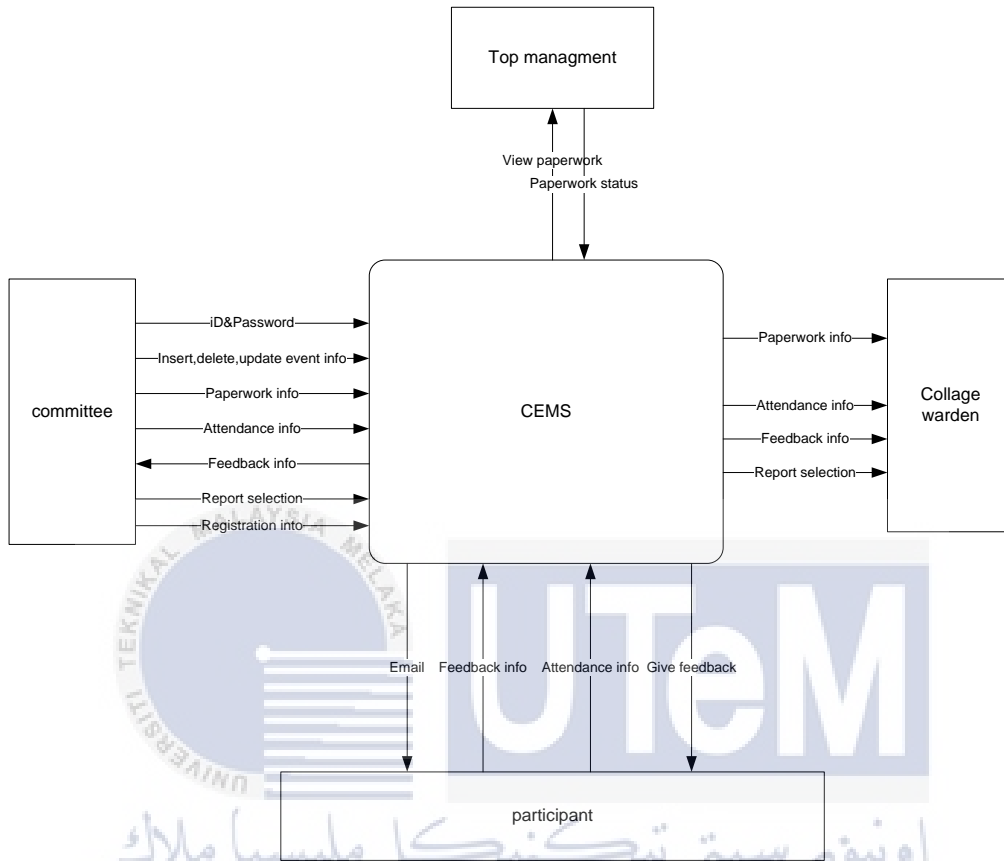
Figure 3.3 : context diagram

Dfd level 0
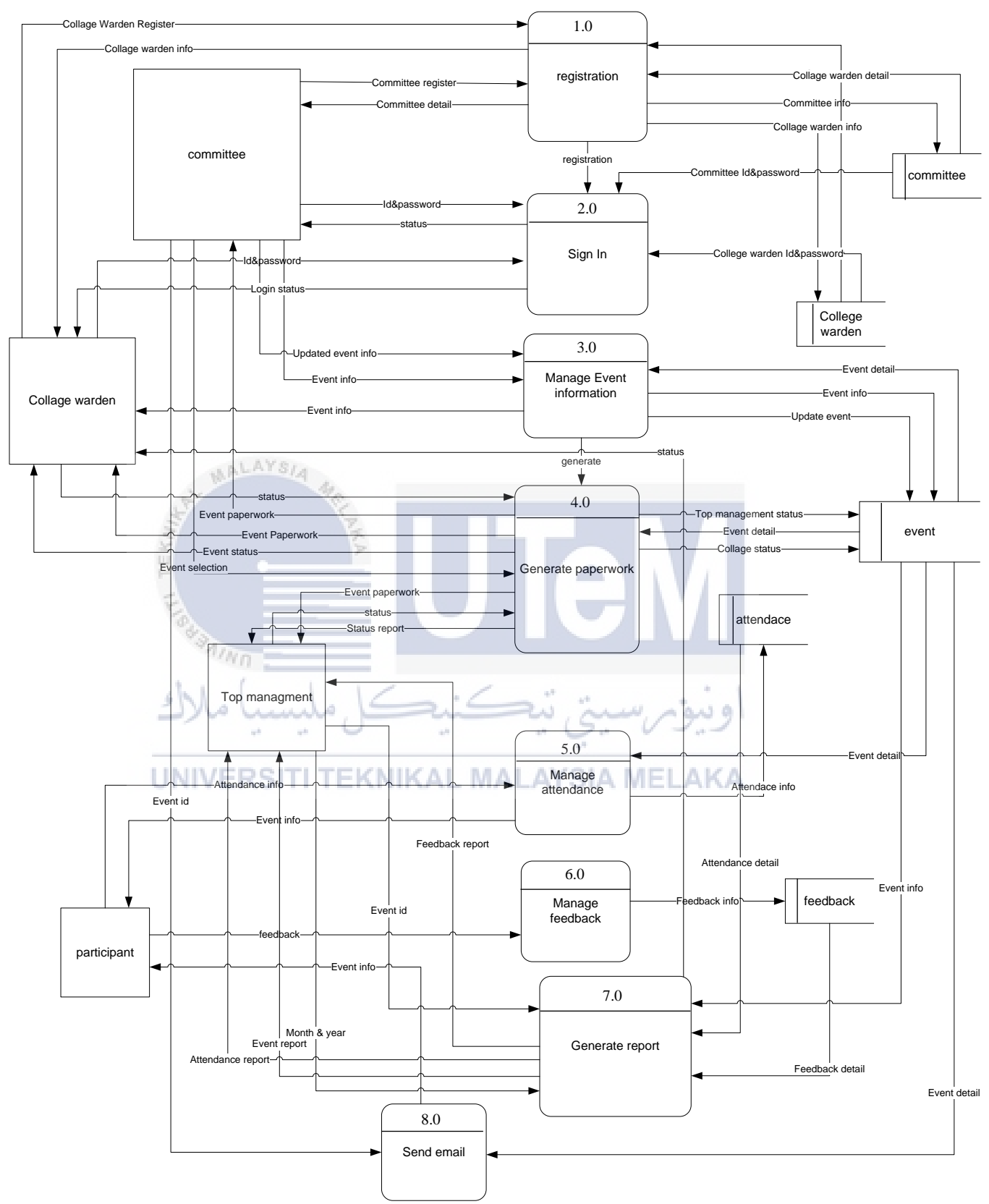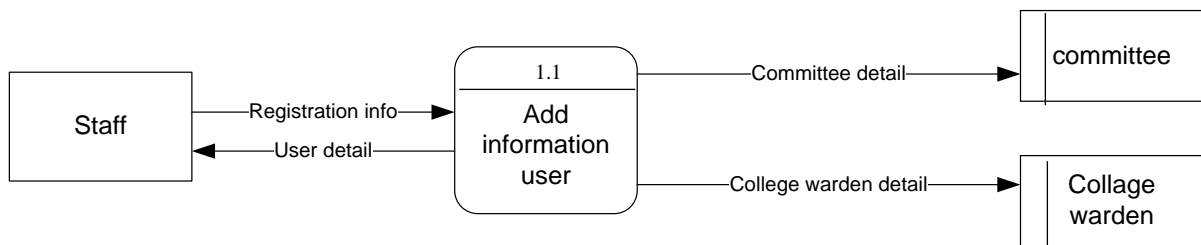

Figure 3.3.1: DFD level 0

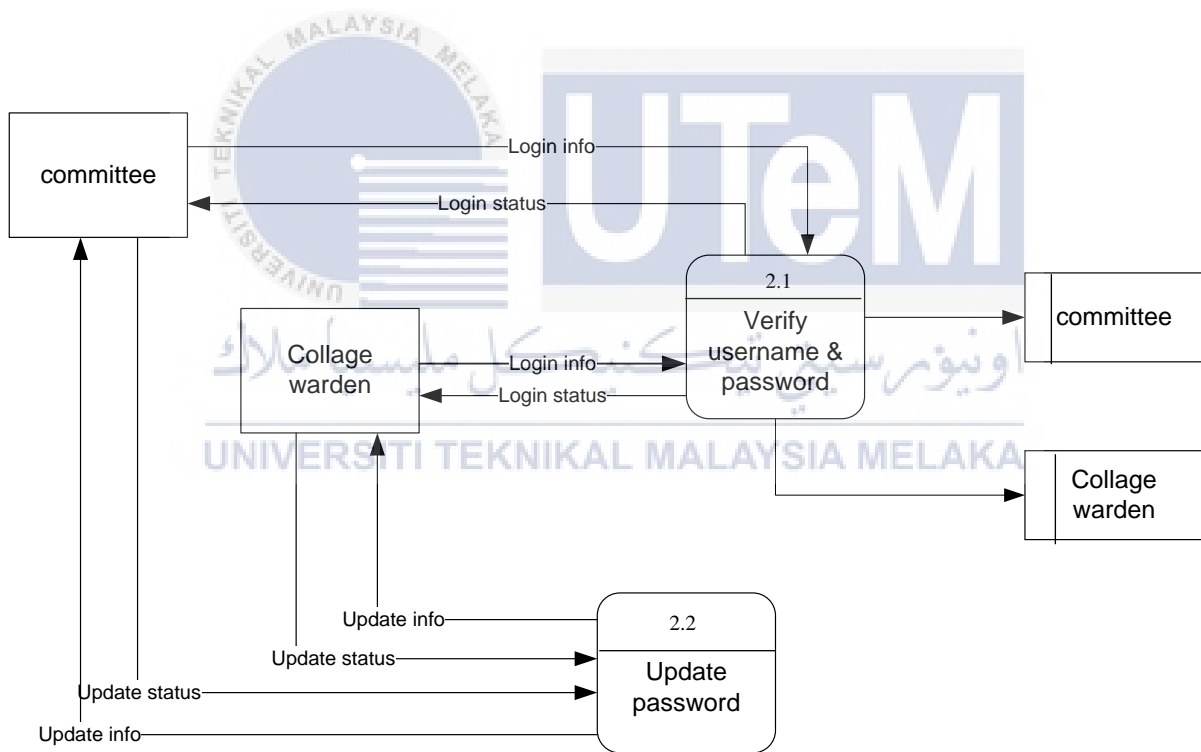**DFD level 1**

Figure 3.3.1: DFD level 1 of process 1
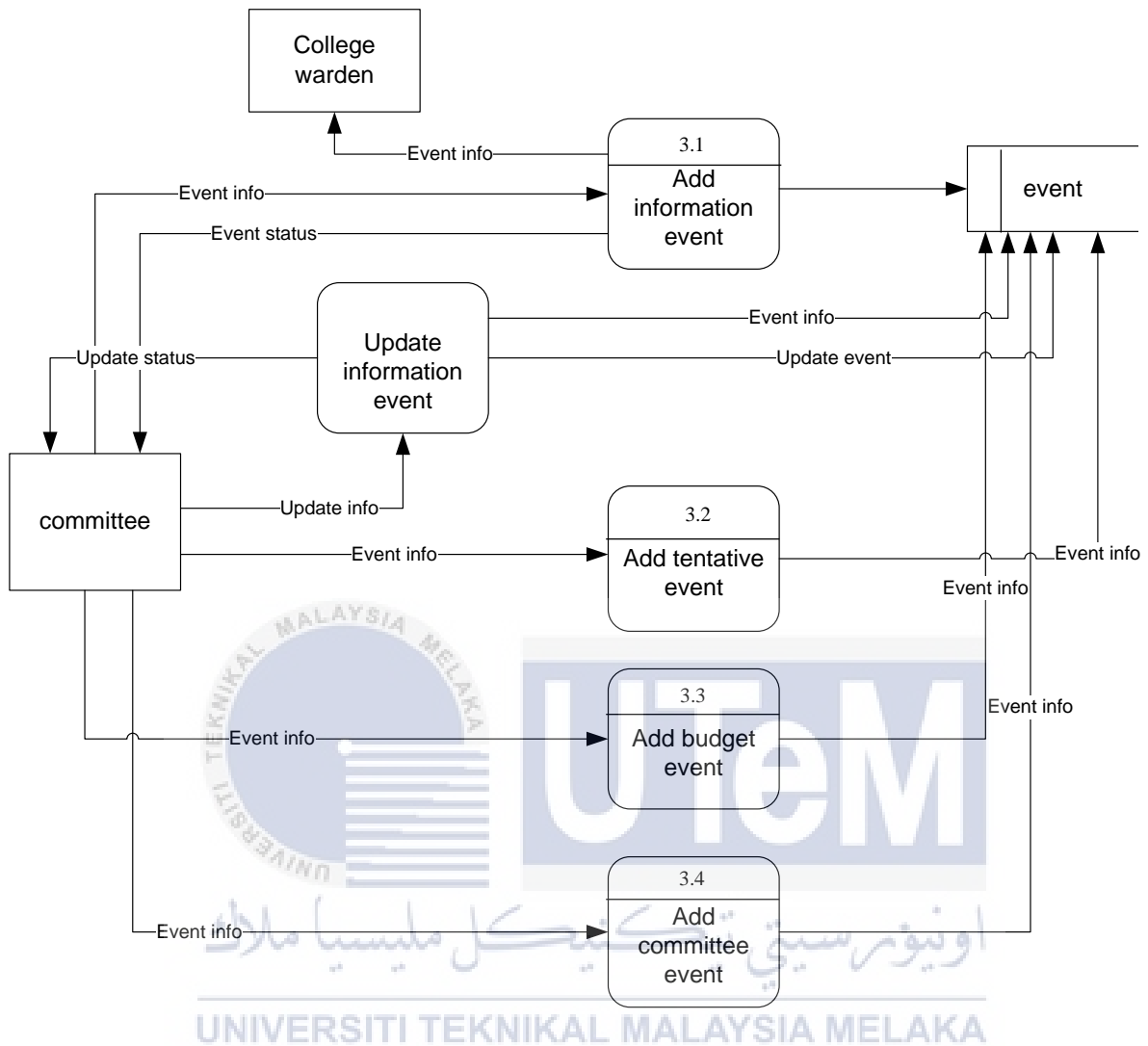

Figure 3.3.1: DFD level 1 of process 2
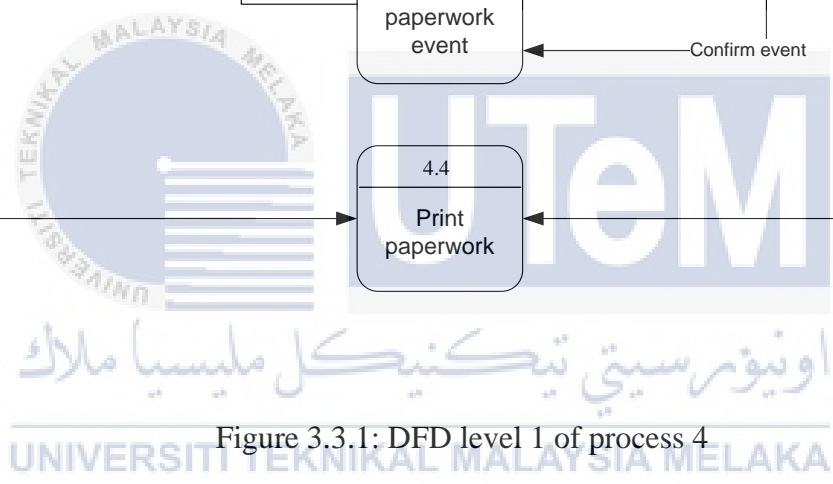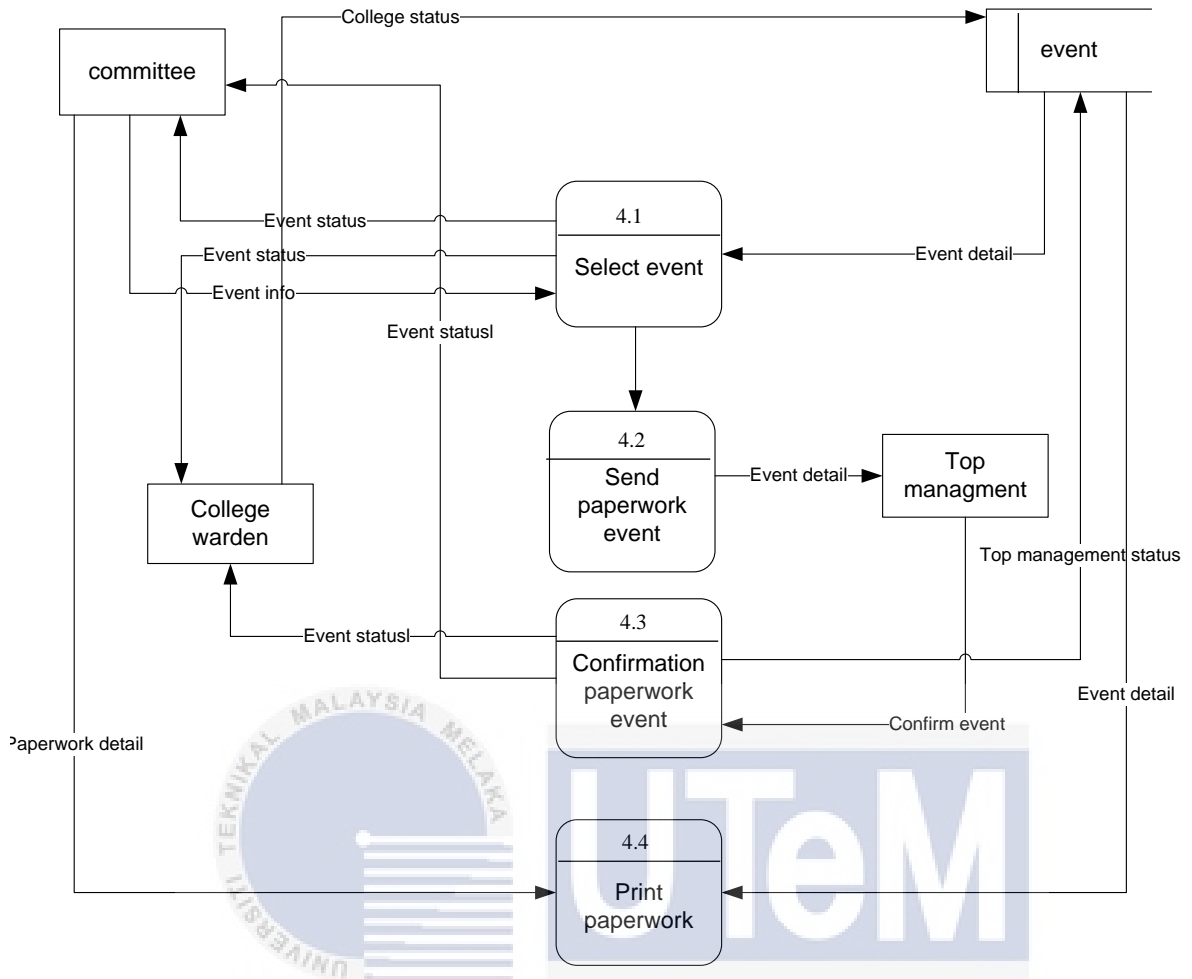
Figure 3.3.1: DFD level 1 of process 3

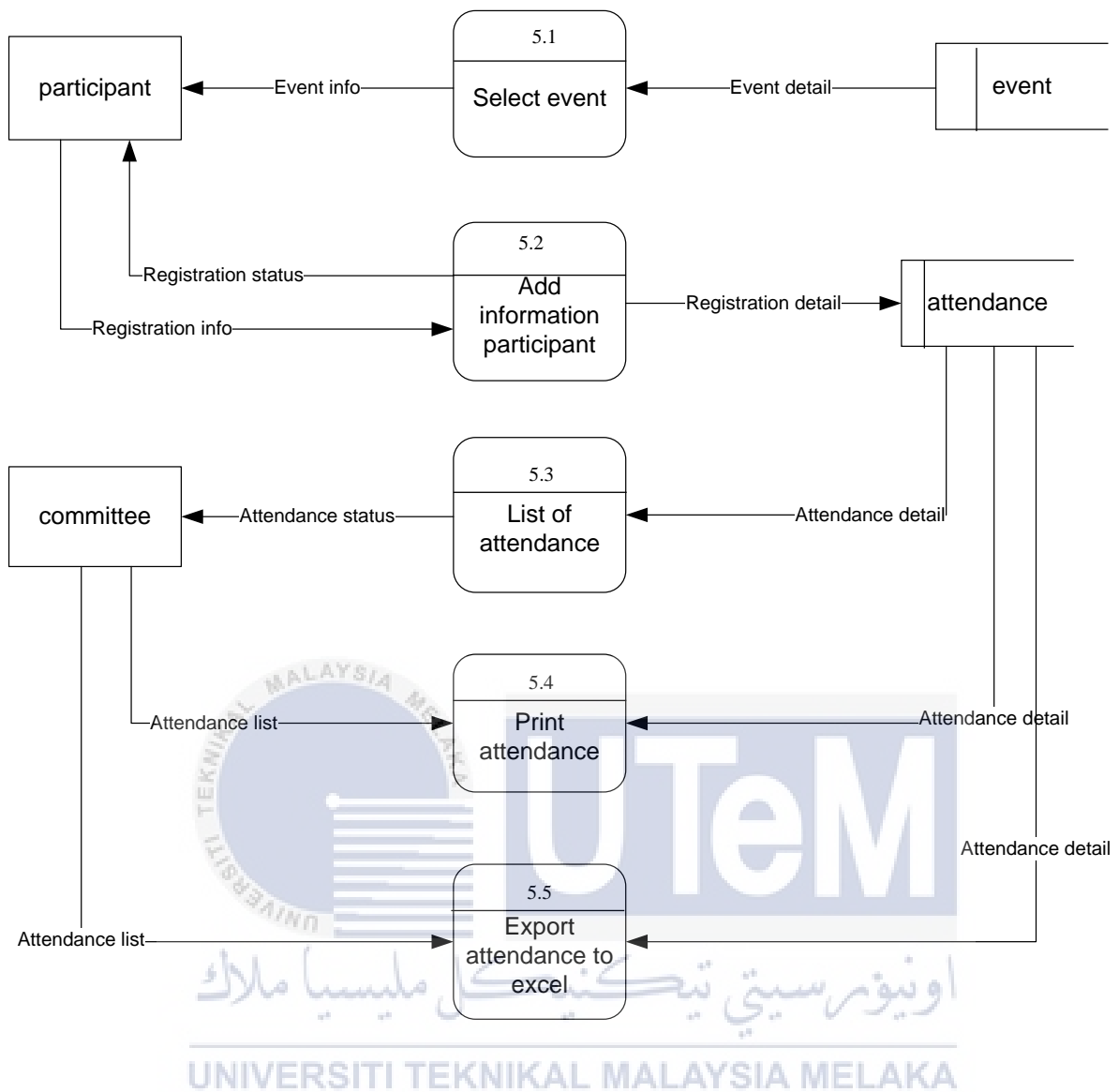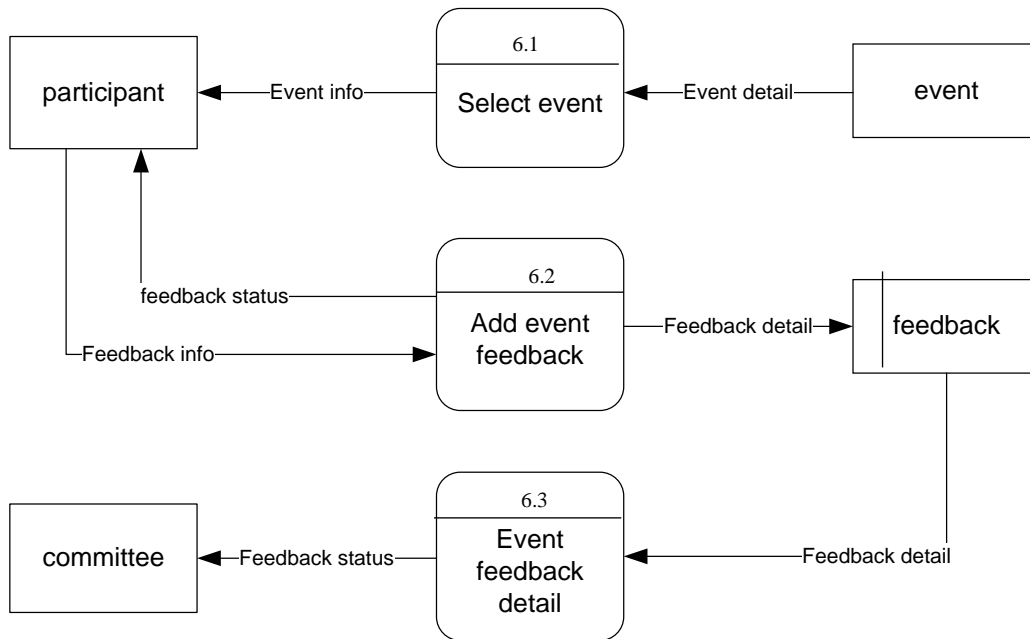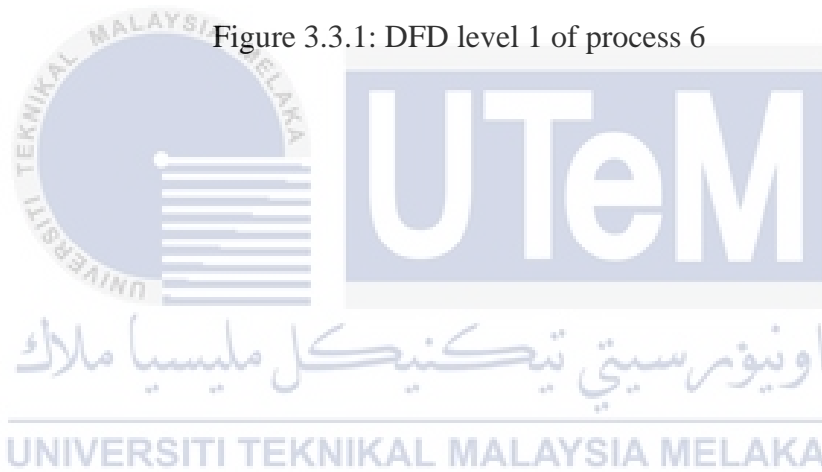Figure 3.3.1: DFD level 1 of process 4

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Figure 3.3.1: DFD level 1 of process 5

Figure 3.3.1: DFD level 1 of process 6
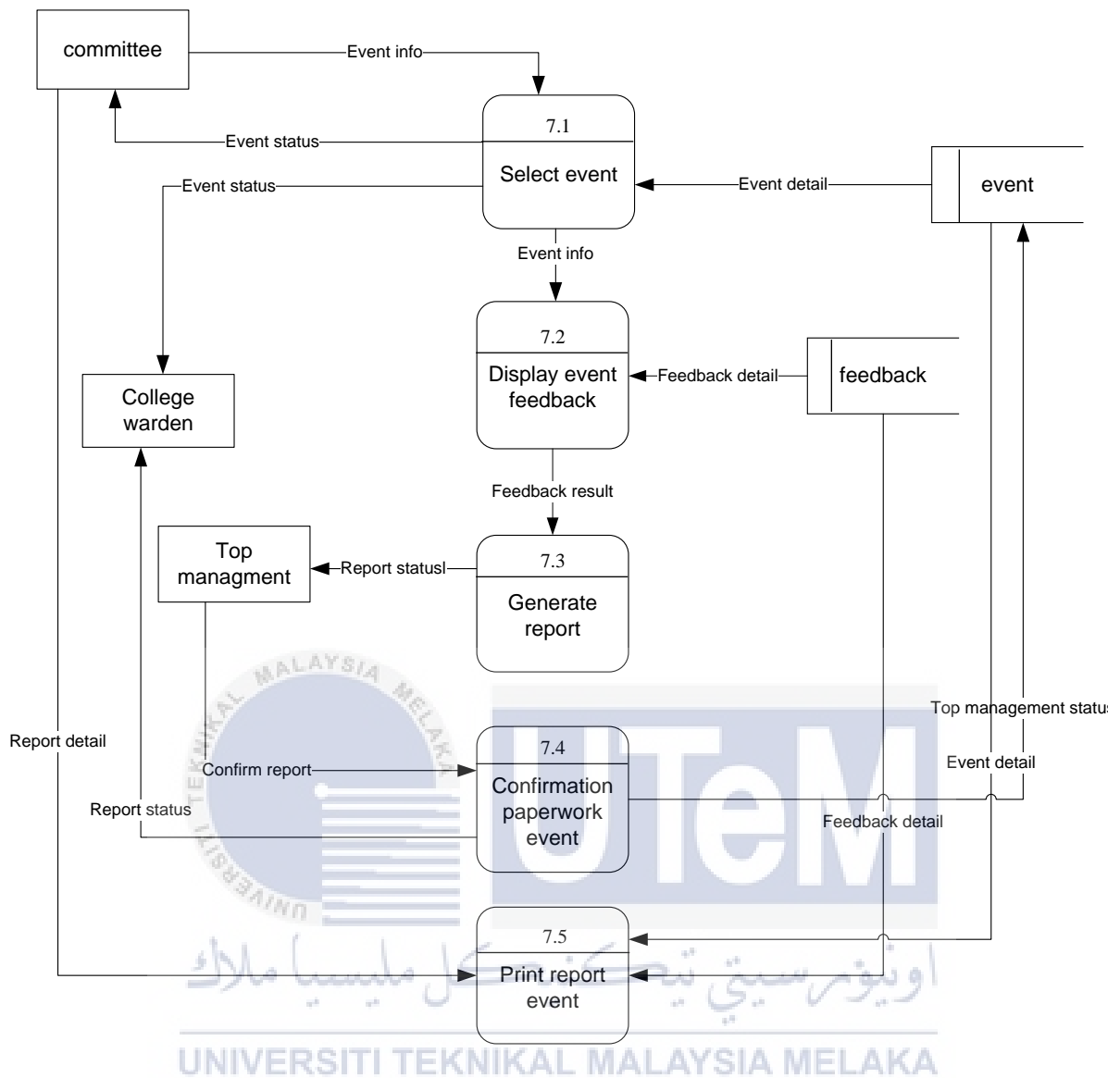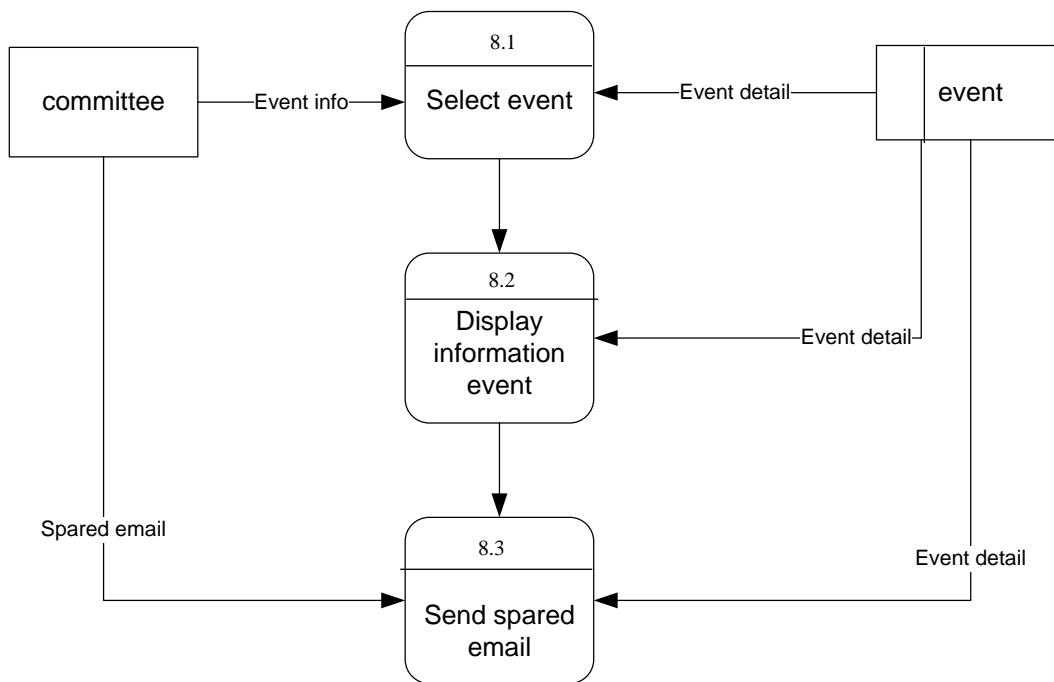
Figure 3.3.1: DFD level 1 of process 7

Figure 3.3.1: DFD level 1 of process 8

3.9 Requirement analysis of the to-be-system

3.9.1 Functional Requirement (Process Model)

Requirement	Description
User authentication	The system has three kinds of user which is staff (collage warden, top management), student (committee) and participant (staff, student, other). Each user has different privilege.
Event information	This module enable organizer (collage warden and committee) to insert, delete and update the detail of event information.
Generate paperwork	The system enable user to generate paperwork's base on the event information inserted form event information module. The paperwork will be generated with the correct format. This module also generates the paperwork into the pdf format.
Attendance event	The system enable participants to insert attendance into system. Then the attendance can be export the attendance list into excel format base on the attendance that content the list of participant information. It will have three type of attendance.

Feedback event	This module enable participants to give feedback based on event.
Generate report	This system can generate reports based on the feedbacks from participant and event attendance after finish event. The report will be generated with the correct format. It also will export the report into the pdf format. The feedback is based on few questions that cover on the hole event activities such as management and utilities. The report that are generated by the system are the numbers of participants male and female by event.

3.9.2 Non-functional requirement

Coding Standards

Requirement	Description
System coding	The system will be developed using php and mysql

Integrity

Requirement	Description
Data integrity	Data should always be consistent 100% through all the interface components.

Security

Requirement	Description
Data Security	Personal information of the committee and collage warden should be secured.

Usability

Requirement	Description
Portability	The system should be able to operate in different platform

Reusability

Requirement	Description
Reusablility	The system must have common component. The component is shared across the system (eg. Sign in)

3.10 Conclutsion

For the conclusion in this chapter show that this chapter is very important to develop system more efficient, stable, and more use of function to the end user. After that, this chapter also can achieve the objective to develop the system more easily because the developer will understand the flow of the system run.

The flowchart of the current system is explained about the flow of the system that they use. Therefore, the context diagram in this report explain about the whole new system that already be improve after investigating the flow of the current system. Besides, the data flow diagram (DFD) is explain more detail about the new system.

CHAPTER IV
DESIGN

4.6 Introducion

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity.

The term database design can be used to describe many different parts of the design of an overall database system. Principally, and most correctly, it can be thought of as the logical design of the base data structures used to store the data. In the relational model these are the tables and views. In an object database, the entities and relationships map are directly to object classes and named as relationships. However, the term database design could also be used to apply to the overall process of designing, not just the base data structures, but also the forms and queries used as part of the overall database application within the database management system (DBMS).

4.7 System Architecture Design
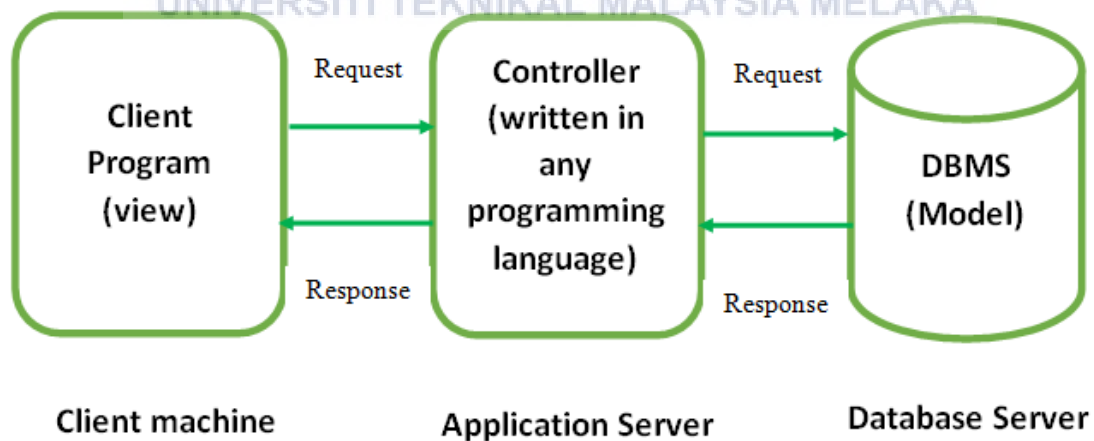
Figure 4.2.1: 3-tier System Architecture Design of DBMS

As shows in figure above, three-tier architecture is a client-server architecture in which the functional process logic, data access, computer data storage and user interface are developed and maintauned as independent modules on seprate platform. Other than that, three-tier architecture ia a software design pattern and a well-establised software architecture.

The three-tier architecture also allow any one of the three tiers to be upgraded or replaced independently. The user interface is implement on a desktop PC and uses a standard graphical user interface with different modules running on the application server. The relational database managment system on the database server contains the computer data storage logic. The middle tier are usualy multitiered.

Three layer in three tier architecture

- client tier : Occupies the top level and display information related to services availabe on a website. This tier communicates with other tiers by sending result to the browser and other tier in the network.
- Application tier : also called the middle tier, logic tier, business logic or logic tier, this tier is pulled from the presentation tier. It controls application functionality by performing detailed processing.
- Database tier : houses database server where information is stored and retrived. Data in this tier is kept indepent of application servers or business ligic.

[https://www.techopedia.com/definition/24649/three-tier-architecture]

4.8 Database Design

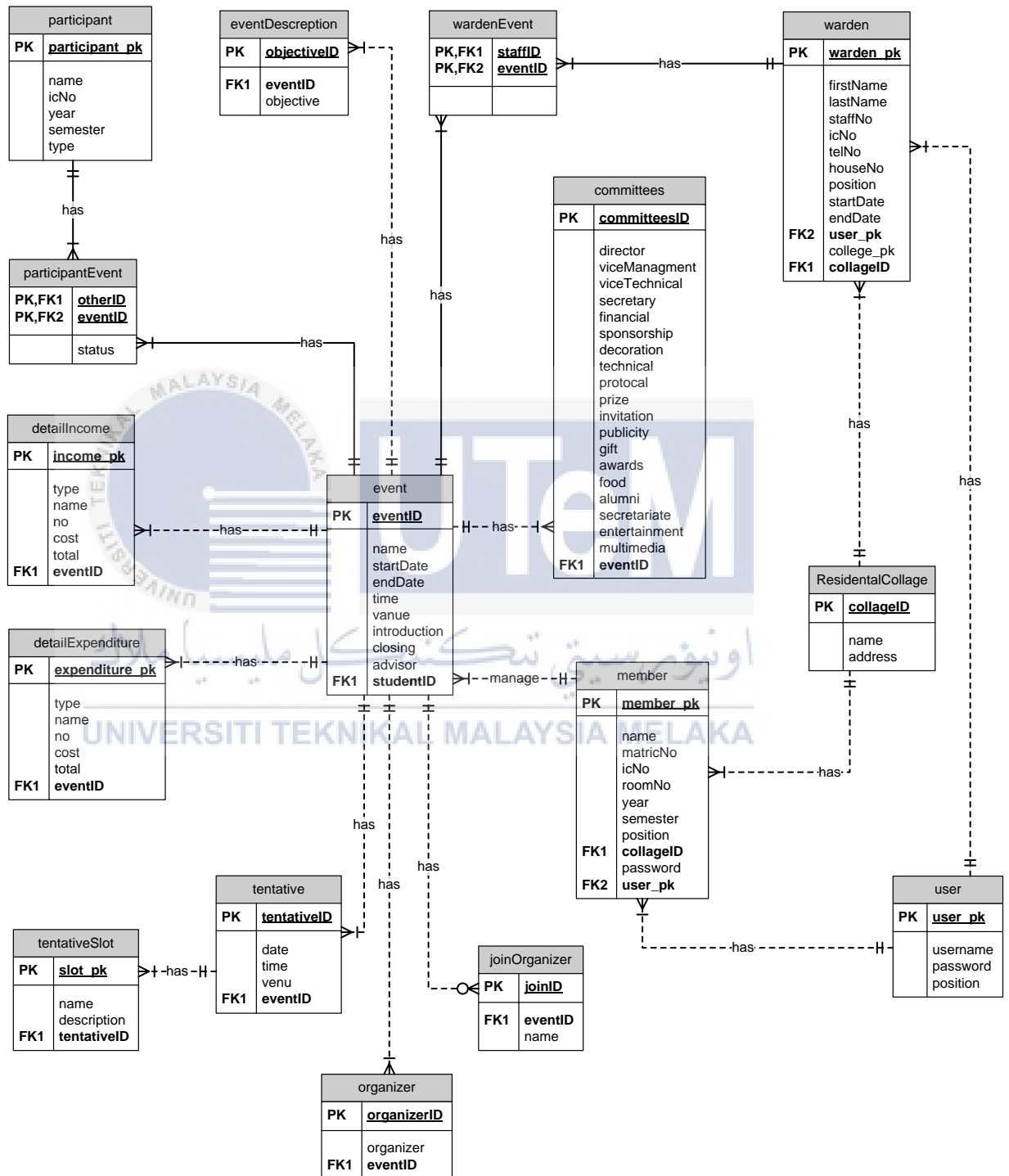### 4.8.1   Conceptual Design

Figure 4.3.1: Entity Relationship Diagram (ERD)

Business Rule

- Each warden has one and only one user.
- Each user has one or many warden.
- Each member has one and only one user.
- Each user has one or many member.
- Each event has one or many event Description.
- Each event description has one and only one event.
- A member can manage one or many event.
- One event manage by one and only one memeber.
- Each warden has one or many warden event.
- Each warden event has one and only one warden.
- Each warden event has one and only one event.
- Each event has one or many wardent event.
- One event has one or many committees.
- Group of committe has one and only one event.
- Each participant has one or many participant event.
- Each participant event has one and only one participant.
- One event has one or many participant event.
- Each paticipant event has one and only one event.
- Each event has one or many detail income
- Each Detail income has one and only one event.
- Each event has one or many detail expenditure
- Each Detail expenditure has one and only one event.
- Each warden has one and only one residental collage.
- Each residental collage has one or many warden.
- Each member has one and only one residental collage.
- Each residental collage has one or many member.
- Each organizer has one and only one event
- Each event has one or many organizer.
- Each join organizer has one and only one event
- Each event has zero or many join organizer
- Each tentative has one and only one event
- Each event has one or many tentative

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- Each tentative slot has one and only one tentative
- Each tentative has one or many tentative slot

4.8.2   Logical Design

Data Dictionary

Entity Name	Attributes	Data Type & Length	Description	Reference
warden	staffID	int(12)	Primary key for warden	
	Name	varchar2(100)	Name of warden	
	staffNo	varchar2(100)	Staff no of warden	
	icNo	int(12)	Identity no of warden	
	noTel	varchar2(50)	Phone no of warden	
	collageName	varchar2(100)	Collage name of warden	
	address	varchar2(250)	Address of warden	
	position	varchar2(100)	Position in collage of warden	
User	User_pk	int(5)	Primary key of user	
	Username	varchar2(100)	Username of user	
	Password	varchar2(100)	Password of user	
	Position	varchar2(100)	Position of user	
Member	memberID	int(5)	Primary key of member	
	name	varchar2(100)	Name of member	
	matricNo	varchar2(10)	Matric no of member	
	roomNo	varchar2(30)	Room no of member	
	year	int(4)	Year study of member	
	semester	int(10)	Semester study of member	
	position	varchar2(30)	Position in collage	
	collageID	int(5)	Foreign key of member	Collage
Residential collage	collageID	Int(5)	Primary key of college	
	name	varchar2(100)	Name of college	
	address	varchar2(250)	Address of collage	

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Event	eventID	Int(5)	Primary key of event	
	name	varchar2(100)	Name of event	
	date	date	Date of event	
	time	varchar2(50)	Time of event	
	vanue	varchar2(100)	Vanue of event	
	introduction	varchar2(350)	Introduction of event	
	closing	varchar2(350)	Closing of event	
	advisor	varchar2(250)	Advisor of event	
Event discerption	objectiveID	Int(5)	Primary key of event desc	
	eventID	Int(5)	Foreign key of event	Event
	objective	varchar2(100)	Objective of event	
Participant Event	otherID	Int(5)	Primary key of participant event	
	eventID	Int(5)	Foreign key of event	Event
Committee	committeeID	int(5)	Primary	
	director	varchar2(100)	Director of committee	
	viceTehnical	varchar2(100)	viceTehnical of committee	
	secretary	varchar2(100)	secretary of committee	
	financial	varchar2(100)	financial of committee	
	sponsorship	varchar2(100)	sponsorship of committee	
	decoration	varchar2(100)	decoration of committee	
	technical	varchar2(100)	technical of committee	
	protocol	varchar2(100)	protocol of committee	
	prize	varchar2(100)	prize of committee	
	invitation	varchar2(110)	invitation of committee	
	publicity	varchar2(100)	publicity of committee	
	gift	varchar2(100)	gift of committee	
	awards	varchar2(100)	awards of committee	
	food	varchar2(100)	food of committee	
	alumni	varchar2(100)	alumni of committee	
	secretariat	varchar2(100)	secretariat of committee	
	entertainment	varchar2(100)	entertainment of committee	
	multimedia	varchar2(100)	multimedia of committee	

	eventID	int(5)	Foreign key of event	Event
Tentative	TentativeID	Int(5)	Primary key of tentative	
	Date	Date	Date of tentative	
	Time	varchar2(100)	Time of tentative	
	Venu	varchar2(100)	Venue of tentative	
	eventID	int(5)	Foreign key of event	Event
Detailincome	Income_Pk	Int(5)	Primary key of income	
	Type	varchar2(100)	Type of income	
	Name	varchar2(100)	Name of income	
	No	varchar2(100)	No of income	
	Cost	varchar2(100)	Cost of income	
	Total	varchar2(100)	Total of income	
	eventPK	Int(5)	Foreign key of event	Event
detailExpenditure	Income_Pk	Int(5)	Primary key of expenditure	
	Type	varchar2(100)	Type of expenditure	
	Name	varchar2(100)	Name of expenditure	
	No	varchar2(100)	No of expenditure	
	Cost	varchar2(100)	Cost of expenditure	
	Total	varchar2(100)	Total of expenditure	
	eventPK	Int(5)	Foreign key of event	Event
Organizer	organizerID	Int(5)	Primary key of organizer	
	eventID	Int(5)	Foreign of event	Event
	organizer	varchar2(100)	Organizer name	
joinOrganizer	jointID	Int(5)	Primary key of join	
	name	varchar2(100)	Name of join	
	eventID	Int(5)	Foreign key of event	Event

Table 4.3.2: Data Dictionary:

4.8.3 Physical Design

MySQL Database is the database choose for this collage event managment system. MySQL is an open sorce relational database managment system (RDBMS) based on structured query language (SQL).

MySQL runs on virtually all platforms, including Linux, UNIX, and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web-based applications and online publishing and is an important component of an open source enterprise stack called LAMP. LAMP is a Web development platform that uses Linux as the operating system, Apache as the Web server, MySQL as the relational database management system and PHP as the object-oriented scripting language. (Sometimes Perl or Python is used instead of PHP.)

This system using the basic function which is insert, delete, and update and also implement stored procedure for each flow of system. Stored procedures are compiled once and stored in executable form, so procedure calls are quick and efficient. Executable code is automatically cached and shared among users. This lower memory requirements and invocation overhead. By grouping SQL statements, a stored procedure allows them to be executed with a single call. This minimizes the use of slow networks, reduces network traffic, and improves round-trip response time. OLTP applications benefit because result set processing eliminates network bottlenecks. Additionally, stored procedures enable you to take advantage of the computing resources of the server. For example, you can move computation-bound procedures from client to server, where they will execute faster. Likewise, stored functions called from SQL statements enhance performance by executing application logic within the server.

This system also implement some trigger. Triggers can be used as an alternative method to check the integrity of data. Triggers are standard actions performed by more than one application program. By coding the action once and storing it in the database for future use, if we need to change the functionality or business logic you need to change only the corresponding trigger program instead of each application program's triggers provide an alternative way to run scheduled tasks. You don't have to wait to run the scheduled tasks because the triggers are invoked. Automatically before or after a change is made to the data in tables' triggers are useful to audit the changes of data in tables. Triggers are also used for calling stored procedures.

4.9 Graphical User Interface (GUI) Design

Navigation flow

college event management system

- committee
  - profile
    - update password
  - event
    - list event
    - add event
    - add tentative
    - add budget
    - add organizer
  - paperwork
    - list paperwork
    - generate paperwork
  - attendance
    - list attendance
    - generate attendance
  - feedback
    - list attendance
    - generate attendance
  - report
    - list report
    - generate attendance
  - logout

- college warden
  - committee
    - organization
    - add organization
  - event
    - list event
  - paperwork
    - list paperwork
  - feedback
    - list feedback
  - report
    - list report
  - logout

- top management
  - profile
  - event
    - list event
    - report event
  - logout

- staff
  - profile
  - collage warden
    - add college warden
    - list college warden
  - committee
    - add committee
    - list committee
  - logout

User interface

4.10   Conclusion

Once all the requirements have been collected and analysed, the next step is to create a conceptual schema for the database, using a high level conceptual data model. This phase is called conceptual design. The result of this phase is an Entity-Relationship (ER) diagram. It is a high-level data model of the specific application area. It describes how different entities are related to each other. It also describes what attributes each entity has. It includes the definitions of all the concepts of the application area.

During or after the conceptual schema design, the basic data model operations can be used to specify the high-level user operations identified during the functional analysis. This also serves to confirm that the conceptual schema meets all the identified functional requirements. There are several notations to draw the ER diagram. The result of the logical design phase is a set of relation schemas. The ER diagram or class diagram is the basis for these relation schemas.

The goal of the last phase of database design, physical design, is to implement the database. At this phase one must know which database management system (DBMS) is used. For example, different DBMS's have different names for datatypes and have different datatypes.