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**ASSOSA UNIVERSITY**

**COLLAGE OF COMPUTING AND INFORMATIC**

**DEPARTMENT OF INFORMATION SCINCE**

**DEVELOPING WEB BASED VITAL EVENT REGSTRATION SYSTEM FOR ASSOSA TOWN**

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A project submitted to department of information science, College of computing and informatics, Assosa University in partial fulfillment for the award of degree of Bachelor in Information Science.

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# APPROVAL SHEET

This is to certify that the project work prepared by group twomembers of Information Science students entitled: “Developing Web Based Vital Event Registration System for Assosa Town” is submitted in partial fulfillment of the requirements for Degree of Bachelor of Science in Information science complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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# ABBREVIATION

BGRS: Benshanguligumuze Regional State.

GUI: Graphical User Interface.

SDLC: Software Development Life Cycle.

WBVERS: Web Based Vital Event Registration System.

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# ABSTRACT

*This research project has be done by Assosa University department of information science  
under graduating students. Developing web based vital event registration of assosa town to provides a simple and efficient way of facilitating event registration service.Vital event registration is the systematic, continuous, permanent, compulsory and**universal recording of the occurrence and characteristics of vital events (live births, deaths, fetal**deaths, marriages, and divorces) and other civil status events pertaining to the population as**provided by decree, law or regulation, in accordance with the legal requirements in the town.*

*The main objective of this project is to change the paper-based registration system to web based registration system, And the system can centralize information in one place. To identify the problems and develop the vital event registration system SDLC have such as: identifying the problem, requirement analysis, system design, activity is performed. This life cycle helps to identify what the problem faced in the existing system and give the guide line and required information to develop the proposed system. We develop this system by using object-oriented tool like edromax and language such as php, html, css, js and mysqli as a data base server. The developed aweb based vital event registration system enables the people live in Assosa town to use the allowed service that means everyone can view news that are posted by end user. After this the Encoder can generate the events to the higher managers by using the developed system.* *Finally, we recommend that to include registering still birth, fetal death, and separation, will contribute for a complete vital statistic. Letting the system to automatically inform the registration of vital events to other systems like court systems and Keble management system, to use XML for better interfacing with other systems, to reappearing a backup for the system.to develop electronic vital event registration.*

# CHAPTER ONE

# INTRODUCTION

# 1.1. Background of Study

The age of information has brought lots of opportunities to the world, which are revealed by Information and Communication Technology (ICT). The vital role that ICT can play in facilitating and accelerating socio-economic development has been recognized worldwide. Developed countries such as Canada, Australia, and USA have benefited a lot from the opportunities that ICT brought (Prasanta M. K. S., 2017).

On the other hand, developing countries like Ethiopia are facing new challenges with their socio-economic development as a result of the up-coming information age. To satisfy the demand of the current global economic system, developing countries have to have ICT as a crucial tool and means to eradicate poverty, speedup socioeconomic development, provide effective and efficient public services, implement E-Government, and speed up good governance. E-government is the delivery of government services and information to the public using electronic means. ICT is the integral part of e-government. Thus, it brings the government closer to the people through major improvements in the delivery of government services, and information provision to citizens and organizations in effective and convenient way (2019).

Among many of the e-government services, vital event registration application which is characterized as Public-Interface Services Application (PISA) is the main e-government application for the provision of e-government related services and information to the public at large (Satish J, 2015).

Vital events are the events those are main happenings in the life time like birth, death and marriage (Wang, 2003). Since these kinds of events are the main components for any personal profile, they should be registered well. From the time when Assosa town vital event registration office is organized as a scope of town the office is registering the vital events. Now the event registrations are available in the town scope. Despite governmental organization is assigned which is eligible for registering vital events, still there are people who are using other institutions (hospitals and churches) registrations as eligible for many purposes. For example, using church’s baptizing certificate or hospital’s vaccination certification as a birth certification. Currently the office is open for registering events like birth, marital status (single, married) and death. According to the office the event registration is carried using paper works, which may lead to data loss. So, the we initiate to change the manual registration process into computerized for the sake of overcoming the type of problems.

**1.2. Statement of the problem**

Even though, Ethiopia is among the countries that have not installed national as well as regional civil registration and vital statistics systems, there were uncoordinated and unorganized administrative attempts that were targeted on the issuance of marriage, birth and death certificates by municipalities. Its importance as a rights issue and as part of an information system for planning and policy formulation is therefore not widely grasped. The practice of birth, death and marriage certificates being issued by churches, hospitals and municipalities is used as a replacement of vital event registration. But issuance of certificates is not based on vital events record (Bequele, 2005).

According to assosa town vital event registration administrator Assosa is among the town that have not installed vital event registration systems there were uncoordinated and unorganized administrative attempts that were targeted on the issuance of marriage, birth and death certificates by municipalities. Its importance as a rights issue and as part of an information system for planning and policy formulation is therefore not widely grasped.

In Assosa town the practice of birth, death and marriage certificates those issued by churches, hospitals and kebeles are manual system. Since such vital event registration is not permanent, continuous, secured and automated, so the records are not enough to make decisions and does not considered as confidential records. It has many problems like take lot of time to retrieve data, difficult to prepare report that mean how many people are register birth, death, marital status in weekly, monthly and annually, there is reduction in sharing information and customer services, duplication of data entry, inconsistency in data entry, room for errors, missing information, Large ongoing staff training cost, take a lot of space, the registered data lost because it is stored as hard copy, difficult for management, and the vital event information are not centralized in one office (example: - hospitals, church, kebeles).Generally the current vital event registration system in assosa town does not provide satisfactory service. Finding the mechanism for solving problems that mentioned on the above the project team will initiate to develop this web based vital event registration system for assosa town.

## 1.3. Objective of the project

### 1.3.1. General objective of the project

The general objective of the project is to design web based vital events registration system for Assosa town.

### 1.3.2. Specific Objectives of the project

To reach the general objective the following specific objectives are set.

* To analyze and specify the gathered requirements of the system.
* To design the propose system.
* To implement the design of the propose system.
* To test the propose system and evaluate the performance and effectiveness of the propose system.

## 1.4. Scope of the project

The system applicable for register and managing vital events such as (birth, marital status, adoption and death) within Assosa town. It covers to provide the following features: Include registration and certification of vital events like marriage, divorce and adoption, Access to individual records and reports based on privilege level of customers, generate report based on some criteria. It not applicable for other works which are not related to vital events. The project started on December 2019 and finished on June 2019.

## 1.5. Significance of the project

This system helps in a good number of ways to ease register of vital event in Assosa Town as the web based and centralized register system help customers, employees and the town administration. The proposed system save time, avoid workload of employees, avoid decentralized of information in different area such as (church, hospital, kebeles), avoid data lost and increase accuracy of data.

## 1.6. Beneficiaries of the project

After completion of this research project, it provides benefits to different users such as:

**user**: -They save time since they serve service quickly than the previous system. It also uses to store data as secure in computerized manner.

**Employees:** - The vital event registration workers get a simple and helpful tool during retrieve, updating data, register event.

**Company**: - The town administration, both governmental and nongovernmental Organizations benefited because it able to control all vital events of the town in centralized and computerized manner.

## 1.7. Feasibility of the study

To change the manual system in to computerized the propose system operational, economical, technical and politically feasible.

### 1.7.1. Economic Feasibility

After the project team completes the project, it is economically feasible. It implies that it reduces transportation cost of the enumerators, it reduces the cost of paper, pen, and other resources.

### 1.7.2. Technical feasibility

In order to made our system technically feasible the project team use easy and user-friendly system development tools like the database (MySQLI), the programming language (PHP), the System modeling (UML) tools and other software and hardware requirements. Since all features are available on web the client doesn’t need to install other applications rather than a web browser. So, it is technically feasible.

### 1.7.3. Operational Feasibility

To make the system operationally feasible the we develop a user-friendly interface that can be implemented easily and perform tasks simply by end user. So, our propose system operationally feasible.

### 1.7.4. Political Feasibility

The system is political feasibility since it does not violet or contradict any law, regulation, custom, values of Ethiopian constitution and statistical agency. So, our propose system politically feasible.

## 1.8. Definition of Term

**Vital events**: are the events those are main happenings in the life time. It refers to the live birth, death, fetal death, marriage, divorce, adoption, legitimation, recognition of parenthood, annulment of marriage, or legal separation (1991).

[**Adoption**](https://adoption.com/guides) :it is a legal process which transfers parental responsibility from the child’s birth parents to their adoptive parents. The Adoption Order is granted by a court when the child have been living with the prospective adopters and all concerned, including the child, are happy. Once an Adoption Order is made it cannot be revoked (Devon, 2019).

**Legitimization of birth**: the formal investigating of a person with the status and rights of legitimacy, according to the laws of each country (Devon, 2019).

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1. Introduction

A number of research papers, workshop reports, conference proceedings, journal papers and vital event registration systems have been reviewed to share the opportunities, the standards and experiences on web based vital event registration systems. The practice of both developed and developing countries are reviewed.

## 2.2. Vital Events Registrations

A vital event is a major change in an individual’s status that leads to a change of population size and status. There is no consensus among policy makers and demographers as to what specifically Constitute vital events. The UN Definitions of Vital Events include ten possibilities (Ayalew, 2007).

Live birth: is the complete expulsion or extraction from its mother of a product of conception, death: is the permanent disappearance of all evidence of life at any time after live birth has taken place, fetal death: is death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, Marriage: the act, ceremony or process by which the legal relationship of husband and wife is constituted, divorce: a final dissolution of a marriage, that is, the separation of husband and wife which confers on the parties the right to remarriage, adoption: is the legal and voluntary taking and treating of the child of other parents as one’s own, in so far as provided by the laws of each country, legitimization of birth: the formal investigating of a person with the status and rights of legitimacy, according to the laws of each country and annulment of marriage: is the invalidation or voiding of marriage by a competent authority, according to the laws of each country which confers on the parties the status of never having been married to each other (Ayalew, 2007).

Countries tend to define vital events and registration differently. The UN uses vital events registration to emphasize the necessity to build legal and administrative institutions for a civil society in which the fundamental human rights related to vital events, systematically protected, and thus, vital registration institutionalized. According to the UN, vital events are the foundation of a legal system for establishing the rights and privileges of individuals. Records from that system are also the main and preferred source of continuous vital statistics on live births, fetal deaths, marriages, divorces, legal separations and deaths. A vital registration system requires functional, legal, and administrative institutions, literacy and education, adequate technical infrastructure, and sufficient human and financial resources. In most cases, five major vital elements are codified in vital registration: birth, death, fetal death, marriage, and divorce (Chengzhi Wang, 2016) .

## 2.3. Vital Events Registration in Ethiopia

Ethiopia is among the countries that have not established national as well as regional vital event registration and vital statistics systems. One of the prior requirements for the establishment of a civil registration system in any country is the formulation of compulsory civil registration law. Alongside the law, it is necessary to setup the civil registration and vital statistics administration. With respect to the registration law, even though Ethiopia has not made adequate attempts to devise an independent civil registration law in the past, several articles on the procedures for reporting of the occurrence of vital events, organizational structure, storage, and similar other components of the registration activity were incorporated in the 1960 Ethiopian Civil Code. The vital events that were referred in the Civil Code were birth, death and marriage. Although the Civil Code has incorporated articles on the registration of vital events, the articles that refer to the registration were stated to remain inapplicable, until such time that it is proclaimed in the Nayarit Gazetta. Since then, the Ethiopian Civil Code was left dormant and idle with respect to its section on civil registration (Hassen, 2006) .

They are administrative services primarily driven by the interest or request of individuals for purposes of Administrative and legal support documents. One of the major reasons for such uncoordinated Effort is the lack of adequate human and financial resources that hinder to do coordinated and Sustainable pilot studies that would enable to create national and regional permanent experimental areas of civil registration and vital statistics systems. However, in the past few years’ major diversion in the thinking and practice of civil registration and statistics systems was observed among the judicial bodies as well as policy makers and planners (Hassen, 2006).

Vital event registration system, which is the continuous, permanent and compulsory recording of the occurrence and characteristic of vital events, is the basis for developing legal, administrative and statistical information system that protects and safeguards most rights and privileges of individuals (citizens) endorsed in the numerous conventions and recommendations of the United Nations (UN). Automating such system will improve the correctness, completeness and availability of the record and recording process. Also, it makes the registered data available not only to vital statistics but also to other public agencies that are using the information in their Administration. The proposal presented by Tesfaye is also to take these advantages (Ayalew, 2007).

## 2.4. Related work

Based on the above literature reviews that the project team have studied the vital event must well registered because it is necessary for control people who live in the country also used to protect socioeconomic of the country. In assosa town vital even like birth, death, marriage, adoption and divorce are registered by paper even if there is a vital registration system in another city like Addis Ababa developed by keder in 2011G.C electronic vital event registration and Abdi Makonnen in(2016GC) but it is not installed in assosa town also it is not including the five vital events. Based on this the proposed system register thus the five vital events, give certificate and generate report.

# CHAPER THREE

# PROJECT DESIGN AND METHODOLOGY

## 3.1. Description of the study area

This project conducted in Benishangul Gumuz Regional Sate (BGRS) in Assosa town. Assosa is located in 668-kilometer km away from Addis Ababa. The town is located in the south western. Since 1934 Assosa town is administrated by city hall. After 2002 E.C Assosa becomes administrative town. Vital event registration office in Benishangul Gumuz Regional state was established in 2006 E.C within Assosa town. This town registration of vital event control or manage six kebeles those are including in Assosa town.

## 3.2. Data source and methods of data collection

For this system we have collect data from both secondary and primary data sources. The primary data sources collected through interview and observation. The data collected through interview from officer’s worker of vital register about the work process. The data collected through observation by watching the workers how they do and what they are do. The secondary data sources collected from various sources such as: books, research papers, internet by direct observation and document analysis.

**A. Primary Source**

To study the activities involved in the various aspect of the existing manual system we collect Primary data source by the following data gathering techniques:

**Observation**: -This technique is the most reliable fact-finding techniques because we use this method when observing the existing vital event registration system done by employees. In this data gathering method also we have seen the forms that are given to customer.

**Interview: -**This is also anther techniques to collect data by asking information face to face. This data gathering method apply directly contacting with head office of vital register and employee Mir. Lelisa she works in the staff.

**B. Secondary Source**

In this data gathering techniques data are obtained from document analysis of the existing system.

**Document Analysis**: - We have get more information about manually collected files by analyze and collect. We have used document of vital event registration office to collect the background of organization and another website document.

## 3.3. System Analysis

In this stage we have collect factual data, identify problems and suggestions for improving system functionality and also focuses on producing model of a system. The project team explained the existing system’s functional requirements, how the system interacted to external entity (Actor) and nonfunctional requirements. System analysis contains many activities and task that are important to the overall success of vital event registration system. It includes requirements analysis or requirement gathering propose system description.

### 3.3.1 Existing system description

In Assosa town all event registration performed by using manually collecting the necessary information. After collecting the necessary information from customer, the data encoders fill all necessary information in the prepared form paper and usually keeps file as documents. Any activity involved in the registration working through documented stored file is manual. All vital event registration has its form. For example, form used for register birth is expressed below in the figure.

****

Figure 3. 1 Birth form of existing system

**3.3.2. Advantage of existing system**

* It creates opportunities to work because it needs number of workers since it works manual.
* Information become centralized in one office. means existing system ignore certify event from other institutions like (hospital, churches)
  + 1. **Disadvantage of existing system**
* Difficult to data processing, update the registered information for Encoder.
* Data loss: - All the necessary information put as document it lead to data loss.
* Time consuming: the time that uses during search, update event information is more.
* Existing system is working manually as a result error is very high
* Hard to manage data.
* Difficult to generate report.

## 3.3.4. Overview of the new system

We have seen the existing system of vital event registration system of Assosa town and also see different problem, then the team initiate to change the current manual system into web-based system that perform different activities such as: vital event registration, give certificate and report generation. The proposed system develops in order to minimize the problem of existing system which is described in the statement of the problem. Unlike existing system, the proposed system is effective at the time of registration, update, and search. Generally, the new system manages and search files or data’s, provide high data security and reliability, generate report easily and theses makes to minimize the work load of employee, Provide fast service for users and workers during update and search. It has four actors thus are general manager, office manager, encoder and administrator. Generally, the proposed system is: -

* Easily file manage and to easily search files or data’s.
* Capable of providing high data security and reliability.
* System can generate report easily and theses makes to minimize the work load of employee.
* Capable of better providing fast service for users and workers during update, search

### 3.3.5. Functional Requirement

Functional requirement is one type of requirement it describes what the system must do. It refers to the functionality of the new system that means what services it provided to the user. So the proposed system has the different functional requirements such as login, create account for users, deactivate account for users, modify account for users, unlock account, generate report based on system activities, view report, register event based on customers’ information, view event, give electronic certificate based on registered event, send message, view message, add news, update news, view news, logout.

**3.3.6. Non\_ Functional Requirements**

Nonfunctional requirement describes invisible aspects of the system and specification is done to identify aspects that are visible to the user but not directly related to the functionality of the system. These include constraints on the performance of the system, its security, its user interface, its documentation, the resources it consumes, and its quality. This constraint does not have direct impact on the functionality of the system but, for example if the user interface is not attractive and doesn’t provide options to navigate easily, users frustrated to do their jobs using the system, which may lead to poor quality service delivery. In case of performance if the system doesn’t respond within a reasonable latency and provide accurate result, users is not have confidence on their job (non-functional-requirements, n.d.).Based on this the proposed system have the following non Functional requirements.

User Interface and Human Requirements

* Interaction of users with the system should be through graphical user interface.
* The user interface should be user friendly and attractive.
* The navigation facility should be flexible.
* The user interface should be consistent in terms of format of page, background color, font and size.

**Performance:** Performance Requirements o Since the system is web based the performance can be directly affected by the quality of hardware, robustness of the software and network traffic. So, the response time should be reasonable.

**Maintainability:** The system maintains when the problem occurs. After the deployment of the project if any error occurs then it should be easily maintained by the system developer.

**Reliability:** The performance of the system better which increase the reliability of the service.

**Robustness:** The system shows error message when errors occur.

**Accessibility:** Since the system is web-based access easily

## System Design

During requirement elicitation or analysis phase the services that are intended to be provided by the system are identified and modeled in such a way that can facilitate, communication among clients, users and developers, but is not detailed at low level how the tasks performed. So, by applying standard design strategies, the gap between specification of requirements and what the system really consists of in terms of functional components is filled. At this phase, we also specify the mechanism of how to organize the system internally through hardware-software mapping with the inclusion of persistent data management. The goal of this phase is to manage complexity by dividing the system into smaller, manageable pieces. This is done by a divide-and-conquer approach, where we recursively divide parts until they are simple enough to be handled by one person or one team.

**Design Goals**

Defining design goals is the first step of the system design, which identifies the qualities that

the proposed system should focus on. Design goals of the proposed system are inferred from

nonfunctional requirements and elicited from clients. It helps to make better decision

when trade- offs are needed.

**Performance**

Response time should be reasonable at any time. It also has to serve all parallel users. Moreover, since the system web-based application, it has to demand minimal memory and reasonable processing power so that any user can access it with available resources.

**Dependability**

The system should be able to prompt the users for supplying user name and password before appropriate access is granted. Secure Socket Layer security should be employed to protect from eavesdroppers during communication on the net. Moreover, users may supply invalid input deliberately or because of typing error, so the system should be able to validate all inputs supplied to the assigned control value and must handle error using error handling mechanisms so that the user gets informed about the errors and fix.

**Maintainability:** The system should be easily modifiable when requirements are changed. The programs should be platform independent so that it can be usable with little modification. Also, the code should be written using readable format for ease of readability.

**End user**: The system should provide user friendly and self-explanatory graphical user interface that eases the interaction of the user with the system. In addition, the system should support and facilitate work like automatic generating and printing of certificates and index cards upon registration of events.

**3.4.1. Development Approach**

The propose system developed by using an iterative approach. The project team chooses iterative approach because which have the following benefits: - The key advantage is that this approach allows developers to break down the task of developing a system into a series of smaller tasks, simplest model of software development tool, to get quick end user feedback &make enhanced system, To learn from earlier development versions, the approach captures user feedback earlier using modeling techniques, all the phases of SDLC has function one after another cyclic manner ,to get quick end user feedback & make enhanced system ,easily identify missing functionalities (Kevin, 2019).

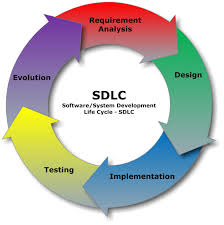


Figure 3. 2 Iterative model diagram

### 3.4.2. Development Methodology

Since it is simple, modifiable, and maintainable and reusable the project team choose object-oriented methodology to develop web based vital event registration. So, the whole system analysis, system design and implementation take using object-oriented methodology.

**Object Oriented Analysis**: - In this phase the we produce a conceptual model of information that exists in the area of vital event registration can be analyzed.

**Object Oriented Design**: - In this phase the team transformed the conceptual models produced in analysis phase to take the account of the constraints imposed to the system format.

**Object Oriented Implementation:** - In this phase the team implemented the design by using PHP as a server side, CSS, HTML, JS is as a client side and MYSQLI as a database server.

### 3.4.3. System Models

**3.4.3.1. Use Cases and Actors**

Use cases are used during requirements elicitation and analysis to represent the functionality of the proposed system. Use cases focus on the behavior of the system from an external point of view. A use case is used to describe a function provided by the system that yields a visible result for an actor. An actor describes any entity that interacts with the system, such as a user, another system and the system’s physical environment. The identification of actors and use cases resulted in the definition of the boundary of the system that is, in differentiating the tasks accomplished by the system and the tasks accomplished by its environment.

**Actors**: -actors are outside the boundary of the system, whereas the use cases are inside the boundary of the system. The system has four basic actors.

Table 3.1 actor name and description

|  |  |  |
| --- | --- | --- |
| No | Actor Name | Description |
| 1 | Administrator | a person who login, create general manager account, unlock account, change password and logout. |
| 2 | General Manager | a person who manage kebeles, office manager and perform the following login, create officer account, deactivate office manager account, view officer manager report, generate report, search event, view event, send message, add kebele, view comment, change password and logout. |
| 3 | Office Manager | a person who control all encoder and perform the following tasks login, generate report, search event, view event, view message, create encoder account, view encoder report, send message, deactivate encoder account, change password and logout. |
| 4 | Encoder | A person who login, register event, search event, update event, generate report, view message, view event, give certificate, change password and logout. |

**Use case**: -describes a sequence of action that is done by actors. Our system contains the following use case.

Table 3.2 use case type

|  |  |  |  |
| --- | --- | --- | --- |
| No | Use case type | No | Use case type |
| 1 | login | 14 | create encoder account |
| 2 | create general manager account | 15 | register event |
| 3 | add news | 16 | deactivate encoder account |
|  | unlock account | 17 | give certificate |
| 4 | update news | 18 | view message |
| 5 | deactivate general manager account | 19 | view event |
| 6 | delete news | 20 | generate report |
| 7 | create office manager account | 21 | view news |
| 8 | Add Kebele | 22 | update event |
| 9 | view office manager report | 23 | view encoder report |
| 10 | send message | 24 | view comment |
| 11 | change password | 25 | logout |
| 12 | search event | 26 |  |
| 13 | view encoder report |  |  |

**System use case diagram**

The following figure describes use case diagram and over all work flow of the system.

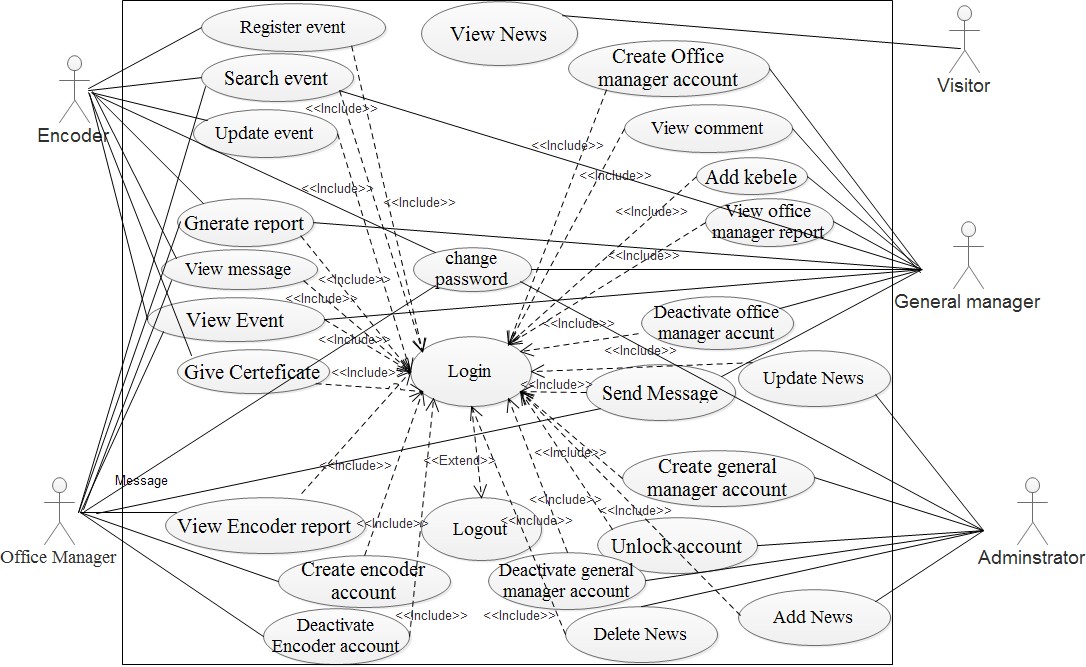


Figure 3 .3 use case diagram

Table 3.4 use case description

|  |  |  |  |
| --- | --- | --- | --- |
| No | Use case name | Use case identifier | Use case description |
| 1 | Login | UC#1 | To inter the system |
| 2 | Register | UC#2 | Register new event to data base |
| 3 | Search event | UC#3 | To search existing data |
| 4 | Update event | UC#4 | To update correct if it is error data |
| 5 | Create encoder account | UC#5 | Office manager use to create encoder account. |
| 6 | Deactivate encoder account | UC#6 | Office manager deactivate encoder account if it is not encoder in activities. |
| 7 | Create office manager account | UC#7 | General manager uses to create create account |
| 8 | Create general manager account | UC#8 | Admin use this use case to create general manager account |
| 9 | View encoder report | UC#9 | Used to only to view encoder report |
| 10 | View office manager report | UC#10 | Use to view office manager report by general manager. |
| 11 | Generate report | UC#11 | Use to how report generate by user. |
| 12 | Add kebele | UC#12 | Express how to add kebele |
| 13 | View event | UC#13 | Express how user view event |
| 14 | Give certificate | UC#14 | Express how certificate give to customer. |
| 15 | Change password | UC#15 | Express how all user Change password |
| 16 | Send message | UC#16 | Express how to send message by user |
| 17 | View message | UC#17 | This use case used to express how to view message |
| 18 | Unlock account | UC#18 | Describe how admin unlock lock account |
| 19 | Deactivate office manager account | UC#19 | Describe how general manager deactivate account |
| 20 | Deactivate general manager account | UC#20 | Describe how admin deactivate account |
| 21 | Logout | UC#21 | Express how user logout from system |
| 22 | Add news | UC#22 | Describe how admin post news |
| 23 | Update news | UC#22 | This explain how news modify |
| 24 | Delete new | UC#22 | Describe how new |
| 25 | View new | UC#25 | Express how visitor view new |
| 26 | View comment | UC#26 | Express how general view comments |

Table 3.4 Login use case

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | | Pre-condition | Post condition | Description |
| Login | | | UC#1 | Encoder, general manager, administrator and office manager | | | All users must be having previously create account. | All users must be after login get proper service. | Describe how the user login to the system. |
| Basic flow of events | | | | | | | | | |
| No | | Actor action | | | System response | | | | |
| 1 | | The users open system. | | |  | | | | |
| 2 | | The user clicks login button | | |  | | | | |
| 3 | |  | | | Login form display | | | | |
| 4 | | The user enters user name and password. | | |  | | | | |
| 5 | | The user presses login button. | | |  | | | | |
| 6 | |  | | | System validate input | | | | |
| 7 | |  | | | The system logs in the user. | | | | |
| 8 | |  | | | Use case end | | | | |
| Alternatives flow of event | | | | | | | | | |
|  | If user simply click login button without enter password and name | | | | | Please enter the username and password”  Message displayed. | | | |
|  | Its user enters incorrect password and name | | | | | Invalid use name and password combination message display. | | | |
|  |  | | | | | Use case end. | | | |

Table 3. 5 Register event use case documentation

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | | Pre-condition | Post condition | Description |
| Register event | | | UC#2 | Encoder | | | A user must be logged as encoder | New event registered to the database | The use case is about registering new event |
| Basic flow of events | | | | | | | | | |
| No | | Actor action | | | System response | | | | |
| 1 | | Encoder click add event registration button | | |  | | | | |
| 2 | |  | | | System displays choice to select event type | | | | |
| 3 | | Select event type | | |  | | | | |
| 4 | |  | | | System displays appropriate event form | | | | |
| 5 | | Encoder fill form | | |  | | | | |
| 6 | | Encoder click register button. | | |  | | | | |
| 7 | |  | | | System validate the entry | | | | |
| 8 | |  | | | System register event in the data base | | | | |
| 9 | |  | | | Use case end | | | | |
| Alternatives flow of event | | | | | | | | | |
|  | If The user enters invalid data | | | | | Please enter correct data message displayed. | | | |

Table 3.6 Create encoder account

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | | Pre-condition | Post condition | Description |
| Create encoder account | | | UC#5 | Office manager | | | The user must logged as Office manager | Create encoder account. | Describes how to create account for each encoder. |
| Basic flow of events | | | | | | | | | |
| No | | Actor action | | | System response | | | | |
| 1 | | Press create encoder account button. | | |  | | | | |
| 2 | |  | | | Create encoder account form is display | | | | |
| 3 | | Fill all required form. | | |  | | | | |
| 4 | |  | | | Press the submit button. | | | | |
| 5 | |  | | | System validate the submit information. | | | | |
| 6 | |  | | | System registers encoder information to the database. | | | | |
| 7 | |  | | | Successful create user account | | | | |
| 8 | |  | | | Use case end | | | | |
| Alternatives flow of event | | | | | | | | | |
|  | if the required information fill is incorrect. | | | | | please try again message display | | | |

Table 3.7 Add news

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | Use Case Identifier | Actor(s) | | Pre-condition | Post condition | Description |
| Add news | | UC#22 | Administrator | | The user must logged as Administrator | News posted | Describes how Administrator post news |
| Basic flow of events | | | | | | | |
| No | Actor action | | | System response | | | |
| 1 | Administrator clicks news button | | |  | | | |
| 2 |  | | | News management page displayed | | | |
| 3 | Administrator clicks add news button. | | |  | | | |
| 4 |  | | | System displays form | | | |
| 5 | Administrator fills the form | | |  | | | |
| 6 | Administrator Press post button. | | |  | | | |
| 7 |  | | | System validates the input entered by Administrator. | | | |
| 8 |  | | | System saves the news to database. | | | |
| 9 |  | | | Success message displayed | | | |
| 10 |  | | | End use case. | | | |
| Alternatives flow of event | | | | | | | |

Table 3. 8 Give certificate use case documentation

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | | Pre-condition | Post condition | Description |
| Give certificate | | | UC#14 | Encoder | | | A user logged as encoder and event must be registered | Give certificate to customer | Describes how to certify cards |
| Basic flow of events | | | | | | | | | |
| No | | Actor action | | | System response | | | | |
| 1 | | Encoder clicks on give certificate button | | |  | | | | |
| 2 | |  | | | System display search form. | | | | |
| 3 | | Encoder selects event type to give certificate. | | |  | | | | |
| 4 | | Encoder enters required information. | | |  | | | | |
| 5 | | Encoder fill form | | | System search and displays the result in the selected event type to give certificate | | | | |
| 6 | | Encoder selects the appropriate event to  give certificate. | | |  | | | | |
| 7 | |  | | | System display certificate preview. | | | | |
| 8 | | Encoder click print button | | |  | | | | |
| 9 | |  | | | System prints the certificate | | | | |
| 10 | |  | | | System acknowledge as success fully certified. | | | | |
| 11 | |  | | | Use case ends. | | | | |
| Alternatives flow of event | | | | | | | | | |
|  | If The user enters invalid data | | | | | No result found please try again. message displayed. | | | |

Table 3.9 change password use case documentation

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | Pre-condition | Post condition | Description |
| Give certificate | | | UC#15 | Encoder, office manager, general manager, Administrator | | User must be have account previously | User change password | Describe how to change password |
| Basic flow of events | | | | | | | | |
| No | | Actor action | | | System response | | | |
| 1 | | Press change password button. | | |  | | | |
| 2 | |  | | | System displays change password form. | | | |
| 3 | | Fill the required information to change password. | | |  | | | |
| 4 | | Press change password button. | | |  | | | |
| 5 | |  | | | System validates the information. | | | |
| 6 | |  | | | System updates the user information in database. | | | |
| 7 | |  | | | Successfully change password message display. | | | |
| 8 | |  | | | Use case end. | | | |
| Alternatives flow of event | | | | | | | | |
|  |  | | | | Invalid input. Please try again” message displayed”. | | | |

Table 3.10 Logout use case documentation

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Use Case Name | | | Use Case Identifier | Actor(s) | | | Pre-condition | Post condition | Description |
| Logout | | | UC#21 | Encoder, Office manager, general manager, Admin | | | All actors must login to system. | Actor log out from system. | Describe how log out from the system |
| Basic flow of events | | | | | | | | | |
| No | | Actor action | | | System response | | | | |
| 1 | | All actor clicks logout link. | | |  | | | | |
| 2 | |  | | | System will return to login page. | | | | |
| **Exceptional flow of event** | | | | | | | | | |
|  |  | | | | | Unknown error occurred! Try  Latter “message displayed. | | | |

**3.4.3.2. Sequence Diagram**

Sequence diagrams are used to formalize the behavior of the system and to visualize the communication among objects. Since it is useful for identifying additional objects that participate in the use cases and describe patterns of communication among a set of interacting objects, the diagram is developed for each Use Case. An object interacts with another object by sending messages.

The reception of a message by an object triggers the execution of an operation, which in turn may send messages to other objects. Arguments may be passed along with a message and are bound to the parameters of the executing operation in the receiving object. The team used sequence diagram in order to easily defining sequence of task that accomplished by the actor of the system. It makes the system understandable by users of system. The sequence diagram passes the message from top to bottom.

**Boxes: -** across top of diagram represents the time an object needs to complete task.

**Message:** - indicates as labeled arrow, represent communication between objects.

**Dashed lin**es: - hanging from the boxes are called object life lines, representing the life span of information.

**Destroy-:** indicates the terminating an object after completing its task. The long thin boxes on the long life lines are method invocation boxes indicating that the target object (s) to full fill a message is performing.

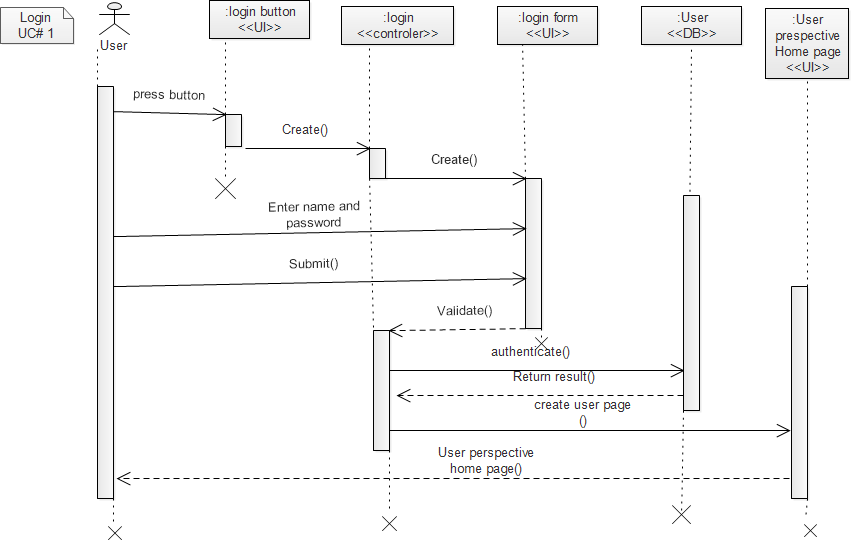


Figure 3.4 Sequence diagram for login

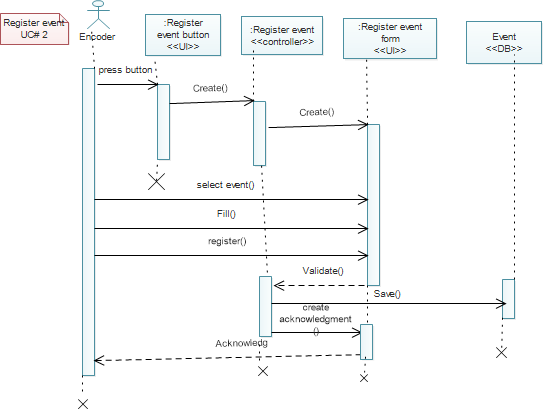


Figure 3.5 Sequence diagram for register event

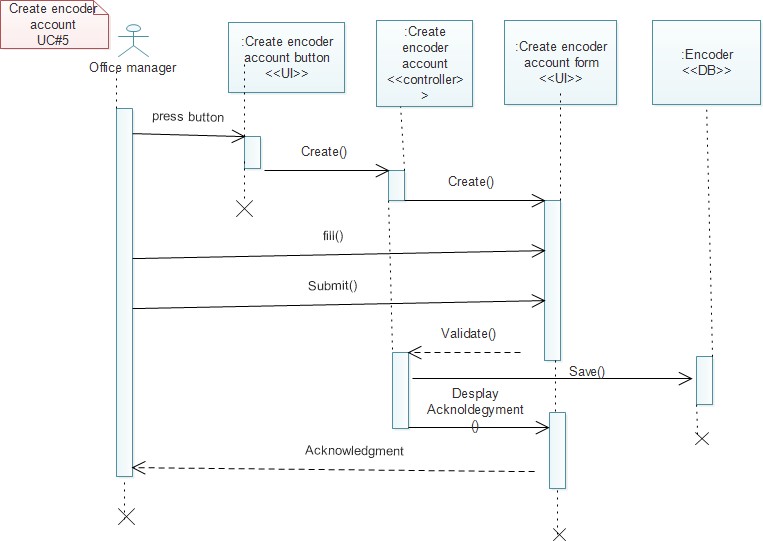


Figure 3.6 Sequence diagram for create encoder account

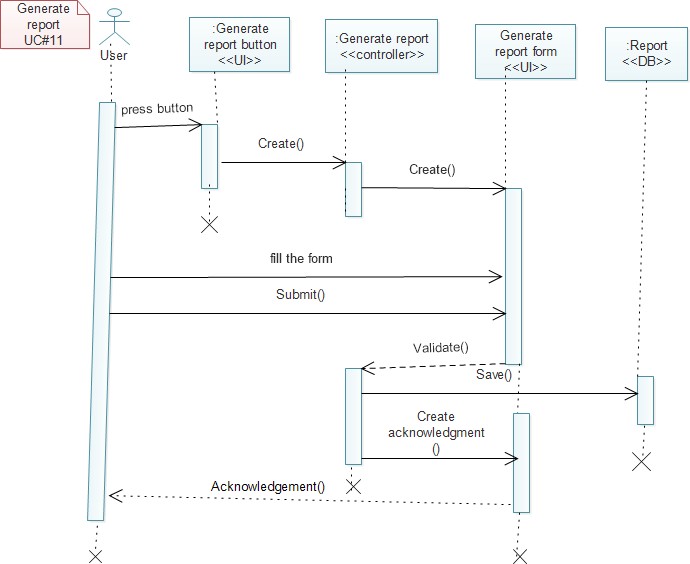


Figure 3.7 sequence diagram for give certificate

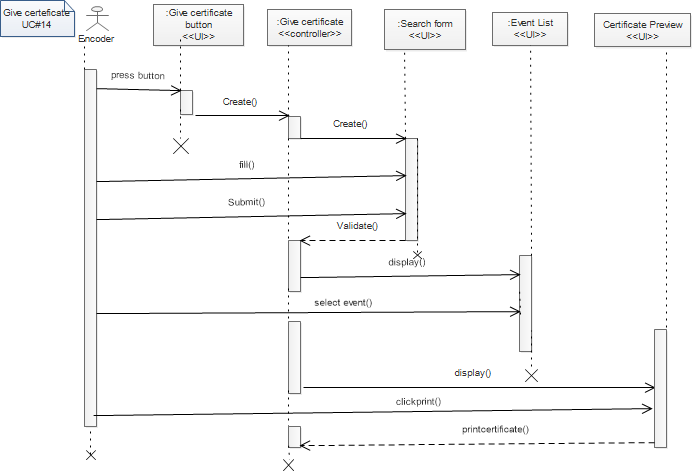


Figure 3.8 sequence diagram for give certificate

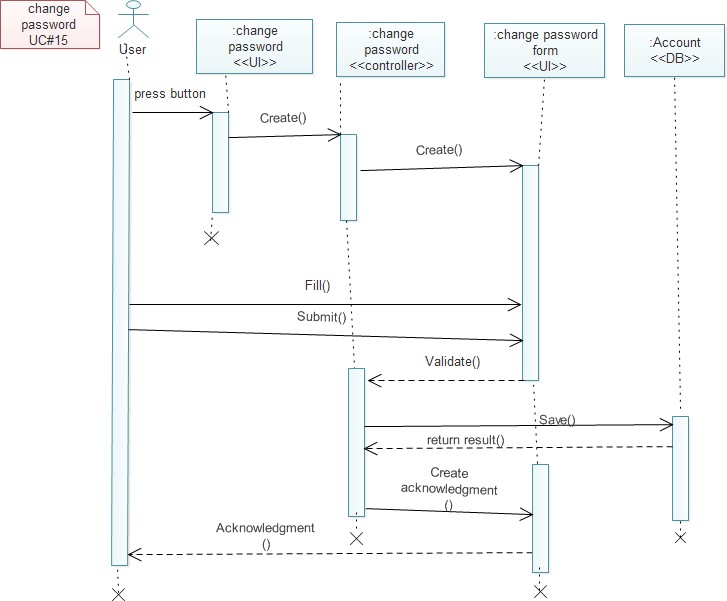


Figure 3.9 Sequence diagram for change password

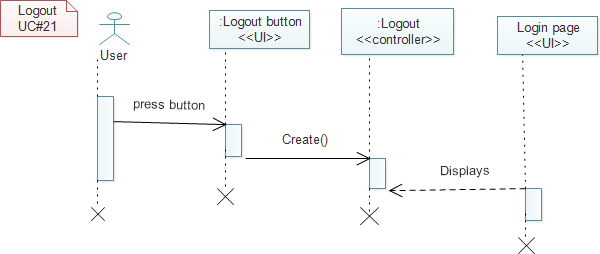


Figure 3. 10 Sequence diagram for logout

**3.4.3.3. Activity Diagram**

An activity diagram is a kind UML diagram. This diagram shows the various activities one by one. An activity diagram shows the flow from activity to activity. Activity diagram that show the flow of order from one activity to activity but doesn’t show any message flow from one object to another object. Initial state indicates the starting state. It represents by the circle. Final state indicates the enclosing states have completed activity. Activity diagram is basically a flow chart to represent the flow form one activity to another activity. The activity can be described operation the system. Control flow is drawn from one operation to another. This flow sequential or branched.

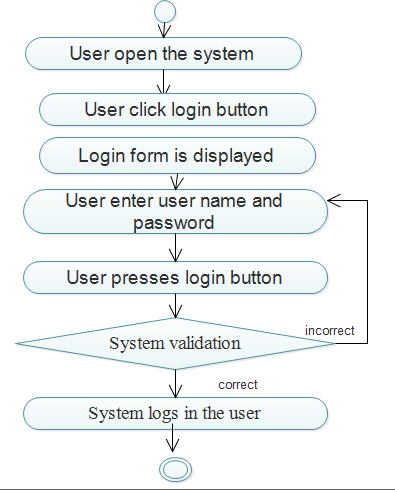


Figure 3.11 Activity diagram for login

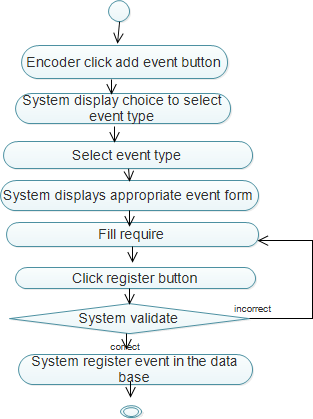


Figure 3.12 Activity diagram for register event

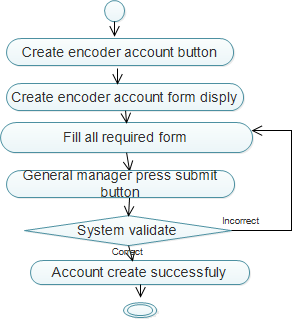


Figure 3.13 Activity diagram for create encoder account

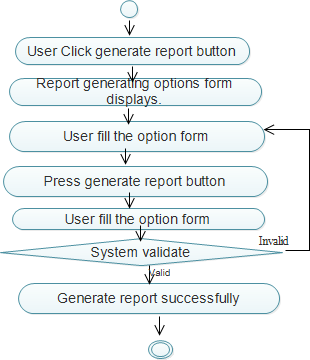


Figure 3.14 Activity diagram for generate report

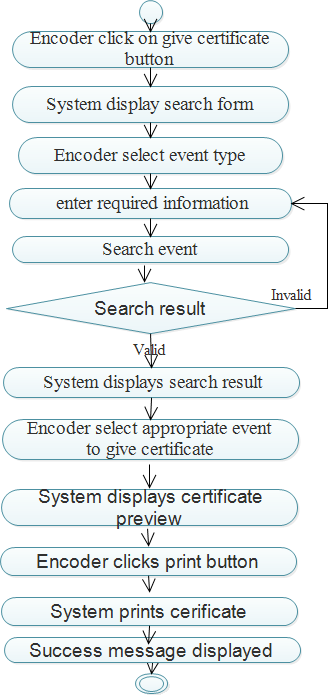


Figure 3.15 Activity diagram for give certificate

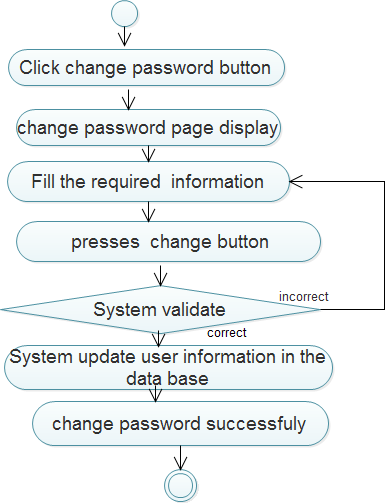


Figure 3.16 Activity diagram for change password

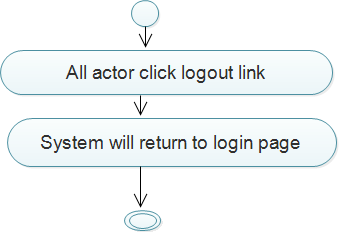


Figure 3.17 Activity diagram for logout

**3.4.3.4. System Class Diagram**

We used class diagram to describe the structure of the proposed system in terms of objects, classes, attributes, operations, and their associations. Classes are abstractions that specify the common structure and behavior of a set of objects in Use Cases. Objects are instances of classes that are created, modified, and destroyed during the execution of the system. The proposed system consists Person, Center staff, Account, Customer and Registrant classes. The class diagram refined during system design to include classes representing the solution domain.

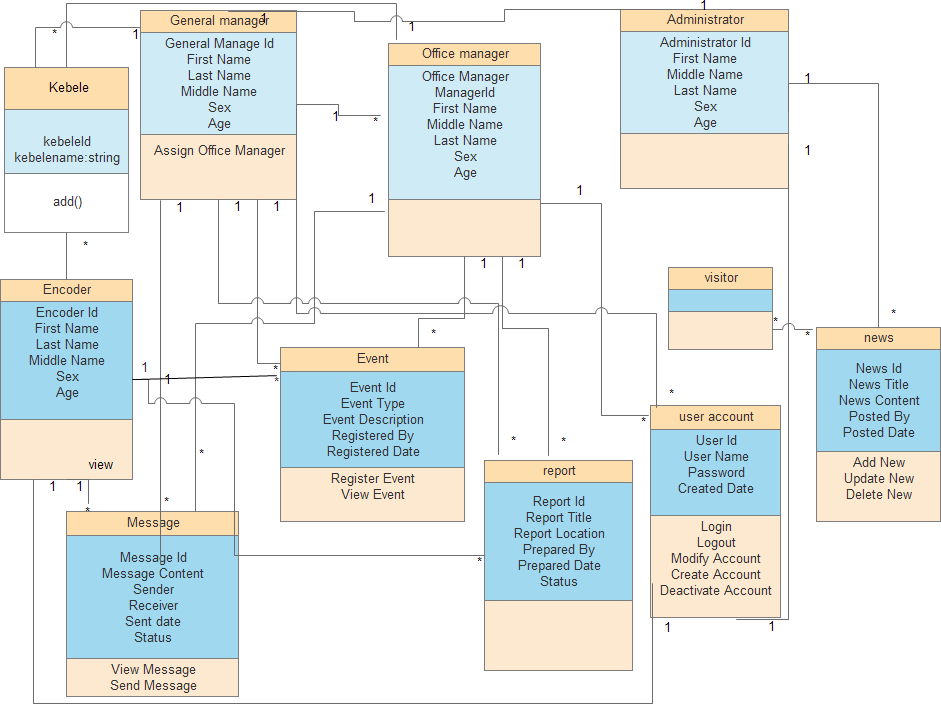
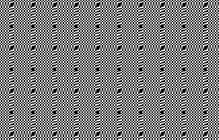


Figure 3.18 system class diagram

### 3.4.4. Proposed System Architecture

The proposed system is expected to replace the existing manual system by vital event registration system for Assosa town. The architecture of an application defines how different parts of the system are organized and logically connected. This architecture allows different user of the system access the data from center database server. The proposed system is MYSQLI database server which is every data related with the system is stored.

The architecture of the vital event registration system is client-server application it consists three tiers namely client tiers, middle tiers and data tiers. On the client application encoder, office manager, general manager, admin and visitor directly interact with the system through web browser. On the middle tiers the vital event registration system contains web server and the web server handles all the HTTP requests coming from the client machines. It also manages the responses that are returned to the client machines.



User Level Interface

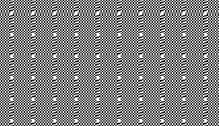


Application Services

Application Server

**Users**

PC Workstations



Application Level



Database

Data Level

Database Server

Figure 3.19 Architectural model of Proposed System

### 3.4.5. Database Design Modeling

Data bases are the houses of data. The data is stored in table inside a data base. The objective of data base is security of data and good overall performance. A data base table is designed as a collection of row and columns which are in turn called as tuples and attributes. Logical data base model contains relationships between entities and focus on primary and foreign key. Primary key is key that unique for all records in system and foreign key another key that create relationship between one table to other it is used to avoid redundancy.

#### 3.4.5.1. Entity Relationship Diagram (ERD)

Entity relationship diagram is graphical representation of information system. In our vital event registration system, it shows the relationship between actors, entities within system. Generally, in our system all actor and entities have the following entity relationship diagram.

**Encoder** has first name, last name, id and make relationship with account, event, message,

**Event entities** has attributes event id, title, type and it can be view by general manager, office manager, encoder, and register by encoder.

**Message entities** has attributes message id, content, and it can be sent by office manager and general manager view by office manager and encoder.

**Account entities** has attributes name, password, user type and it create relationship with encoder, general manager office manager.

**Report** has attributes report id, report title, it can be view by general manager, office manager generates by all user.

**Administrator** has the following attributes id, first name, last name, middle name, sex, and age create relationship with news by Add and with account by relation create.

**General Manager** has attributes first name, last name, middle name, sex, and age this actor make relation to account, event, message, report.

**Office manager** has the following attributes first name, middle name, last name, sex, age make relation with account, event, message, and report.

General our system entity relationship represents in the following diagram actors and entities represent by rectangle, relationship by diamond and attributes by circle and primary key can be represent by circle with underscore.

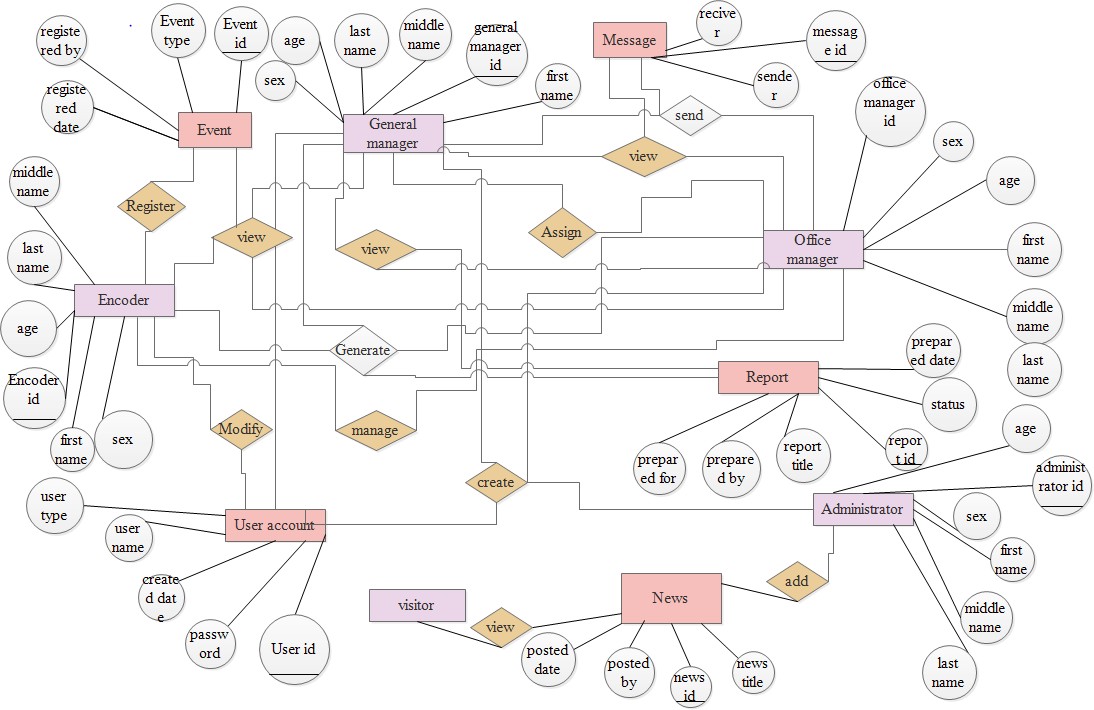


Figure 3.20 Entity relationship diagram Figure

## 3.5. Specification

### 3.5.1. Hardware Specification

The following are minimum hardware specification needed to use the proposed system.

Table 3.11 Hardware Specification

|  |  |  |
| --- | --- | --- |
| **No** | **Hardware** | **Description and usage** |
| **1.** | Printer | Machine used for printing text. |
| **2.** | Mobile | Used to communicate and talk relevant information. |
| **3.** | Flash disk | A device used to hold data and move file from computer to computer. |
| **4.** | Rewritable CD | For storage of data. |
| **5.** | Desktop | Computer used for performing the documentation |
| **7** | Paper | A material used for accepting a drafting. |

### 3.5.2. Software Specification

We use the following software tools are needed to be installed on both client and server side.

Table 3.12 Software Specification

|  |  |  |
| --- | --- | --- |
| **No** | **Software** | **Description and usage** |
| **1.** | XAMPP Server 2013 | to develop the system by using HTML |
| **2.** | Web browser Mozilla Firefox | For execution of the project |
| **3.** | Database: such as MYSQLI | For to store and retrieve data from the database to web application. |
| **4.** | Notepad++ | Used for editing a code project for. |
| **5.** | Microsoft office 2007 | Used for writing of the documentation. |
| **6.** | Windows 7 | Used to operate and control our computer |
| **7** | Edraw max | Used to draw uml diagrams |

### 3.5.3. Language Specification

Table 3.13 language Specification

|  |  |  |
| --- | --- | --- |
| **No** | **Language** | **Description and usage** |
| 1 | Html | Hyper markup language for creating the basic structure |
| 2 | CSS | Describes the style of html document |
| 3 | Java script | for adding responsiveness or validation purpose |
| 4 | Php | for dynamic changes in the webpages |

## 3.6. Implementation and Access Control

### 3.6.1. System Implementation

During implementation, we translate the object model into source code, which includes  
implementing the attributes, methods of each object and integration of all objects to be   
the functioned as a single system. The implementation activity spans the gap between the detailed object design model and a complete set of source code files that compiled together. Finally, we implement the design by using PHP as a server side, CSS, HTML, JS is as a client side and MYSQLI as a database server.

In terms of system security our system is provides an authentication. The authentication includes Username and password and it give the access to the authorized person who has a username and password. When the administrator creates account for the user, the user gets a username and password. When the user used the system in first time it can be change the user name and it answer two questions in terms of used to reset the username and password when it forgets the username or password.

**3.6.2. Access Control**

The users of this system have own access level, this access level used to perform their own operations, the access control of this system is,

**System Administrator:**

Access level: Log On (), login to the system create Account (), create the users account for general manager, active and deactivate user accounts (), fix system error, and post News ordered by general manager.

**3.7. Testing**

Testing is the process of running a system with the intention of finding errors. In our system testing can enhances the integrity of a system by detecting deviations in design and errors in the system, reduced risk of failures once systems are transferred to live operation; it also typically identifies the end of the development phase of the project.

Presently there are so many project testing methods from those our group decides to use the testing methods that are listed below.

**3.7. 1. Unit Testing**

Unit testing is the testing of an individual unit or group of related units It is often done by the programmer to test that the unit he/she has implemented is producing expected output against given input so that our team mate perform unit test to test the internal logic of the module/program. So, the system is tested by all member developed it.

### 3.7.2. Integration Testing

Our group carried to test the code module interfaces in order to ensure there are no errors in the parameter passing, when one module invoked another. Even if the units of software are working fine individually, there is a need to find out if the units if integrated together would also work without errors. For example, argument passes and data updating etc.

* + 1. **System testing**

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. It ensures that the entire integrated software system meets the desired requirements. It tests a configuration to ensure known and predictable results. Due to this our project can fulfill system testing criteria’s.

* + 1. **Validation Testing**

validation testing is one type of testing which checked on whether the system is able to handle the incorrect data that entered by the user or not and also it checks the projects are valid or invalid. It ensures that the data enter by the user is correct and in the correct format or correct data type. For example, if the user is need to enter the character data to the system but the user enters the numeric data, will the system able to track the data entered by user and rapid error message to tell the user to enter the exact data to the system.

### Feature to be tested

###### **Security testing**

* User must have username and password before entering to the system.
* Security is protected by passwords

Table 3.14 security testing of login users

|  |  |  |
| --- | --- | --- |
| **Action** | **Data** | **Action response** |
| User inter valid password and invalid user name. and click login button | **Password=** |  |
| Both User name and password is Empty then click login button | User name=    Password= |  |
| User inters Invalid password and valid user name. then click  login button | Invalid email put and password= |  |

## 3.8. Documentation

We put help guideline to the user of the system as a reference if they have any problem before, during and after using the system. In this part we prepared user manuals for system users. It helped them to refer any challenging things that occur in the system i.e. it support them to have the knowledge of how to use this system, how to open the system, how to use links, how to proceed from one activity to the other, show which services are reserved for and which service is denied for whom.

**3.9. Evaluation**

Under this phase the project team determine the subject’s merit, worth and significance, using criteria governed by a set of standards. System performance use evaluate to see the functionalities of the system followed by user acceptance test so as to evaluate the usability of the system and use other more qualitative methods too. For this process user test checklist use. So, the system is evaluated by developers, advisors, and stockholders.

The system can be evaluated by attaining the following conditions:

* Comparing with the current system, Accessibility of information, Readability and accuracy of information and Timeliness of information distribution.
* Checking its user friendly
* Examining the system for effectiveness and efficiency

# CHAPTER FOUR

# 4. PROJECT RESULT AND PROTOTYPS

## 4.1. Project Result

The expected Result of this research project is that of functional, effective which well register thus event birth, death, marriage and divorce. Regarding to this, the system should be create account for users, deactivate account for users, modify account for users, unlock account, generate report based on system activities, view report, register event based on customers’ information, view event, give electronic certificate based on registered event, send message, view message, add news, update news, view news, The actors exist in this system are Administrator,encoder,office manager and general manager.

**4.2. Prototype of the System**

**4.2. 1.prototype of the home page**



Figure 4.21 User interface design about home page

### 4.4. 1.prototype of the login page



Figure 4.22 user interface design Login form

**Sample code for login page**

**<?php**

**session\_start();**

**include("database.php");**

**$message = "";**

**if (isset($\_POST["login"])) {**

**$user\_name =$\_POST["user\_name"];**

**$password =$\_POST["password"];**

**$username = stripslashes($username);**

**$password = stripslashes($password);**

**$username = mysqli\_real\_escape\_string($con,$username);**

**$password = mysqli\_real\_escape\_string($con,$password);**

**$query = mysqli\_query($con,"SELECT \* FROM USER\_ACCOUNT WHERE USER\_NAME='$user\_name'");**

**if (mysqli\_num\_rows($query) > 0) {**

**$login\_attempt = mysqli\_fetch\_assoc($query)["LOGIN\_ATTEMPT"];**

**echo $login\_attempt;**

**if ($login\_attempt < 5) {**

**$query = mysqli\_query($con,"SELECT \* FROM USER\_ACCOUNT WHERE USER\_NAME='$user\_name' AND PASSWORD='$password'");**

**if (mysqli\_num\_rows($query) > 0) { $message = "found"; $row = mysqli\_fetch\_array($query);$user\_id = $row["USER\_ID"];$\_SESSION["user\_id"] = $user\_id;$user\_type = $row["USER\_TYPE"]; $status = $row["STATUS"];if ($status == 1) {mysqli\_query($con,"UPDATE USER\_ACCOUNT SET LOGIN\_ATTEMPT=0 WHERE USER\_NAME='$user\_name'");if ($user\_type == "administrator") {**

**$admin\_query = mysqli\_query($con,"SELECT \* FROM ADMINISTRATOR WHERE EMAIL='$user\_name'");$admin\_row = mysqli\_fetch\_assoc($admin\_query);**

**$admin\_id = $admin\_row["ADMINISTRATOR\_ID"];**

**$first\_name = $admin\_row["FIRST\_NAME"];**

**$middle\_name = $admin\_row["MIDDLE\_NAME"];**

**$last\_name = $admin\_row["LAST\_NAME"];**

**$email = $admin\_row["EMAIL"];**

**$\_SESSION["admin\_logged"] = "true";**

**$\_SESSION["admin\_id"] = $admin\_id;**

**$\_SESSION["first\_name"] = $first\_name;**

**$\_SESSION["middle\_name"] = $middle\_name;**

**$\_SESSION["last\_name"] = $last\_name;**

**$\_SESSION["email"] = $email;**

**header("Location: administrator/index.php");**

**} else if ($user\_type == "general\_manager") {**

**$general\_manager\_query = mysqli\_query($con,"SELECT \* FROM general\_manager WHERE EMAIL='$user\_name'"); $general\_manager\_row = mysqli\_fetch\_assoc($general\_manager\_query);**

**$general\_manager\_id = $general\_manager\_row["GENERAL\_MANAGER\_ID"];**

**$first\_name = $general\_manager\_row["FIRST\_NAME"];**

**$middle\_name = $general\_manager\_row["MIDDLE\_NAME"];**

**$last\_name = $general\_manager\_row["LAST\_NAME"];**

**$email=$general\_manager\_row["EMAIL"];$\_SESSION["general\_manager\_logged"] = "true";$\_SESSION["general\_manager\_id"] = $general\_manager\_id;**

**$\_SESSION["first\_name"] = $first\_name;**

**$\_SESSION["middle\_name"] = $middle\_name;**

**$\_SESSION["last\_name"] = $last\_name;**

**$\_SESSION["email"]=$email;header("Location: generalmanager/index.php");} else if ($user\_type == "office\_manager") {$office\_manager\_query = mysqli\_query($con,"SELECT \* FROM office\_managerWHEREEMAIL='$user\_name'"); $office\_manager\_row=mysqli\_fetch\_assoc($office\_manager\_query);$office\_manager\_id = $office\_manager\_row["OFFICE\_MANAGER\_ID"];**

**$first\_name = $office\_manager\_row["FIRST\_NAME"];**

**$middle\_name = $office\_manager\_row["MIDDLE\_NAME"];**

**$last\_name = $office\_manager\_row["LAST\_NAME"];**

**$email = $office\_manager\_row["EMAIL"];**

**$kebele\_id=$office\_manager\_row["KEBELE\_ID"];$\_SESSION["office\_manager\_logged"] = "true";$\_SESSION["office\_manager\_id"] = $office\_manager\_id;**

**$\_SESSION["first\_name"] = $first\_name;**

**$\_SESSION["middle\_name"] = $middle\_name;**

**$\_SESSION["last\_name"] = $last\_name;**

**$\_SESSION["email"] = $email;**

**$\_SESSION["kebele\_id"]=$kebele\_id;header("Location: officemanager/index.php");**

**} else if ($user\_type == "encoder") {**

**$encoder\_query = mysqli\_query($con,"SELECT \* FROM encoder WHERE EMAIL='$user\_name'");$encoder\_row=mysqli\_fetch\_assoc($encoder\_query);$encoder\_id =$encoder\_row["ENCODER\_ID"];$first\_name=$encoder\_row["FIRST\_NAME"];$middle\_name = $encoder\_row["MIDDLE\_NAME"];**

**$last\_name = $encoder\_row["LAST\_NAME"];**

**$email = $encoder\_row["EMAIL"];**

**$kebele\_id = $encoder\_row["KEBELE\_ID"];**

**$\_SESSION["encoder\_logged"] = "true";**

**$\_SESSION["encoder\_id"] = $encoder\_id;$\_SESSION["first\_name"] = $first\_name; $\_SESSION["middle\_name"] = $middle\_name;$\_SESSION["last\_name"] = $last\_name;$\_SESSION["email"] = $email; $\_SESSION["kebele\_id"] = $kebele\_id;**

**header("Location: encoder/index.php"); }} else { $message = "account deactivated"; }} else{$message="incorrectpassword";mysqli\_query($con,"UPDATEUSER\_ACCOUNTSETLOGIN\_ATTEMPT=LOGIN\_ATTEMPT+1 WHERE USER\_NAME='$user\_name'");} } else {$message = "locked account"; }} else { $message = "username not found"; }}?>**

**<!DOCTYPE html><head><meta charset="utf-8"><meta http-equiv="X-UA-Compatible"content="IE=edge,chrome=1"><title>login</title><meta name="description" content=""><meta name="viewport" content="width=device-width, initial-scale=1.0">**

**</head><body><nav id="mainmenu" class="mainmenu"> <ul><li class="active">**

**<aclass="active"href="index.php"><b>Home</b></a></li> <liclass="active"><class="active"href="about2.php"><b>About&#9662;</b></a>**

**<ul class="dropdown"> <li><a class="active" href="about2.php"><b>Vission </b></a></li> <li><aclass="active"href="about2.php"><b>Mission</b></a> </li>**

**<li><aclass="active"href="about2.php"><b>Background</b></a></li></ul>**

**</li><li class="active"><a class="active" href="contact.php"><b>Contact Us</b></a> </li><li class="active"><aclass="active" href="news.php"><b>News</b></a>**

**</li><li>class="active"><a class="active"href="help.php"><b>Help</b></a</li>**

**<li class="active"> <a href="#">languge &#9662;</a>**

**<ulclass="dropdown"> <li><strong><aclass="active"href="about.php#background"><b>English</b></a></strong></li><li><strong><aclass="active"href="about.php#mission"><b>Amaric</b></a></strong></li></ul></li><li>class="active"><button onclick="document.getElementById('id01').style.display='block'" style="width:auto;"><b>Login</b></button>**

**<divid="id01"class="modal"><formclass="modal-contentanimate" action="/action\_page.php">//Getthemodalvarmodal = document.getElementById('id01');// When the user clicks anywhere outside of the modal, close itwindow.onclick = function(event) {**

**if (event.target == modal) { modal.style.display = "none"; }}</script></li> </ul></nav>**

**<div style="background-color:lightblue"><div class="container"><div class="row"> <div class="col-md-12"> <h1>Login</h1></div> <script type="text/javascript">function loginfunc() { if (document.loginname.user\_name.value == "") { document.getElementById('username').innerHTML = '<font color="red">Please insert username!</font>'; document.loginname.user\_name.focus();return false;**

**}elseif(document.loginname.password.value=="") {document.getElementById('username').innerHTML = '';document.getElementById('password1').innerHTML = '<font color="red">Please insert password!</font>';document.loginname.password.focus(); return false; } else {return true; } }</script><div class="background"><div class="section"><div class="container"><div class="row"><div class="col-sm-5"><div class="basic-login"> <form action="login.php" method="post" onsubmit="return loginfunc();" name="loginname" > <h1><font color="#151B54" size="6"><i>login form</i></font></h1><div class="form-group"> <label for="login-username"><i class="icon-user"></i><img src="downloadrt.jpg" alt="Smiley face" width="35" height="30" /><b><font color="#151B54" size="4">Username</font></b></label> <input name="user\_name" class="form-control" id="user\_name" type="text" placeholder="Username"><p id="username"></p>**

**<?php} else {?></div>body></html>**



Figure 23 Give birth certificates form

# CHAPTER FIVE

# 5. CONCLUSION AND RECOMMENDATION

## 5.1 Conclusion

Our project vital event registration system is mainly focused on systematic recording of the occurrence and characteristics of vital events (birth, death, marriage, divorces and adoption). Thus, events have great function to government administration for the distribution of infrastructure of people. So that our project needed by current attitude of government and professionals on vital events registration is encouraging to take the advantages of the system. Registering the occurrence and characteristics of vital events is a long-term process, which requires enforcing laws, awareness of citizens, cooperation of institutions, dedication of the government, professional contribution of citizens, and integration of up-to-date technology.

Finally, if the other requirements of vital event registration are in place, the proposed solution will facilitate the registration, storage, communication on generate report, and presentation of vital events with minimum cost and effort. Moreover, it will provide reliable, complete, and up-to-date input for vital statistics. Also, it contributes for good governance and addressing the public at large.

## 5.2. Recommendation

The proposed web based vital events registration system can be enhanced by including the following recommendations are suggested for better benefits and efficiency.

* To include registering still birth, fetal death, and separation, will contribute for a complete vital statistic.
* Letting the system to automatically inform the registration of vital events to other systems like court systems and Keble management system.
* To use XML for better interfacing with other systems.
* To develop electronic vital event registration.

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# APPENDIX

**Sample Interview questions**

1. When Assosa vital event registration was established?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is the organization performing registration services manually?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How the work process is?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What are the disadvantages and advantage of the manual vital registration?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What type of event are registered?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What service is provided?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Are there any secured Databases to store registration information?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is the registration process is satisfied by the user?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is difficult or simple to update and delete specific information?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is simple or difficult to manage?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Is it secured or not?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_