Adigrat University

College Of Engineering and Technology

Department Of Software Engineering

Project Proposal on Online Teacher Transfer Management

System

A PROJECT PROPOSAL SUBMITTED TO THE DEPARTMENT OF SOFTWARE ENGINEERING OF ADIGRAT UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING.

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January 03, 2024

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Executive Summary

This project entitled with "Online teacher transfer management system for East Tigray zone education office" is designed to keep records of teachers, schools and make retrieval of their information easier. This project examines teacher transfer system stored in the database and Capable of easy retrieval of information. The system is very interactive and useful for the educational office workers (TDT), teacher. The main idea of the system lays in the need for a system which the TDT, teachers and System administrators communicate each other for improving teachers transfer system. The project has been designed with PHP technology. PHP (PHP with HTML) and MySQL Version: 5.6.12 database for the development of the project. For this project, the team member used object-oriented software development methodology

All the data needed for the application is stored in the form of tables in the php MyAdmin. The report contains the details of all the tasks carried out during the entire website development life cycle of the online teacher transfer.

Generally, the main goal of Web based teacher transfer management system is to assign the teacher online, to reduce errors, to reduce redundancy of data, to improve the accuracy of input and also reduce labor pains of the TDT office

List of Acronyms

TDT: Teacher development transfer

TTMS: Teacher Transfer Management System HTML:
 Hyper Text Markup Language

PHP: php Hypertext Pre-Processor GUI:

Graphical User Interface

SW: Soft Ware

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1. Introduction

Now a days Technology is being used in almost every company to accomplish specific tasks. Many businesses are using various business communication technologies to change the way their employees interact and communicate while at work. Employees can use various communication tools to interact or exchange information at work such us developing website for online communication

The project title is online teacher transferring management system for Eastern Tigray zone education office. This project is preferred to improve the load of existing manual system by automation or computerization system. Still now the existing teacher transfer management system exchange information through manually. Therefore, this work that manually performed needs to be automated or computerized to reduce the problems that happened. For this project, the team member used object- oriented software development methodology.

2. Background of the project

Eastern Tigray Education office is one non-profit organization dedicated to coordinate the education process among 18 Woreda's of Eastern Tigray administrative zone. The main aim (goal) of this educational office is to improve the quality of education in Eastern Tigray.

In addition to this educational organization, there is also another sub office which is called TDT office. These organizations perform concurrently for quality of education and give different services for the zone learning teaching process. Some of the services which are performed by the organizations is transfer of teachers in different schools, managing educational materials for different schools. From this

service which is listed above the project team specifically deals about teachers transferring management system.

3. Statement of the Problem

The problem of the existing teachers transferring management system currently is done by manually. Due to this reason the manual method is: -

- Poor Data Storage: -When the number of teachers becomes huge (increase) storing of their data is difficult and needs more cost.

- Existence of data duplication: - teacher may submit transfer form more than once.

- Loosing of the stored document: - because the system uses paper to store Teacher's information, so data can be lost.

- It is difficult to find and modify existing records.

- Lack of immediate data retrievals: - Information retrieval of teacher detail is difficult and time consuming because there is no way to search teacher information.

- Overburden work for the TDT officer, school director and teacher during providing the service

Generally, it takes more time to perform actions due to all actions are performed using human labor. Therefore, the current problems that initiate the project team members to design the automated teachers transferring system. [1]

4. Objective of the project

4.1. General objective

The main objective of this project is to develop automated teachers transferring system for Eastern Tigray zone educational office.

1.4.1. Specific objective

To achieve the above general objective, the project has done the following specific objectives.

- To understand the existing transfer's process.

- To analyze the gathered requirements.

- To allows the system updating information.

- To create well-organized database.

- To design a user-friendly GUI.

- To develop a mechanism for a report generation feature.

5. Scope of the project

The scope of this project is teachers transferring management system from woreda-to-Woreda (External transfer) and school-to-school(internal transfer) in Eastern Tigray zone. [2] In this project, the following activities are made:

- Register teacher information.

- Register Woredas information related to teacher transfer management system.

- Sort teachers' information based on services.

- Assign teachers to school all in one.

- Set transfer deadline.

- manage user account (create, update, activate/deactivate accounts).

- Generate report.

6. Significance and Target beneficiaries of the System

6.1. Significance of the project

The relevance because we have to conduct the study is:

- **To shorten data-processing time:** In order to done a specific job, it will not consume much time to process.

- **Reduce errors:** Through this system, many errors will be avoided because the system will be easy to use.

- **Improve the accuracy of input:** It will help the user to avoid mistakes regarding the information that they will address to the subjects. There will be accurate information because the system will have an update option.

- **Give information easily and efficiently:** It will make easier the way finding information of a users and also it will provide accurate data.

- To develop a system that facilitates fast working environment.

- To manage the user information easily.

- To avoids data redundancy

- To increases the security and efficiency

- Avoiding improper resource consumption like paper, card, file cabinets and so on…

- Avoiding data loss because of using of destroyable components.

6.2. Beneficiaries of the system

The project system benefits the following users.

For teachers: -teachers are more beneficial by this system because of,

- It reduces transport cost.

- It provides available information easily.

- It saves time.

- Increase teacher's satisfaction. For

TDT officer: -

- It provides good management system.

- Easy to filter or search records.

- It keeps records data safely.

- It assigns teachers within a short period of time easily.

- It updates information accurately.

- Reduce resource wastage.

For School director: -

- It provides easy communication with TDT officer.

- It reduces the overload of the school director.

- It provides an easy mechanism to send and receives request

- It solves the scarcity of teachers easily.

For the Developers:

While developing the system

- Developer's team skills improved knowledge how to conduct and prepare online system.
- Developer's team problem solving skill increase.

7. Limitation of the project

There are many constraints within our proposed system that limit their effectiveness of performance [2]. Our system is limited only in the process of web based TTMS of the Eastern Tigray zone educational office but does not include about whole management system. The system depends on electric power and network connection. The above activities or subsystems are proposed system limitations because of the following reason: -

- Time is the main factor of limitation our proposed systems that limit its performance because while we are developing the system it takes more time

and we may not get enough time to automate the system. So, do not expect fully functional system.

- Accessibility: Users may face challenges accessing the system if they lack the necessary hardware, internet connectivity or technical skills.

- Unforeseen policy changes: changes in educational polices or regulations may necessitate updates to the system and failure to adapt to these changes could render their system obsolete or non-compliant.

8. literature Review

Literature Review Related to Teacher Transfer Management system

There are many thesis papers, journals, articles, books, conferences and published studies related to the analysis of teacher transfer management system. Some of them which are considered to be essential and basic for our work are discussed below:

A Teacher Transfer mean the movement of a teacher from one building to another building, from school to another school or from one classroom teaching assignment to another within the same building, or from classroom teaching to any other position within the unit other than classroom teaching, or the reverse, or from non-classroom teaching to non- classroom teaching for regular education to special education or the reverse. Necessary and reasonable assignment changes for teachers who are normally assigned to more than one building,

such as speech therapists and elementary art, music, and physical education teachers, etc. shall not be deemed transfers (law insider, 2022).

Odisha online teachers transfer portal is an online web based efficient and transparent transfer system for school teachers of the state. Developed with an objective to ensure the right allocation of teachers, in line with norms and in a fair & transparent manner, it provides an opportunity to school teachers to choose their preferred school, track the application progress and also update their personal data (Bhubaneswar, 2022)

8.1. Technology Gap

There are different types of webs based online teacher transfer system designed so far in different language. Those websites are used for transfer teacher from school to school. Therefore, in this work we proposed web based online teacher transfer system to overcome mentioned problem.

8.2. Summary from Literature Review

As we see from the literature review there are different types of webs based online teacher transfers are designed and developed by different programmers. Like Odisha online teachers transfer portal, teacher transfer. All those websites are applicable on different country but not seen in our country much.

9. Methodology

For the successful completion of this project, a number of data gathering, analysis, and programming tools and techniques are put into use. The data collected focuses on issues like, what is expected from the system? What are the inputs of the system? What are the outputs of the system? What are the rules of processing the input data? How are they processed? Who requires which data in what form? **System development methodology**

System development methodology in system developing refers to the frame work that is used to structure plan and control the flow of developing an information system.[1] For this project, the team will use object-oriented software development methodology.

The reason for selecting object -oriented system development is: -

- Objects/classes or models will use to represent real world problems in simplified form.

- Object based models will appeal to the working of human cognition and hence the human input in to the development of a system is likely to be more natural

and less error prone.

- These techniques have usability features (it allows to use codes repeatedly on other system). Re-use not only modules but also entire design.

- Allow full exploitation of the power of object based and object-oriented programming languages.

Project team will use iterative (Agile Methodology) system development life because of: -

- It is flexible to change the user requirement and scope to get full requirement.

- Errors are easily to be identified

- Simple to manage risk because of it handles during its iteration.

Iterative (Agile Methodology) processes involve refining and improving a software project or product based on received feedback or new information. The goal is to achieve continuous improvement by incorporating changes in a trial-and-error fashion.

9.1. Data Collection Methodology

Data collection is one of the important tasks in determining and analyzing the existing system. It is the most important part in this project to find the main requirement of the system and to understand how the system does. The following are the methods that the project team uses to collect data.

Observation: - We have observed physically by going to the education office to analyze the TDT and teacher associations work processes.

Document analysis: - To get information about the background of the educational office the project team review necessary documents, manual that supports for this project.

Interviews: The project team use interviews to gather direct information from TDT managers and teachers' association managers getting over all current system process.

- What Kind Of System The Organization Has Used?

- Have They Any Computerized System?

- How The Existing System Works?

- During Transfer, Are There Any Problems? If There, What Are They?
- Who Is a Responsible Person In This Transfer Process?
- How Many Woreda And Kebele In Eastern Tigray Zone ?
- Is There Supporter Team For The Teacher Transfer Processes?
- Who Approved The Process To Be Done?
- How get the teacher transfer or in which case the teacher can transfer?
- How many schools are available in eastern Tigray zone?
- The dead line or the teacher transfer time to be done?

10. Overview of the existing system

In the current situation the system is done manually. If the teacher wants to transfer from one place to another place, he/she must require moving to the TDT office and submits the application letter to responsible person who works in TDT office. And also, the TDT take the teacher's application letter and validate the letter whether it is correct applicant or not based on different criteria. Some of the criteria taken into considerations are:

✓ Whether the teacher has 2 years and above services for woreda-to-woreda transfer and for school-to-school transfer teacher has 1 year and above service.

✓ Whether the teacher has married or unmarried.

✓ Whether the application letter is due to the problem of health or social problems.

In general, the transferring is performed hierarchically, that means if the teacher's transferring is from woreda to woreda, the task is performed by zone TDT. Otherwise transferring is from school to school the transferring task is performed by woreda TDT. 9

11.Functional Requirement

The functional requirement is the services that are provided by the system [3].

- 🔸 **The following are the work that our system does.**

  - Register teachers' information

  - Register the school information.

  - Register woreda information

  - System allows to manage user (activate/deactivate)

  - The System set transfer deadline
  - The system generates report.

  - The system allows to send request

  - The system assigns teacher to school all in one.

  - The system allows teachers to view their result.

  - Catch backup

12. **Non-functional requirements**

Non- functional requirement describes user visible aspects of the system that are not designed to the functional behavior of the system. Some of the non- functional requirements are [4]:

🔸 **Performance:**

Performance is characterized by the amount of useful work accomplished by the system compared to the time and resources used. The system performs its task efficiently and effectively because of project team use a light weighted code in HTML, PHP, CSS and

JavaScript.

- **Usability:**

Our system designed to have user-friendly interfaces and easy navigate from one link to other. It is also designed in such a way that users can easily learn and operate.

- **Portability:**

This system is portable, since it runs on different desktop platforms. The system is made using HTML, CSS, PHP, etc. which are platform independent and can be transported to other servers with minimum effort.

- **Availability**: The users can access the system at any time as he/she needs. So, the users of system can access the system successfully.

- **Security:** Every user can access the system after authenticated by user name and password.

- **Extendibility:** The system should be readily extendable and modifiable when user requirement.

- **Response time:** The system gives automatic response for any action that can be performed by users.

- **Error Handling:** When a user interacts with the system errors may occur. To control this kind of inaccuracies the application will generate different user-friendly messages.

13. Hardware and Software tools requirement

13.1. Hard ware tools

Table 1: storage requirement

Hardware component	Minimum requirement
Memory (RAM)	2GB and above
Processor Type (system type)	64 bit/32bit operating system
Processor	Intel Pentium
Processor Speed	3.00 GHZ and above
Hard Disk Space	10GB and above
Mouse	Any pointing device
Key board	QWERT ……

13.3. Software Development tools   11

While developing the project starts from the documentation to the implementation, we will use the following case tools [5]:

Table 2: System developing Tools

Tools	Activities
Notepad, Sublime text, Visual studio code	For coding PHP web language
CSS	For making attractive layout
PHP	Back end (Server-side coding)
HTML, AJAX, JQUERY, JAVASCRIPT	Client-side coding
MYSQL	Back end (data base)
XAMPP/Wamp/Mamp/Lamp(anyone)Server	For storing patient information permanently
Mozilla Firefox, IE, Google Chrome, Opera	Browsers
MS office word 2016	For Documentation
MS office PowerPoint 2016	For Presentation
Edraw Max7.9 and Visio 2010	To draw UML Diagram and for designs
Adobe Photo Shop CS6	To design back ground images

14. Work and Budget Plan

14.1. Work plan

Table 3: Work Plan (Gant Chart)

	January				February				March			
Requirement Gathering	■											
Analysis			■									
Design					■							
Coding						■			■			
Testing										■		
Implement												■
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4

Wi's are weeks of the month for i=1,2,3,4.

14.2. Budget plan

14.2.1. Software Cost

Table 4: Software Cost

Tools	Activities	access	cost
Notepad, Sublime text, Visual studio code	For coding PHP web language	internet	free
CSS	For making attractive layout	internet	free
PHP	Back end (Server-side coding)	internet	free
HTML, AJAX, JQUERY, JAVASCRIPT	Client-side coding	internet	free
MYSQL	Back end (data base)	internet	free
WAMP, XAMP Server	For storing patient information permanently	internet	free
Mozilla Firefox, IE, Google Chrome, Opera	Browsers	internet	free
MS office word 2016	For Documentation	internet	free
MS office PowerPoint 2016	For Presentation	internet	free
Edraw Max7.9 and Visio 2010	To draw UML Diagram and for designs	internet	free
Adobe Photo Shop CS6	To design back ground images	internet	free

14.2.2. Hardware Cost

Table 5: Hardware Cost

NO.	Materials	Quantity	Unit	Birr	Cent	Birr total
1	Paper	1	Packet	750	00	750.00 ETB
2	Pen	5	PCS	25	00	125.00 ETB
3	Flash Disk	1	Single	400	00	400.00 ETB
4	Mobile Card	10	Single	25	00	250.00 ETB
5	Printing	70	Single	5	00	350.00 ETB
6	Binding	3	Single	30	00	90.00 ETB
7	Laptop	1	Single	50,000	00	50,000.00
8	Transport	6	6	300	00	300
	TOTAL					**52,265.00TB**

ommendations

15.1. Conclusion

the proposal phases the current teacher transfer management System uses manual way of teacher's placement system. Due to this the current system has different.

Problem related with placement and data handling. So, the system we will develop in this zone Change in to the computerized way of teacher transfer from one woreda to another woreda and from one school to

another school. It is known that developing a system for an organization is not Easy. But the team will be trying its best and developed interesting online teacher transfer management System. It will be flexible, accurate and attractive with easy GUI approach. Generally, the team Confidently can say that the software will complete successfully with negligible errors. Finally, the Team expects the software will change the current system and makes it more reliable and efficient Than the previous manual system.

15.2. Recommendations

According to scope of our project the team will develop online TTMS. Because of the time   constraint we may have limitation which should be consideration in, but in the future the team believes that this system should be fully operationally by adding some functionality that are not included in the proposed system. We will also want to recommend this project can be expand and more automated with additional functionalism by integrating with many new technologies.

The system that we will try to automate is not the whole system of teacher transfer management system. Because of time limitation we can't develop all parts of the system, but we will try to automate some sub systems and functionalism

.

16.Reference

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17.Annex

Interview questions that we asked during requirement gathering.

- What kind of system the organization has used?
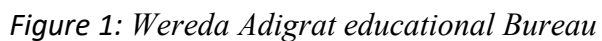- Have they any computerized system?

- Who is a responsible person in this transfer process?

Figure 1: Wereda Adigrat educational Bureau

Figure 2:Teachers Development Management System (TTMS) form

Figure 3:Collecting data through interviewing