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**FACULTY OF TECHNOLOGY**

**BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**UNIT: PROJECT PROGRAMMING**

**PROJECT TITLE: LIBRARY MANAGEMENT SYSTEM FOR…**

**IMPLEMENTATION PLAN**

**NAME: YUSSUF AHMED YASSIN**

**ADM NO: 21/05125**

**SUPERVISOR: DR. SIMON N. MWENDA**

**DATE:**

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# IMPLEMENTATION STRATEGIES

# INTRODUCTION

This document explains in detail the process, issues, requirements, activities, training and the players involved in the deployment of the application into the school for use. Implementation of the Library Management system will be conducted after the successful testing of the application as discussed in a previous document the *Test Plan.* With the assurance that the application is fully functional and meets the requirements, also discussed previously in the *System Requirement Specifications,* the implementation can go forward. Areas to be covered are, installation, user training, installation of databases and networks to support the application.

## Purpose

The purpose of this document is to guide the developer and the High school management of the steps to be undertaken before, during and after actual application deployment. This document is to be used for reference purposes for the entire implementation process. Herein, outlined are the requirements, standards to be met for the application to be successfully deployed for use by the High school.

* 1. Objectives

This document seeks to attain the best possible implementation strategy in order to ensure the roll out of the application is smooth. The following are the objectives of this document;

1. To identify a changeover strategy to support the roll out of the application. This changeover should be appropriate for a web application.
2. Serve as a reference point during the implementation of the application.
3. Guide the processes of the whole implementation process.
4. Direct the post implementation activities of the application.

# CHANGEOVER STRATEGY

## Parallel changeover

In as much as this is a disruption the Library management system cannot be relied on to communicate all books to all High school members. The traditional Library management system should still be running; this is to maintain the reach of books. The application should be considered as a complimentary to the traditional Library management system. Despite the application, on campus members can still access the Library management system. Therefore, the two Library management systems should run concurrently permanently.

## Features of the parallel changeover.

1. The current and new systems run concurrently (permanently in this case).
2. Users can choose any of the systems they would like.
3. The two systems are always up to date and concurring, i.e. they should be on equal states.

## **Justification**

Discussed below are the justifications for using the parallel changeover.

1. Risk – this type of changeover has relatively lower risk since the current system is still in operation, in case the new system is unavailable the users will always revert to the older system for books.
2. Cost – the cost to be incurred from the changeover is relatively low since the application is spread across the users (since it is a web application). The only costs to be incurred will be due to expanding the current systems in place to accommodate the extra traffic in the High school’s network and resources.
3. Time – this being a web application, with good deployment strategies like; advertising it to the students and other Wagberi high school members and campaigning for its use, the application will penetrate to the users in no time.

Advantages of parallel changeover**;**

1. This type of changeover allows for results to be compared, old and new system comparison.
2. There is always the old system to turn to incase the new one is unavailable.
3. The concurrency of the two systems offers an assurance to the users.
4. This arrangement is all inclusive of the Wagberi high school fraternity, e.g. for people who cannot access the application.

### Disadvantages of parallel changeover

1. This arrangement may be tedious since both the applications should be running concurrently. This is however minimal since the books updates are distributed.
   1. Tasks involved in implementation**.**

Discussed herein are the tasks to be completed for the successful implementation of the application. They will cover deployment, migration, training and post implementation guidelines.

## System setup

The first step of the implementation is setting up of infrastructure, controls and other aspects necessary for the successful deployment of a web application. The discussed below tasks are carried out once a release version has been tested and been approved for deployment.

1. Preparing application for release - these are activities like configuring the application, building and signing release files,
2. Updating application resources for release – the application resources such as multimedia files and graphics are updated and included in the servers.
3. Preparation of an end user license agreement (EULA) document. This is to protect the organizations intellectual property.
4. Activation of remote servers and facilities.
   1. Deployment

This is the process by which the application is to be released to the users. There are multiple ways of doing this with varying penetration to the users. A mixed approach is favored in order to have the highest possible reach to users. The possible deployment strategies are;

1. Google web browser – this is the go to place to deploy web applications. A lot of users are conversant with the Google browser and therefore accessing the application from here won’t be much of a challenge.
2. Campaigning for the website via the official school websites e.g. the e-learning platform, the official sites, the student portal among others. This is possible by offering links to visit the website.

## **Training**

Training involves making sure that users are fully conversant with how the system works despite providing the user manual to the enterprise management. These will include providing a system tour on the whole system and making the users participates throughout the whole process. Additionally, the application will provide a platform on which the users can raise issues for assistance.

The training aids to be used include:

1. User tutorials and guides on first login.
2. A User manual accessible from the application to be available for users who want to refer to it.
3. A FAQ page to answer frequently asked questions

## Review

This is a process of verifying whether the application is in order. This is meant to ensure that the application is acting normally and as prescribed by the configurations in place.

Part of the application review is the software maintenance plan. This is an elaborate and continuous system that allows the developer and the system owners to track the progress of an application to determine how the application is performing. This can be used to help back track the application to its original course by rectifying errors as their come up.

Software maintenance can also be used to add functionality to the application for it to be more productive. There are different modes of software maintenance as discussed below;

1. Corrective maintenance – this is repairing/processing performance failures or rectifying misleading information. In this case this would mean corrective measures to minimize errors.
2. Adaptive maintenance – this means altering of the program to be in line with required conditions due to changes of the business environment for example, change in business operations etc.
3. Perfective maintenance – this is for adding functionality to the application for more productivity this is meant to improve performance, increase efficiency, effectiveness and other benefits.

**Activities in software maintenance are;**

1. Correcting coding and design errors – this is done when there is an issue of the delivery of the system, particularly not being in terms with what the system is supposed to achieve.
2. Updating documentation/ test data – this is the additional of not included data in prior documentations e.g. Additional of extra source code and its functionality.
3. Upgrading user support.
4. Enhancement – this is the adding, modifying or redeveloping of code to support changes.

**Reasons for maintaining software**

1. Necessary to keep up with the changing user needs and operational environment.
2. To modify code and make it more enhanced.
3. To ensure the code is clean of bugs.
4. A well maintained software results to a more reliable system and with faster response time.