IMPLEMENTATION PLAN

PROJECT: LIBRARY MANAGEMENT SYSTEM
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Implementation plan LIBRARY MANAGEMENT SYSTEM application

1.0 Implementation Strategy

The installation strategy for the System Projects is provided below. The strategy presupposes that standard MIS installation requirements will be adhered to. Additionally, unless otherwise stated, all modifications must be done in the PRD Partition. The source of these modifications will be made clear throughout the strategy. As part of the installation, all outdated systems will be transferred to the new Production library. Future system cleanup will be made easier as a result.

2.0 Installation and conversion plans

This strategy will mostly include updating or changing the current architecture of writing information in books to a software system. Analysts can choose from a variety of conversion techniques as well as a contingency approach that considers a number of user and organizational factors when selecting a conversion strategy. The ideal conversion strategy varies depending on the situation. It is impossible to overstate the value of eful planning and organizing the conversion with the strategic participation of users(which sometimes takes several weeks), file backups, and proper security. Direct changeover is the approach which will be used in this implementation procedure. When a system is converted directly, users cease using the old one on a given date and start using the new one instead. Direct switchover will only be accomplished after considerable testing, and it functions best when certain processing delays can be accepted. The system will be launched on 30th November, 2022 where the users will stop using the old method of recording information on books. Direct switch is seen as a dangerous conversion strategy.

Users who are resentful about being compelled to utilize a strange technology without choice may disrupt the workplace. The ability to compare new and previous findings is also lacking.

3.0 Software and Hardware installation

Installing hardware and software involves setting up hardware and software inside of a computer program or system. Hardware is any physical element that may be plugged into or attached to a device to enable correct operation. The process of physically inserting components into a computer or another electronic equipment is known as hardware installation. Additionally, setting up motherboard jumpers or DIP switches, turning on and off integrated components, plugging in connections, etc. are included in this. Putting data on a storage device so that other devices may access it is the process of installing software.

Both are crucial components needed for the proper operation of any particular piece of hardware or software in use today.

4.0 Data Conversion plan

It includes a description of every action that has to be taken in order to bring the new system into operation. It foresees potential issues and offers methods to address them. The parties involved will be;

- CEO SIXT Companies
- Employees
- 2 programmers

4.1 File conversion

One file format is converted into another during this procedure. For instance, a WordPerfect file may be changed into a Microsoft Word document. The files in the books will be transferred in the software system by the employees. This data entry will take like two days where information like names, id numbers, email addresses will be entered. The staff will be trained virtually through zoom meeting before the implementation day. At this training, the trainers and trainees must arrive at the same time but need not be in the same location. The main tools utilized in this situation include virtual reality programs,
text-based Internet relay chat tools, and video conferencing.

4.2 Test file

 For this Library management system, unit tests are run using test files. A test file will be written with a class that extends Web Test Case as the first step (or Drupal Unit Test Case). A static function called getInfo() in this class will be included, which returns an array containing test-related data. Then the class with as many methods (functions) as necessary to run tests on the program will be extended. The name of every method must begin with "test".

 4.3 Training personnel

 4.3.1 User manual

This part gives explanation to the clients (students) and the employees (librarian and admin) using the system. For the clients, first they will register into the web-based system through any browser where they will enter their personal details such as name, school email address, registration number and password on pressing the button "SIGN UP". This data will be stored into the database whereby its only admins can access it. After registration, they will be directed into the system where they will be able to request books, issue books and also, they can request unavailable books from the admin.

4.3.2Data Dictionary

Table Name: ActivityLog				
Description: store all the activity done by user in the system				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
LogId	int	Not null	-	-
LogEmp	nchar(10)	Not null	-	-
LogTime	datetime	Not null	-	-
LogActivity	varchar(MAX)	Not null	-	-

Field	**Example Data**
LogId(PK)	113
LogEmp	M0001
LogTime	2011-02-16 16:35:07.000
LogActivity	Information of PublisherID P0003 has been updated

Table: Data Dictionary for ActivityLog table

Table Name: Admin				
Description: store the information of user who used the library system				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
Admin_ID	nvarchar(50)	Not null	-	-
Admin_Name	nvarchar(50)	Not null	-	-
Admin_Level	nvarchar(50)	Not null	-	Format: 1,0

Password	nvarchar(50)	Not null	-	-
Admin_ic	nvarchar(50)	Not null	-	-
admin_contact	nvarchar(50)	Not null	-	-
admin_email	nvarchar(50)	Not null	-	-
admin_address	nvarchar(MAX)	Not null	-	-

Field	Example Data
Admin_ID	M0001
Admin_Name	Matta Kimani
Admin_Level	4
Password	Kimani
Admin_ic	880704-35-5263
admin_contact	04-3984851
admin_email	kimani@gmail.com
admin_address	kenya

Table: Data Dictionary for Admin table

Table Name: Book

Description: store the information of the books

Fields	Data Type	Null/Not Null	Default Value	Rules
ISBN	nvarchar(50)	Not null	-	-
BookTitle	nvarchar(50)	Not null	-	-
Author	nvarchar(50)	Not null	-	-
PublisherID	nvarchar(50)	Not null	-	-
Language	nvarchar(50)	Not null	-	-
Category	nvarchar(50)	Not null	-	-
Description	nvarchar(MAX)	Not null	-	-
BookCover	nvarchar(MAX)	Not null	-	-

Field	Example Data
Book id	5
BookTitle	Famous Five
Author	ds
PublisherID	dsd
Language	English
Genre	Mystery
Description	A book which shows the latest information of all brand handphone
BookCover	Handphone.JPG

Table 3.4.3 Data Dictionary for Book table

Table Name: BookComment

Description: to store the comment for particular book

Fields	Data Type	Null/Not Null	Default Value	Rules
CID	Int	Not null	-	-
ISBN	Nvarchar(50)	Not null	-	-
UserID	Nvarchar(max)	Not null	-	-
Comment	Nvarchar(max)	Not null	-	-

Field	Example Data
CID	13
ISBN	1234567891234
UserID	M0001
Comment	This book is very interesting…thanks

Table: Data Dictionary for BookComment table

Table Name: BookCopy

Description: to store the quantities of books and the detail of each book

Fields	Data Type	Null/Not Null	Default Value	Rules
BarcodeID	nvarchar(50)	Not null	-	-
ISBN	nvarchar(50)	Not null	-	-
Status	nvarchar(50)	Not null	-	Format : L, A, N
PurchasePrice	Money	Not null	-	-
purchaseDate	Datetime	Not null	-	-

Field	Example Data
barcodeID	978158713204901
ISBN	9781587132049
Status	L
PurchasePrice	200.0000
PurchaseDate	2011-02-16 00:00:00.000

Table: Data Dictionary for BookCopy table

Table Name: News

Description: to post the latest news at web site's main page

Fields	Data Type	Null/Not Null	Default Value	Rules
ID	Int	Not null	-	-
Date	Date	Not null	-	-
[content]	Nvarchar(50)	Not null	-	-

Field	Example Data
ID	9781587132049
Date	2011-01-13
[content]	The popular book 'The Lord of the Ring' is now available !!!

Table: Data Dictionary for News table

Table Name: LibraryDetail				
Description : to store the information of the library				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
libno	Char(10)	Not null	-	-
Libname	varchar(50)	Not null	-	-
Libadd1	varchar(50)	Not null	-	-
Libadd2	varchar(50)	Not null	-	-
Libposcode	Char(5)	Not null	-	-
Libstate	varchar(50)	Not null	-	-
Libtown	varchar(50)	Not null	-	-
Libphone	varchar(50)	Not null	-	-
Libfax	varchar(50)	Not null	-	-
Libemail	varchar(50)	Not null	-	Format : abc@abc.abc
Libweb	varchar(50)	Not null	-	-

Field	**Example Data**
libno	002
Libname	Lelo Muli
Libadd1	30, lintang perai 5,
Libadd2	Taman putang,
Libposcode	13506
Libstate	Pulau Pinang
Libtown	Butterworth
Libphone	04-3859451
Libfax	04-3225645
Libemail	lelomuli@bitanni.com
Libweb	www.google.com

Table: Data Dictionary for LibraryDetail table

Table Name: Reservation				
Description: to record the book reservation for the member				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
UserID	Nvarchar(50)	Not null	-	-
BarCodeId	Nvarchar(50)	Not null	-	-
DateReserve	date	Not null	-	-

Field	**Example Data**
UserID	M0001
BarCodeId	584961352652401

Table: Data Dictionary for Reservation table

Table Name: LostBook				
Description : to keep the information of lost book				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
ID	int	Not null	-	-
Userid	varchar(50)	Not null	-	-
Barcodeid	varchar(50)	Not null	-	-
ISBN	varchar(50)	Not null	-	-
LostDate	Date	Not null	-	-

Field	**Example Data**
ID	3
Userid	M0002
Barcodeid	978158713204901
ISBN	9781587132049
LostDate	2011-02-16

Table: Data Dictionary for LostBook table

Table Name: RetalInfo

Description: to keep the book transaction detail

Fields	Data Type	Null/Not Null	Default Value	Rules
userID	nvarchar(50)	Not null	-	-
BarCodeID	nvarchar(50)	Not null	-	-
DateReturned	Datetime	-	-	-
DateRented	Datetime	Not null	-	-
DateDue	Datetime	Not null	-	-
Total Fine	money	-	-	-

Field	Example Data
userID	M0003
BarCodeID	123456789123401
DateReturned	2011-03-02 00:00:00.000
DateRented	2010-09-09 00:00:00.000
DateDue	2010-10-10 00:00:00.000
Total Fine	200.0000

Table Name: Publisher

Description: to store the publisher so it is available when register book

Fields	Data Type	Null/Not Null	Default Value	Rules
PublisherId	Nvarchar(50)	Not null	-	-
PublisherName	nvarchar(50)	Not null	-	-

Field	Example Data
PublisherId	P0001
PublisherName	Tan Khen Khen

Table: publishers' details

Table Name: User				
Description: to store the information of the member				
Fields	**Data Type**	**Null/Not Null**	**Default Value**	**Rules**
UserID	Char(10)	Not null	-	-
Username	varchar(50)	Not null	-	-
Useraddress	varchar(50)	Not null	-	-
UserPhone	varchar(50)	Not null	-	-
UserIC	Char(5)	Not null	-	-
UserRegDate	varchar(50)	Not null	-	-
AvailableBook	varchar(50)	Not null	-	-
Userpass	varchar(50)	Not null	-	-
Userphoto	varchar(50)	Not null	-	-
Useremail	varchar(50)	Not null	-	Format : abc@abc.abc
UserExpiredDate	varchar(50)	Not null	-	-

Field	**Example Data**
UserID	M001
Username	Ooi Yee Neng
Useraddress	30 lintang talang 2, taman perai. 13600 Perai, Penang.
UserRegDate	2022-02-12 00:00:00.000
AvailableBook	4
Userpass	12345678
Userphoto	Tan_chen_khen.JPG
Useremail	mrtan@hotmail.com
UserExpiredDate	2022-03-12 00:00:00.000

Table: student registration

4.3.3 Job Aids
This area is specifically for the employees. The system graphic user interface is friendly to both the clients and the employees. The employees will only be required to insert clients' details during the time of hiring and save.

4.4 Conversion of physical facilities
4.4.1 Communication Network
In any office working with software's and computers, communication is very essential as the clients usingthe system from different places want to get responses of their questions. So, there will be installation of a WIFI network to make communication easy

. 4.4.2 Hardware
Some of the hardware facilities to be used include WIFI routers, computers, clean and well-maintained rooms for laptops, and furniture.

4.5 Conversion of administrative procedures
The administration used to be manually carried out system will change to an automate one, only the admin will change.

4.6 Installation Approach
Parallel approach is the one to be used in this process. It is a strategy in which the old and the new systems function side by side for a while. The differences between the two systems' outputs are compared and resolved. The benefit of this conversion is that it has gained widespread acceptance and offers the organization a high level of protection from the failure in the new system. A goal data should be established during parallel conversion to signal when this conversion may be stopped and the new systemcan function independently. If there are discrepancies between the old and new systems, the transaction should be confirmed using the same inputs. The main reason for using this approach is to enable the librarian use the new system that is now working

5.0 Training plan
Both virtually and physically are the approaches to be used. Instructor led training is the one to be used in this implementation. ILT, or instructor-led training, is when an instructor leads a training session for a class of students or a single learner. ILT can be delivered in 6 person or online, but real-time communication between the students and the teacher is essential for discussion and feedback. Resistance to change plan to fight the resistance to the new system, it has more advantages compared to the old system. Quickly create a quote. Know whenever a vehicle is available. Enable communication between the students and the administration on a single platform. Look for any missing or damaged objects. Information availability everywhere and at any time. Selecting the appropriate software for your library system.

6.0 Software maintenance plan

Restoring something to its initial state is maintenance. Enhancement refers to the act of adding or changing the code to accommodate modifications made by the user specification. System improvement increases system capabilities by adding additional needs while system maintenance keeps the system in compliance with its original specifications. As a result, maintenance modifies the current system, enhancement adds features, and development replaces the current system. The tasks that involve updating documentation, testing data, and correcting mistakes made in system design and implementation make up a significant portion of system development. Corrective Maintenance – This will allow the user to mend and fix any lingering issues. Adaptive Maintenance – This will allow the user to change how the programs' functions are performed. Perfective maintenance - users may improve or adapt programs in accordance with their requirements and evolving demands

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