**KIST COLLEGE OF INFORMATION AND TECHNOLOGY KAMALPOKHARI, KATHMANDU NEPAL**



**PROPOSAL**

**FOR**

**“GYM MANAGEMENT SYSTEM”**

|  |  |  |
| --- | --- | --- |
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# Application overview:

GYM management system is a desktop- based application which is the system for managing the day to day activities of the gym. Hence, this system will be focusing on the gym members and employees to record their data. The aim of this project is to create a GYM management system for GYM related business.

This Gym Management System is mainly used by gym manager, user and admin. Normal gym manager is able to manage the members of the gym including their details, and also the most important module in a gym which is payment transaction module. The system is mainly used to design the user interface and keep database records. The facility of adding new members and searching the information of the members, etc. is there in the software. It is also easy to use for both beginners and advanced users.

# Objectives

The objectives of the system are: -

* **Faster Process:** To make sure a user gets his desire data and booking as early as possible; the GYM management system will provide a faster response to complete the process.
* **Minimize paperwork:** As all the system us computerized, there is no need to fill any application form for Booking purpose. So, the paperwork will be very less.
* **Centralized:** All types of data and the activities related to the system will be kept in a file so that it is easy to monitor the system and provide the customer the best service.

This software package can be readily used by non-programming personal avoiding human handled chance of error. This project is used by two types of personnel

1. Admin
2. User

Admin can maintain daily updates in details and print reports according to need.

Administrator must be an authorized user.

User can register themselves and make choices according to their need from data provided.

System can be upgraded according to user’s and administrator’s requirements with little changes.

New features can be added as per requirements.

# Scope

This project has a large scope as it has the following features which help in making it easy to use, understand and modify it:

* User registration.
* No need to do Paper work.
* Manage the information of the user, staff and inventory.
* To increase the accuracy and efficiency of managing the GYM payment.
* To satisfy the user requirement.

This software package can be readily used by non -programming personal avoiding human handled chance of error. This project is used by two types of users

1. Admin
2. User

Main points are:

* Simplified management of User information.
* Easy to understand by User and operator

# Phases

The execution phases involved are divided into following phases as listed below:

Project start – up

* Project Acquisition
* Requirement Analysis
* Project management planning

Project Execution

* Design
* Development and integration
* Testing

# Software Development Lifecycle

## 1.0 Functional Requirement

In software and system engineering, a functional requirement defines a function of a system or its component, where a function is described as a specification of behavior between input and outputs

## 2.0 System Design

System design is the process of defining the components, modules, interfaces, and data for a system to satisfy specified requirements. System development is the process of creating or altering systems, along with the processes, practices, models, and methodologies used to develop them.

Importance:

* If any pre-existing code need to be understood, organized, and pieced together.
* It is common for the project team to have to write some code and produce original programs that support the application logic of the system.

## 3.0 Implementation

This phase is initiated after the designing is compete. In this phase, programmers code based on project requirements and specifications, with some testing and implementation taking place as well. We used C++ programming to implement our project.

* File Handling was used for the data and records.
* Functions for sub modules.
* The system is first developed in small programs called units, which are integrated in the next phase. The testing of each developed unit individually is referred as unit testing.

## 4.0 Integration and Testing

The systems integration test function is to ensure that the developed systems meet all the technical requirements with the components and subsystems integrated. All the modules/functions are tested. Individual functions are provided and output is generated. The code is tested through the unit testing.

* **Unit Testing:** A testing technique using which individual modules are tested to determine if there are any issues to be fixed. It is concerned with functional correctness of the standalone modules. The main aim is to isolate each unit of the system to identify, analyze and fix the defects.

### **4.1 Unit Testing Technique:**

* + **Black box Testing:** Black -box testing is a method of software testing that examines the functionality of an application without peering into its internal structures or workings.
  + **White box Testing:** White-box testing is a method of software testing that tests internal structures or workings of an application, as opposed to its functionality. In white box testing an internal perspective of the system, as well as programming skills, are used to design test cases.

## 5.0 Deployment and Maintenance

Once the software has been deployed for customer uses the maintenance phase begins and any defects found and change requests are then taken care of with new updates. The tests of the product and the product passes each testing phase, the product is ready to go live. This means the product is ready to be used in a real environment by all end users of the product.

* Once the functional and non-functional testing is done, the product us deployed in the customer environment or released into the market.
* After the product is deployed to the user’s market from there the maintenance phase starts
* Once the product or the system is in use there will be many patches to be fixed.
* The user might ask for new features and enhancements. It is the responsibility of the maintenance team to attend to these requests and to fix the bugs that are found.
* The maintenance effort revisits all the other stages of the software life cycle.
* Each modification requires planning, specification, design, coding, testing, installation.