

EGERTON UNIVERSITY



PROJECT PROPOSAL

FOR

TITLE: GAMES MANAGAMENT SYSTEM

PREPARED BY: STUDENTS NAME:

DAVID OPIKO

JACKSON KING'ORA

PAPA JEREMY

HUMPHREY ADALA

MIKE OMAMO

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PROJECT CORDINATOR: MR. ODIYO

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ABSTRACT/EXECUTIVE SUMMARY

The proposed system is a web-based management system for the university games department to manage all its sporting and gaming activities. Therefore, if a user has access to Internet connection and any computer with a browser he or she is set to use the system.

Since most of the work in the Games Department is done manually, this system is intended to significantly improve the operations such as communication between the Games Department coordinator, the games tutors, the games in-charges (coaches, patrons) and students who participate in the various sporting events. Currently, manual reports have to be written to keep records, communicate to finance and facilitate communication between various parties. Advertisements of sporting events are done through printed notices and through communication on social media. The coordinator is the head of Games Department, under him exists three tutors who work closely with the coordinator. Tutors can take the responsibilities of in-charges or coaches in situation where there are no instructors for a particular activity. In-charges (coaches) manages a particular gaming activity as stipulated by the coordinator.

The system development will therefore depend on these individuals to acquire the requirements necessary to develop the system.

The coordinator registers all the games and sporting events that occur in the university. He or she also assigns the patron to a particular gaming activity. The coordinator can also develop the budget for a particular event through finance approval.

The patron approves request from students and adds students who participate in that particular event that he or she is in charge. They can also communicate with the system coordinator to requests for funds for various activities, inform him of upcoming events and also communicate with the students participating in his sporting event.

Independently, there exists a store clerk who is the keeper to the games store. He manages day to day activities and records the inputs and outputs of the games store. The student should be able to communicate to the patron, view upcoming events and also check whether their remunerations have been disbursed.

The system is set to be developed using waterfall methodology. For the methodology phases, i.e. planning, requirements collection, analysis, design, testing and implementation, documentation will provide a clear roadmap to achieve the goals and objectives associated with the system.

CHAPTER 1: INTRODUCTION

Background

The university currently uses a manual system to organize and manage the gaming and sporting activities.

This makes it difficult to handle the information about the students who participate in various sporting events.

Requesting for funds, organizing sporting activities in the university and outside the university is a big challenge to both the patrons and the games department since both parties must meet physically but through this system they will be able to communicate easily and be updated effectively.

Managing the store contents is another hurdle imposed from the games department. This can be trickier as manual record are used to record day to days' activities as far as the store is concerned. Hence, a system that incorporates this need to exist eventually.

Objective:

The system is intended to manage the university Games Department in various:

- i. Maintain the records of all games and sports, sporting activities and individuals who participate in them.
- ii. Improve communication between individuals who participate in sporting events such as patrons and student.
- iii. Manage the persons who work in the games department.
- iv. Enable patrons request for funds for the activities.
- v. Enable proper planning of sports events in the university.
- vi. The system should be able to generate reports on how the Game Department spends its finances.
- vii. To manage the store contents and record more electronically other than manually.

1.1 Overview and Literature Review

Since most of the work in the Games Department is done manually, this system is intended to significantly improve the operations such as communication between the Games Department coordinator, the games tutors (patrons), the games in-charges (coaches) and students who participate in the various sporting events. Currently, manual reports have to be written to keep records, communicate to finance and facilitate communication between various parties. Advertisements of sporting events are done through printed notices and through communication on social media. The coordinator is the head of Games Department, under him exists three tutors

who work closely with the coordinator. Tutors can take the responsibilities of in-charges or coaches in situation where there are no instructors for a particular activity. In-charges (coaches) manages a particular gaming activity as stipulated by the coordinator.

The system development will therefore depend on these individuals to acquire the requirements necessary to develop the system.

1.2 Problem Statement

The University Games Department wishes to implement a web-based system to manage all the activities of the campus sports events.

The system should have at least four modules which are:

- i. Coordinator's module - Registers every sport in the university, adds and assigns every game to a patron, approves funds requested for by patrons, communicates directly with patrons, approves every sport events and activities and generate reports.
- ii. Games patron module – Requests for funds, approves new students who wishes to join the sport, informs the coordinator about upcoming sporting events and activities, communicate directly with both the coordinator and students in his or her sport.
- iii. Students module – View upcoming events and activities, check whether remunerations have been disbursed, communicate directly with the patron.
- iv. Store clerk module – Manage inputs and outputs to the game department store including their source and current receptacle of a particular store entity.

The system will require every user to login in order to use it.

Being an electronic system, it will minimize the use of papers to store information on activities and individuals. It will also reduce the time taken to search and retrieve information about a particular activity or individual.

1.3 Justification

The proposed system will be able to manage all records electronically therefore reducing the manual paperwork which is currently being used. Since it is electronic, it will be easier to search, update, store and retrieve information from the system therefore saving on the time taken. Patrons will be able to communicate to the coordinators easily and make various requests such as funding requests.

All this information will be stored in an electronic database managed by a server.

Objectives

The system is intended to manage the university Games Department in various:

- i. Maintain the records of all sports, sporting activities and individuals who participate in them.

- ii. Improve communication between individuals who participate in sports such as patrons and student.
- iii. Manage the persons who work in the games department.
- iv. Enable patrons request for funds for the activities.
- v. Enable proper planning of sports events in the university.
- vi. The system should be able to generate reports on how the Game Department spends its cash.
- vii. Keep track of the Games Department resources in the store.

CHAPTER 2: PROPOSED SOLUTION

2.0.1 Methodology

The university Games department currently uses a manual system to organize and manage its activities. This therefore means that there is quite a large number of paper work. Students who participate in sports usually do not know whether their remunerations have been disbursed, thus, some usually end up not getting paid. Patrons have to present themselves physically to the Games Department when they want to request for funds or organize activities. There is also no clear way knowing the amount of money the Games department uses in a single academic year since the papers can be altered or get destroyed. Managing the store also is a challenge when dealing with diverse users of a particular system.

In order to reduce these challenges, the following will be accomplished by the system:

- i. Login functionality – Every user will be required to login in order to use the system. This will prevent unauthorized access to the system.
- ii. Accountability - Every user who inserts or modifies any record will be logged.
- iii. Time efficiency – Searching and retrieving records in the system will be faster thereby saving on time.
- iv. Direct communication – Games patrons and the coordinators are able to communicate directly. This provides a way for the patrons to request for funds and inform the department of upcoming events. The patrons can also communicate with their respective students directly instead of having to wait until they meet physically.
- v. Once the remunerations for the students have been disbursed, they reflect directly on the students' module.

The system is set to be developed using waterfall methodology. For the methodology phases, i.e. planning, requirements collection, analysis, design, testing and implementation, documentation will provide a clear roadmap to achieve the goals and objectives associated with the system. Each phase will be tested (Verified and validated before proceeding to the next phase). The waterfall methodology is shown below.

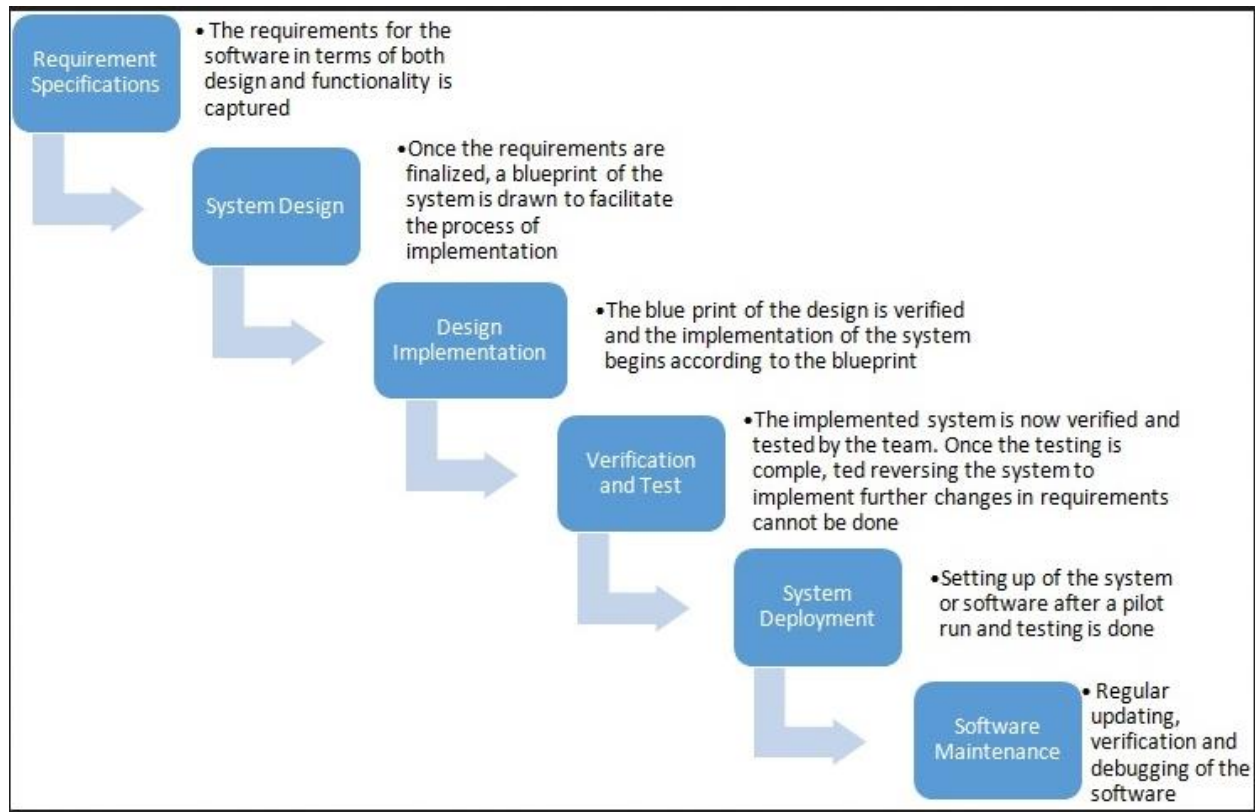


Figure 1: Waterfall methodology.

Pros of waterfall model is that it is a methodical and sequential approach, it stresses on method keeping and documentation, clients know what to expect at each phase or development stage and the team turnover can be ranked accordingly. These surpasses cons like every step being final, the project depending heavily on initial inputs requirements, changes in waterfall method are a nightmare to incorporate and testing can only happen at the end of the sequence.

2.0.2 Project Scope

The system brings four modules together:

- i. Coordinator module - Registers every sport in the university, assigns every game with a patron, approves funds requested for by patrons, communicates directly with patrons, approves every sport events and activities and generate reports.
- ii. Games patron module – Requests for funds, approves new students who wishes to join the sport, informs the coordinator about upcoming sporting events and activities, communicate directly with both the coordinator and students in his or her sport.
- iii. Students module – View upcoming events and activities, check whether remunerations have been disbursed, communicate directly with the patron.
- iv. Store clerk module – Manage inputs and outputs to the game department store including their source and current receptacle of a particular store entity.

2.0.3 Resources

Hardware:

- i. Computer with at least 2Gb R.A.M and intel Pentium duo core processor.
- ii. Web Server.

Software:

- i. Latest web browser like Mozilla Firefox.
- ii. Database Management System like XAMPP MySQL.

CHAPTER 3: PRELIMINARY RESULTS

After the system has been deployed, the following solutions are expected to have been solved:

- i. Large quantity of paperwork and physical files – Since the system is electronic, there will be minimal or no paper use within the Games department.
- ii. Poor communication – Since the various users of the system will be able to communicate together, this challenge will have been adequately addressed.
- iii. Accountability – Any user who inserts or modifies a record will be saved in the log. Thus, it will be easier to track a user's activity in the system.
- iv. Authorized access – Every user who uses the system is required to login using their username and password. Also, a user of a particular module cannot access another module.
- v. Time efficiency – It will be easier to search for records within the system.
- vi. Manageability – Organizing information for retrieval when needed. Protecting records that are essential to mission-critical departmental operations. Ensuring compliance with legal and regulatory recordkeeping requirements, thereby avoiding costly fines or other penalties on games actors.

CHAPTER 4: CHALLENGES, OBSTACLES AND RISKS

Requirements Elicitation Risks:

- i. Some of the respondents who are potential users of the system may be uncooperative. This is a very high risk. It could lead to the developers developing a poor quality and ineffective system. Actions such as advising the respondents the benefits the proposed system over the current manual one and conducting the interview may help in mitigating its occurrence.
- ii. The developers may collect information which may be irrelevant in developing the proposed system – This is a high risk. It could lead to a poor quality and ineffective system. The developers should conduct proper research on how the proposed system is intended to function and its requirement before embarking on gathering requirements.

Scheduling and budget challenges:

- i. The developers could run short of time during the project development. This is a high risk. It could lead to delay in delivery of the system and even worse cancellation of the contract. The developer should develop a proper schedule taking into considerations the milestone that might be encountered during project.
- ii. The projected budget for the project may not have been enough. This is a high risk. It could lead to delay in system delivery or even stalling the project. The developers should set aside some cash to handle emergencies and make a proper budget.

Human risks:

- i. The developers could get sick during the project. It is a moderate risk but its effect on the project can vary from minimal to great depending on the severity of the ailment.
- ii. Handling project developers is a challenging factor and the project manager has keep everyone on toes doing what he was supposed to be doing, hence a moderate but critical human risk.

Additional modules risks:

- i. If the project sponsor intends to add some modules to the system, it could crash the whole system or even require that the project begin again. This is a moderate risk which can be mitigated by conducting a thorough requirements elicitation.
- ii. Integration risk – The modules may not integrate effectively since a a team of developers will be used to code the system.

CHAPTER 5: SCHEDULE AND BUDGET

5.0.1 Schedule

The project schedule is as follows:

- i. Project planning – 7 days.
- ii. Requirements elicitation – 5 days.
- iii. Requirements analysis – 3 days.
- iv. Feasibility analysis – 2 days.
- v. System coding – 21 days.
- vi. Interface design – 14 days.
- vii. System testing and debugging – 2 days.
- viii. Configuration – 1 days
- ix. Final Testing – 2 days.

5.0.2 Budget

Expenditure Description	Budget Requested (Ksh)	Justification for Expenditures
<u>Equipment</u>		
Computer(Laptop)	35, 000	A computer is provided for in the lab (coding and testing)
<u>Supplies and services</u>		
Hosting	5,000	Hosting the system
Risks and uncertainties	4,000	Recovering from any risk that might happen
Project evaluation	2,000	For testing before implementation
Implementation and maintenance	4,000	Updating the system

CHAPTER 6:

Conclusion and Future Work

The proposed electronic system will significantly improve operations of the games department since it will be time efficient, save on space occupied by the physical files and papers.

The developers encourage the games department to consider integrating the system with M-PESA mobile payment platform in order for the students to receive their remunerations directly on their mobile phones.

The activities of the games department will have to be made happen in real time especially at the field to compete on an international standard. Other facilities e.g. modern football pitch need to be launched to enable spectacular views of the same.

Most of the games and sports in this department will be required to move to an online platform. This is due to the current phenomenon displayed by advanced countries.

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