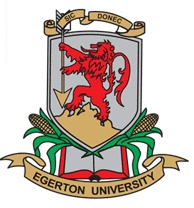
**EGERTON UNIVERSITY**



**PROPOSAL DOCUMENT**

**FOR**

**EGERTON UNIVERSITY TRANSPORT**

**MANAGEMENT SYSTEM**

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**VERSION 2**

**ACKNOWLEDGEMENT**

I declare that this proposal is my own work and has not been plagiarized

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# ABSTRACT

This project is supposed to take care of Egerton university transport department needs. The department is responsible for assigning vehicles to departments who have made requests for trips. It therefore has to come up with a schedule of booked vehicles at the beginning of the semester. The department also has to keep record of their drivers and mechanics and their work. Besides this there are inventories for the department whose records need to be managed and know what’s available and what is not. All this done manually.

This system will address this issues affect this department. The system has to meet the following objectives:

* To automate request and booking of vehicles
* To formulate a schedule
* To automate inventory management
* To automate staff management
* To make records available at all times – a simple database is maintained

To deal with the above objectives the system has a simple database that is easy to maintain. This database makes it easy to access records of inventory, drivers, mechanics, booking details. The system also has an easy to understand, user friendly view for the users to enable easy usage and access to what the user wants based on the privileges assigned to them. The system takes care of booking from departments that are viewed by transport department administration which can be accepted or denied and information is sent back on that.

# INTRODUCTION

Egerton university transport department is an essential part of the university which offers transportation services. To do this there are several activities that take place in order for the department to work on requests given to them by several departments in the university.

The transport department generally is responsible for booking of vehicles to respective departments that have requested for vehicles. University departments first send requests to the transport department to book for a vehicle or vehicles. This is usually done at the beginning of a semester or a semester earlier. The chairman of the transport department or the fleet assistant goes through all requests made and allocates a vehicle depending on the number of people, the date and the duration the vehicle is needed. There are also request that come in very late bit need a vehicle allocation. This are also taken care of. The departments are then notified if they have been allocated a vehicle or not.

Besides managing the allocation of vehicles, the transport department also has to take record of vehicle in terms of servicing, fuel consumption and the mileage of the vehicles. Drivers are also allocated a vehicle and therefore the details are needed. There are also mechanics that service of the vehicles who work under a manager. The department also keeps track of inventory like spare parts of vehicles

The activities done by the transport department becomes challenging to the especially when it comes to records and managing the records since they have to manually do it. This means there will be a lot of paper work involved and lots of files to keep track of everything that goes on. It is also difficult to come up with a schedule since a lot of request come in and may be difficult to keep track of all of them. Some requests may never get to be approved or if they do a vehicle may be allocated to two departments at same time. Going through all the assessment forms of drivers is also tiresome.

This project is going to take care of making of requests by departments where departments can make requests in the system and see if requests is accepted, denied or still pending. The transport department will receive request and accept or deny. The transport department will be able to view records of allocated vehicles, unallocated vehicles, the schedule, driver details, mechanics details and vehicle details. Inventory management will be also available where the system will keep track of cost of items, ones that are available and used items

The system will make it easy coming up with a schedule, managing divers, managing mechanics, keep truck of available vehicles, easy booking, rating drivers and mechanics, keeping track of inventor

# OVERVIEW AND LITERETURE REVIEW

Currently the university doesn’t have transport management system. All work is done manually. In this system it is very difficult to find old records. Since all work is done manually, it takes time to give report to management regarding their query. Prateek (2016) states that The main objective of this system is to reduce the consumption of time during maintaining the records of college Transport management. Separate divisions are provided to maintain the records. The system can be used to manage the data of all type of transport management. It will support both stand alone and also networking environment

# PROBLEM STATEMENT

The transport department has the following problems:

* Keeping track of records-manual filing and paper work
* Conflicting allocations of vehicles and drivers
* Managing inventories of consumables - what is available, cost of the items, what has been used and existing staff
* Management of staff i.e. driver allocation table, available drivers and mechanics

Considering the above problems, the system will be able to

* store all data of requests made and if they have been accepted, denied or pending which will be available to the administrator at all-time hence taking care of the manual filing and paper work and time it takes to access records
* automatically compile a list of all allocated vehicles with dates and departments hence have a schedule of booked and avoid conflicting bookings
* Keep all records of inventories such as the costs, what has been taken from inventories and what inventories are available. This will help keep track of all items and know what needs to be added
* Keep all records of vehicles, that is service, fuel consumption among others. This information will help in decision making on relevance of a vehicle

# JUSTIFICATION

This project is worth doing because:

* It will save a lot of time when it comes to booking of vehicles. There will be no need to take a list of requests to transport department but instead making a request will be one click away
* Conflicting allocations will be solved since a schedule will be formulated
* There will be less paper work and filing since data will be stored in a database which also makes retrieval of information quiet easy compared to a manual system
* Management of inventories becomes so easy since the system will have details of the stork, that is what is available, what has been taken, what to add.
* Staff management will be eased since data of staff will available including their availability

# OBJECTIVES

The objectives of this project are as follows:

* To automate request and booking of vehicles
* To formulate a schedule
* To automate inventory management
* To automate staff management
* To make records available at all times – a simple database is maintained

# CHAPTER TWO

# PROPOSED SOLUTION

The system will be of benefit because it solves the following issues:

* It will save a lot of time when it comes to booking of vehicles. There will be no need to take a list of requests to transport department but instead making a request will be one click away
* There will be schedule that is updated automatically in case of changes
* There will be less paper work and filing since data will be stored in a database which also makes retrieval of information quiet easy compared to a manual system
* Driver management makes it easier for the administrator to make decisions on driver performance and log details. Mechanic management will also save a lot of time to know if a mechanic is reliable on the job or not
* Management of inventories becomes so easy since the system will have details of the stork, that is what is available, what has been taken, what to add.

# METHODOLOGY

The transport department essentially involves management of vehicles booked by different departments of the university. To get to understand all the activities that take place in and how they are all done. Research had to be done to collect data on all the activities

Here are some of the method I applied to get to understand what the transport department entails and what the system would have to improve the departments day to day activities:

* **Interview –** an interview was undertaken at the transport department of the university with some of the staff working there. The chairman, fleet assistant and mechanics manager gave the overall activities of the department and explained the problems and challenges they face in their day to day activities
* **Observation –** from my observation, it was noted that there are a lot of files in that department making it obvious that record keeping and tracking was a lot of work. It was also observed that the process of booking is a long process. Also driver clearance and report for a trip has a lot of paper work

# PROJECT SCOPE

The system is supposed to cover the following features:

* Login, authentication and registration
* Booking of vehicles
* Staff management
* Vehicle management
* Inventory management and reports generation

# RESOURCES

In order to run the project system needs to have following minimum hardware and software configuration:

* RAM: 4gb
* Processor: intel core i3 1.7GHz
* Operating system: windows 7, windows 8, windows 10
* HDD: 500GB
* Database: PostgreSQL 10.0.1
* A browser

Apart from the above resources, the following are also needed:

* Internet - there is the need of an internet connection for the web application to run well online with a preferred domain name
* Computer literate person - there a need to have a person who has a background in basic computer skills, who will operate the system to yield efficiency and accuracy in using the system

# CHAPTER THREE

# PRELIMINARY RESULTS AND EVALUATION

All work at the time of booking vehicles, assigning drivers, coming up with a schedule are all done by ink and paper or by having to manually type out and print the information. This is consuming much effort and at time as it is very slow and a lot movement is done just to do some simple tasks. Maintaining records of previous trips and booked vehicles, inventory, drivers and mechanics is very difficult. However, by developing this system we are going to attain the following advantages over the old manual system:

* **Easy accessing of information –** from the manual system, in order to get information on a driver, inventory on some trip details, a person would have to dig through a lot of files just to access it. However, the proposed system will have all data stored in a simple database that’s easy to maintain. The database will be well organized to take care of any queries the operator of the system would want such as a schedule or a list of available inventories.
* **Report generation –** the system will easy generate reports based on what the operator of the system wants. Information on all the activities will readily available
* **Reduced inventory cost –** finances used in management of the transport department will be reduced since money spent on inventories such as papers will be saved. Instead of having to use many papers to file documents, everything will be in the system.
* **Easy to manage a database –** there will be data consistency. Information entered into the system will be automatically be updated to the database

# CHAPTER FOUR

# CHALLENGE OBSTACLES AND RISKS

The following are some of the obstacle challenges and risks that are likely to prevent the successful attainment of the project goals:

* **Less information –** Even though information on requirements of the system might be collected, it might end up being insufficient in the long run. More requirements may come up in the development stages or even after completion of the project
* **Funds** – money needed to purchase the necessary equipment may not be enough. This creates a problem when it comes to the efficiency of the system because if it lacks some components it may not work as it’s supposed to.
* **Internet** – the system being a web based application, internet is essential for the system to work. No internet connection cripples the departments activities.
* **Time** – time is a big factor when it comes to system development. All processes involved require time. There is a schedule for each stage in development and if a stage takes longer than required, it drags the rest of the stages making the competition of the projected take longer than the scheduled period. There is a risk of the project taking longer.

# CHAPTER FIVE

# SCHEDULE

Below is the schedule of how long the project will take and the processes involved with their duration

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Duration Activity** | **Jan**  **2018** | **Feb**  **2018** | **March-April**  **2018** | **May-June**  **2018** | **July**  **2018** | **July**  **2018** | **August**  **2018** | **August**  **2018** |
| **Problem definition** |  |  |  |  |  |  |  |  |
| **Feasibility study and analysis** |  |  |  |  |  |  |  |  |
| **Requirement** **Analysis** |  |  |  |  |  |  |  |  |
| **System Design** |  |  |  |  |  |  |  |  |
| **Coding** |  |  |  |  |  |  |  |  |
| **Compiling and Testing** |  |  |  |  |  |  |  |  |
| **System Integration** |  |  |  |  |  |  |  |  |
| **User Documentation** |  |  |  |  |  |  |  |  |
| **Testing and Debugging** |  |  |  |  |  |  |  |  |
| **Presentation** |  |  |  |  |  |  |  |  |

# BUDGET

This project is likely to cost between Ksh 48,000 and Ksh 70,000

# CHAPTER SIX

# CONCLUSION AND FUTURE WORK

In this modern world there is the need to automate a lot of activities and work that is done manually to reduce the work load and easy organization in any company or institution. This system is going to reduce the work done by the department by half and time spent in organization of their work including booking is going to take a short time since there will be online booking. Management of inventory, drivers, mechanics will be much simpler. Most importantly generation of reports and semester schedules will be taken care of

For future improvement of the system, I suggest the following be added:

* A driver evaluation form that can be used to analyze driver performance
* A mechanics ranking.
* Tracking vehicles movements

# REFERENCES

https://www.slideshare.net/PrateekSingh74/college-transport-management-system-60569537 (Last accesed:1/2/2017)

Project\_Proposal\_Format.pdf by Dr. -Ing Wilfred G. Gikaru Department of Computer Science, Egerton University

# APPENDICES