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Chapter 1 – System Investigation

PURPOSE OF THE SYSTEM

Chitungwiza general hospital records a number of deaths every day, from the hospital its self and outside the hospital. The system is going to be used for managing the dead as come to Chitungwiza General Hospital Mortuary, this involves; storing of the dead’s record, processing bills for the time the body is refrigerated and among other things. The system will only be used by a certain number of people (mortuary administrator and probably their assistance).

The system will capture data of the dead, process bills, allocate body with a room number, and store the dead’s records for a certain period after the collection of the body. The real system would be service oriented and would expose some of its functionality as a set of services which could be consumed by other applications.

PROBLEMS IN THE EXISTING SYSTEM

The current system is a manual system where records are stored in physical files and are stored somewhere safe where they cannot be easily damaged or destroyed by natural disasters. The files are written by human and this causes for high rate of errors in recording them. It is also much slower as compared to computerized system, manual system records about 5 records in an hour on a busy day whilst a computer can double that number 5 times. The current system has a number problems which all of which can be solved jus by a single button click using a computer.

The problems include:

* No searching for records in files, you would need to go through file by file just to find the record you are looking for.
* There is no security of the file, anyone in the mortuary can access them.
* More storage spaces required.
* prone to damage and being misplaced
* hard to make changes to the records
* high cost, in keeping the records and user personals

SOLUTION OF THESE PROBLEMS

The recording keeping system is more efficient and effective and these can be shown by its functionalities listed below:

* People’s data can be stored electronically which helps in security by use of passwords and restrictions to the system its self.
* All the records can be maintained centrally.
* Reduced redundancy and data duplication.
* Search, editing and deleting a specific file will be available.
* User authentication, admin and their assistance will be provided passwords which they will use to log into the system.
* No room will be allocated more than one dead because of automated randomly generated room numbers.
* Files will be stored in files or database.

Feasibility

An analysis and evaluation of a proposed project to determine if it (1) is technically feasible, (2) is feasible within the estimated cost, and (3) will be profitable. Feasibility studies are almost always conducted where large sums are at stake. Also called feasibility analysis

* Technically feasibility
* Economic feasibility

Technical Feasibility

A technical feasibility study is an excellent tool for both troubleshooting and long-term planning.The technical issue usually raised during the feasibility stage of the investigation includes the following:

* Does the infrastructure design meet the need specified during the Identification Phase?
* Are the engineering and architectural requirements of the project achievable? If so, are they achievable at a price comparable with similar infrastructure?
* Is the proposed technology (if a specific technology is being proposed, this may not always be the best approach as it may constrain innovation) proven or can the associated risks be properly managed or allocated?
* Does the technical description of the project avoid, as far as possible, significant geo-technical risks? Does it avoid other unbearable technical risks?
* Is the scope of service viable from a regulatory perspective?
* Can the service be specified in terms of outputs? If so, can the service be measured adequately though performance indicators? and
* Can the main technological changes in the service delivery be satisfactorily estimated?

Economic Feasibility

Analysis of a project's costs and revenues in an effort to determine whether or not it is logical and possible to complete.

* Define the business requirements that must be met by the selected project and include the critical success factors for the project
* Detail alternative approaches that will meet business requirements, including comparative cost/benefit and risk analyses
* Recommend the best approach for preparing a business case or moving through the implementation process

Chapter 2 – System Analysis

## Information Gathering Techniques

The methodology of this system is a collection of procedures, tools, documentation aid that will help the developer to implement their information system [3]. There are a number of system to be used related to the project are factors that are considered e.g. time, cost, incorporation of requirements changes during the development process, system complex, communication between customers and bank

There are five commonly regarded methods of gathering the requirements of a new system that maybe relevant to the project at hand

* Research
* Interviews
* Sample documents
* Questionnaires
* Observation

Many projects are usually taken by the third parties that have very limited understanding of the youth centric bank. Research provided the opportunity for the analysis, process and to gauge an understanding of the business activities, processes and practices that may go on within the bank. Research is always a great necessity of high quality in order to produce knowledge that is applicable outside of the research setting. The result of the study may have implications for future project implementation.

Interviews

Interview is a conversation where questions are asked to elicit information. The interviewer is a professional or a paid researcher, sometimes trained, who poses questions to the interviewee in an alternating series of usually brief questions and answers. The advantages of interviews include the possibilities of collecting detailed information about research questions. It is easy to capture the requirements, suggestions and the change that the customers and employers need for an effective and competitive system.

Sample documents

Document analysis is the form of quantitative research in which documents are interpreted by the researcher to give a voice and meaning around an assessment topic. You can gather relevant text and explore the context and also authenticity of documents within the banking hall. Sample documents are useful when designing the database as they outline the exact data that should be stored in the database. Sampling the documents is less time consuming, scope of sampling is high and accuracy of data is high. However it is risk to fully rely on the sample documents since it’s difficult to truly select a representative sample, there is need to specific knowledge and there are impossibilities in sampling.

Questionnaires

These can be classified as both quantitative and qualitative method depending on the nature of the questions. This provides access to the questioner to obtain multiple choice answers, it has advantages of increased speed of data collection, no cost requirements, higher level of objectivity compared to many alternative methods of primary data collection

Disadvantages

Selection of random answers. No possibility for respondent to express the additional thoughts about the system due to the absence of a relevant question

Observation

The main purpose of the analyst on this technique was to gather the first-hand information to aid the analyst in analysing the system under study. The systems analyst participated in and watched people performing activities as a way to learn about the current system. The technique entails the observation of events as they unfold and produce results afterwards. Through this fact finding technique the system analyst observed the following

* Traditional banking habits
* Poor security
* Time consuming
* Long waiting lines in the banking halls
* Slow bank tellers
* Long processes

Strength of observation

* Direct access to research phenomena
* High level of flexibility in terms of application and generation of an effective system

## STUDY OF THE SYSTEM

The system has been designed with the user in mind and it has a single login platform for the administrator only. The system is command based, which means the admin will enter commands to interact with system.

System default login details: Username – Admin

Secrete pin – 1234

## Current System

In the present system all work is done on paper. A body comes in and its records are written in a file and it is allocated a room number. Next of keen details are also taken down for collection purposes and bill processing. The day the body is registered in is taken down and the day the body is collected and a report is generated to both the Mortuary administrator and the next of keen. The funeral policy details are also taken down so as the policy number and it is verified with to confirm. Everything is manually done and face to face meetings and confirmations are what they regard as appropriate ways of doing business.

### DISADVANTAGES OF THE CURRENT SYSTEM

* The manual system is slow in all aspects(data capturing, filing, searching)
* It is hard to produce report and process bills because all the calculations are done manually
* There is a lot of paper work and paper load is too much.
* Time consuming: Every work is done manually so we cannot generate report in the middle of the session or as per the requirement because it is very time consuming.
* The system is not user friendly since the user write everything done
* Data duplication and redundancy
* Double room allocation

### THE PROPOSED SYSTEM

* User Friendly: The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed system, which provides user to deal with the system very easily.
* Reports are easily generated: reports can be easily generated in the proposed system so user can generate the report as per the requirement (monthly) or in the middle of the session. User can give the notice to the students so he/she become regular.
* Very less paper work: The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers. Moreover work become very easy because there is no need to keep data on papers.
* Computer operator control: Computer operator control will be there so no chance of errors. Moreover storing and retrieving of information is easy. So work can be done speedily and in time.

## Data flow Diagram of Chitungwiza Mortuary Management System

**Bill and report**

**Deceased are brought into the system**

**Produces report, bill receipts, room number**

**Deceased details**

**Produces report, bill receipts, room number**

**Deceased details**

Hospital

**Deceased:** name, surname, age, date of death, next of keen

**NOK:** name, surname, relationship, address, contact info

Mortuary Database / Record File

Externals

Administrator

Mortuary Management System

## Entity Relationship Diagram

Body

Next of keen

Action

Portal

Administrator

Action

Action successful

# Chapter 3 –System Design

## INPUTS AND OUTPUTS

The major inputs and outputs and major functions of the system are follows:

**Inputs:**

* The Admin enters their secrete pin for login.
* Admin registers new body and takes the body details i.e. name, surname etc.
* Next of keen details are taken down as well i.e. name, relationship with the deceased, address etc.
* Date of admission is recorded and proposed date of discharging the body captured as well.
* For search admin enters room name and surname.
* For adding new user, admin enters details of the new user i.e. name, surname etc.

**Output:**

* Confirmation of new body successfully added.
* Room number for new body is generated.
* New user is given a pin for login purposes.
* Payment bill is produced and given to the next of next keen.
* Date of discharging or collecting the body is given to the next of keen.

### INPUT DESIGN

Input design is a part of overall system design. The main objective during the input design as given below:

* To control the amount of input required.
* To achieve the highest possible level of accuracy.
* To avoid errors, delay and extra steps whilst keeping the process simple.
* To ensure that the input is acceptable and understood by the system.

Input States:

* Data recording
* Data transcription
* Data conversion
* Data verification
* Data transmission
* Data validation
* Data correction

Input Types:

Necessary input categorizes

* External Inputs which are primary inputs for the system.
* Internal Inputs, which are user communications with the systems.
* Operational, which are computer department’s communications to the system?
* Interactive, which are inputs entered during a dialogue.

Input Media:

At this stage choice has to be made about the input media. To conclude about the input media consideration has to be given to:

* Type of Input
* Flexibility of Format
* Speed
* Accuracy
* Verification methods
* Rejection rates
* Ease of correction
* Storage and handling requirements
* Security
* Easy to use
* Portability

Keeping in view the above description of the input types and input media, it can be said that most of the inputs are of the form of internal and interactive. As input data is to be directly keyed in by the user, the keyboard can be considered to be the most suitable input device.

### OUTPUT DESIGN:

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of the results for later consultation. The various types of outputs in general are:

* External Outputs, whose destination is outside the organization,
* Internal Outputs whose destination is within organization and they are the
* User’s main interface with the computer.
* Operational outputs whose use is purely within the computer department.
* Interface outputs, which involve the user in communicating directly with User Interface.

Output Definition:

The outputs should be defined in terms of the following points:

* Type of the output
* Content of the output
* Format of the output
* Location of the output
* Frequency of the output
* Volume of the output
* Sequence of the output

It is not always desirable to print or display data as it is held on a computer. It should be decided as which form of the output is the most suitable.

For Example

* Will decimal points need to be inserted
* Should leading zeros be suppressed.

Output Media:

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

* The suitability for the device to the particular application.
* The need for a hard copy.
* The response time required.
* The location of the users
* The software and hardware available.

Keeping in view the above description the project is to have outputs mainly coming under the category of internal outputs. The main outputs desired according to the requirement specification are: The outputs were needed to be generated as a hot copy and as well as queries to be viewed on the screen. Keeping in view these outputs, the format for the output is taken from the outputs, which are currently being obtained after manual processing. The standard printer is to be used as output media for hard copies.