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*Design and implementation of internet based hostel accommodation allocation system.*

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**Abstract**

*The internet provides resources sharing among thousands of networks, for this reason this project work is presented to design and internet based hostel form where students can complete their hostel allocation processes from the comfort of their home, designed specifically for federal polytechnic Nekede. The existing system of the study was analysed by over viewing the system, describing the system, evaluating the system and enumerating remedies for such system. After studying the existing system, a new system was proposed and designed. It is there that the four elements of system design was considered which are input, output, file and procedures. C++ was the programming language used to design the system with MySQL at the backend. The software met its objective and was recommended for all higher institutions.*

**Keywords:** Internet, Hostel, Computer, System, Allocation

**Introduction**

A hostel reservation system, also known as a central reservation system {CRS} is a computerized system that stores and distributes of a hostel, resort and other lodging facilities. A central reservation system is a tool to reach the global distribution system as well as internet distribution system from one single system. A CRS assists hostel managers in managing their online marketing and sales, allowing them to upload their rates and availabilities to be seen by sales channels that are using the CRS. Sales channels may include conventional travel agencies as well as online travel agencies. This software is conceived with care for the small and medium sized hostels, guesthouses, B&BS,

hostels, etc... The system is so simplified and easy to navigate, that you don't need explicitly trained staff. All you need is a good internet connection and you can start managing your bookings, follow up your income daily and periodically, inquire different reports for clients and room partners. As today a good internet connection you can find even in the most remote places on earth, you can pack your bags and notebook and takes the way to Peru. For example. Our online based software gives you comfort that you're a good unerring manager. And that is why installing the system is easy and very fast process, only few steps, and it will be attracted to your hostel webpage. With our interface you can manage all your bookings, coming from channels, you can

administrate your website texts, photos and contacts etc. we offer a free website templates for those who don't have internet page. Implementation of the reservation form, texts and galleries requires basic knowledge. We offer a modern and handy interface for online booking that can be easily inserted into an existing website. There is a possibility for installing an online payment system, where you define the sums required as deposit for confirmed bookings. The client receives an automatic e-mail confirmation and the hostel receives a message for every transaction made online. With an access code the client can enter his booking in real time and check it for changes, pay deposits, totals, remaining sums, or cancel. The online booking engine is only in English, but it can be easily translated to other languages from the admin panel. There are no limits about the type and the number of rooms or beds that you can allocate in the system. Each room inserted in the base is available for sale both like a private room and like separate beds in a dorm; you decide how to manage the sales. You can insert different prices for the different days of the week or for a period of time.

### **Objective Of The Study**

The main objective of this research work is to provide an online system, which will help to spend preview hostel to students. In this research work, it is aimed for designing and implementing an internet based hostel accommodation allocation system. Therefore the presence of those computerized systems will help to update file accurately.

### **Statement Of The Problems**

The use of manual method in the hostel allocation is tedious and time consuming, the manual method of allocation is prone to

errors, therefore a computerized method should be adopted in hostel allocation because it involves not much more effort, saves time, reliable data and data processed at very high speed. The problem of file maintenance, which is an act of amending and deleting of standing records on the reference or master file. This record includes: Name of students, Reg. No/Matric No, Program of study, State of origin, Next of kin to be contacted in case of emergency, Name/contact address of parents/guardian etc.

The clerk at the student's affairs unit/department keeps records of unoccupied or allocated rooms on a source document so as to know where to allocate a student. Thus the information gathered from the respective students are time consuming. They may in some cases be inaccurate and untimely, therefore to avoid this method, a better method can be adopted which each student can through the internet, provide the required information or data. This computerized version will consume less time, it is easier to operate more efficient and reliable.

### **Proposed Solutions to the problems stated above**

The significance of this study is to bring to focus the need and importance of this internet based hostel accommodation form and allocation system and the study also highlight the basic roles played by computerized hostel system which includes:

Effective method of completing or filling of hostels form.

Effective method of getting allocation result.

Effective method of balloting and allocations.

Effective method of getting students information.

### **Methodology**

System study is an in depth and comprehensive study, carried out upon an existing system in order to arrive at vital and relevant facts, which will assist in the design of the database system. The aim is to study and learn how the system is operating so as to come up with related and relevant data. The investigation or study was carried out in two parts;

#### **Data capturing.**

##### **Analysis of data captured.**

This assists in verifying the application and implication of both the manual and the automated system to the management, staff and student with its objective as follows;

Identifying the areas that need improvement along with cost and constraints of the system.

Identifying the sequence of operation and how they are performed. The cost of the system and the reaction of those affected by the introduction of the automated version.

#### **Research Methodology**

This is the systematic and structured approach of arriving at collection, analysis and interpretation of data. It also a detailed description of what the researcher planned and procedures adopted. In gathering new facts relevant to the project work, hence the method employed during the investigation for data collection from the current system is through interview and observation method. This is discussed below on fact finding methods and techniques.

#### **Facts Finding Method/Techniques**

Having chosen federal polytechnics my case study, it becomes necessary to go and

observe their operation from observation, we discovered that the allocation clerk performs the following operation manually:

Entering of data into allocation form.

Processing of data and storing allocation form.

Showing states of allocation.

#### **Interview**

This was conducted at the student's affairs unit where I asked some questions and got the results like;

What means is used in obtaining information from students.

How many students are allocated to a room?

How many rooms are there in the hostel?

How much is paid for the allocation?

What duration of time does this money expire?

What type of allocation system is used?

What type of device is used in keeping records?

#### **Structured System Analysis**

The structured system analysis is a logic and creative process of having an integrated collection of a specification of inputs, output, and tools of the system. The aim is mainly to propose a specification, which will enable a complete and effective design and implementation of the new system. The output of the analysis will give rise to proper documentation that will assist the designer to do a better work of designing the new system. The analytical stages of the system development consider the following activities.

Reappraisal of the terms of the references of the investigation in respect of the result received in the main time. Consider again on the results of the analysis of the existing system especially the weak point. Determine the nature of the output that will be produced by the new system. Determine the data required to produce the required and expected output. Choose the information, bearing in mind the software and hardware availability and requirement develop an efficient method of processing input to get the output, making use of the available software with documentation.

Explain all the clerical procedures and documentation, consider how the system is to cope with changes and modification, the modification may rely on the information requirement and technology trends.

### **Analysis Of The New System**

There are four halls of residence in federal polytechnic nekede, which comprises of hostels. "A" for male hostel, "B", "C" and "D" for female students only. There are about 130 rooms in hostel "A" which is partitioned into three, two ND corners occupying 4 students each and one HND corner to 2 HND students because they are all double bunk. This implies that the male hostel is meant for 780 male students. The three hostels made for female student are 1272 bed spaces. However, hostel "B" and "C" have 34 rooms and each having 3 double bunks resulting to a total of 204 bed space each. Hostel "D" has a total of 24 rooms upstairs and down stairs each and have 4 double bunks resulting into 384 bed spaces.

So less than 30% of the student population could be accommodated in campus, where as the majority lives off campus in rental rooms.

Those that may be accommodated in order of priority.

- Disabled students.
- Foreign students.
- HND students.
- Fresh students.
- Sportsmen and women.
- Female students and others.

### **Modality**

Allocation for bed spaces is always by balloting at the respective centers, the chances of picking "YES" is much higher on the first day of registration and less probable in subsequent days. The sum of #6000 is being paid per bed space for a section at the bursary department and a copy of receipt submitted to the allocation officer. There is a fairly furnished common room with television set attached to each hall for students relaxation and to receive there visitors.

### **Proposed system**

The invitation of computer in our world today has greatly improved the method/procedure through which people do things. Hence this research is aimed at employing the computer to perform the allocation system that is efficient, and require less human effort, less time consuming and more reliable. However the provision of the computerized allocation system will help the organizational operation to ensure that data is entered processed and an accurate output at a high speed, so as to meet the needs of students and management.

### **System Design**

System design is the process of designing the input and output formats and the processing set to meet the user requirements identified in system analysis.

The design state, produces a physical design describes the hardware, software and the operating systems logical design to become a reality, while technical knowledge is important in system design.

### Database Specification

The database management system used in this project is access database; this was possible by creating the table in access and save them in the program directory.

### Input Design Format For Students Hostel

Names of students. Registration number. Department and Level. Gender and Age. Receipt number. Nationality, State and Local government. Contact address. Sponsors name and Address. Disability. Hostel.

### Output Design Format For Students Hostel

- Hostel.
- Students name.
- Registration number.
- Department.
- Receipt number.

### Program Module

This program consists of several modules for easy accessibility and understanding of the flow of information.

### Students Module

This is the main module that runs in internet explorer, where students fill their hostel form, send submenu to the database at the click of the mouse.

### The Administrative Module

This module is where the hostel management logs in for the allocation of

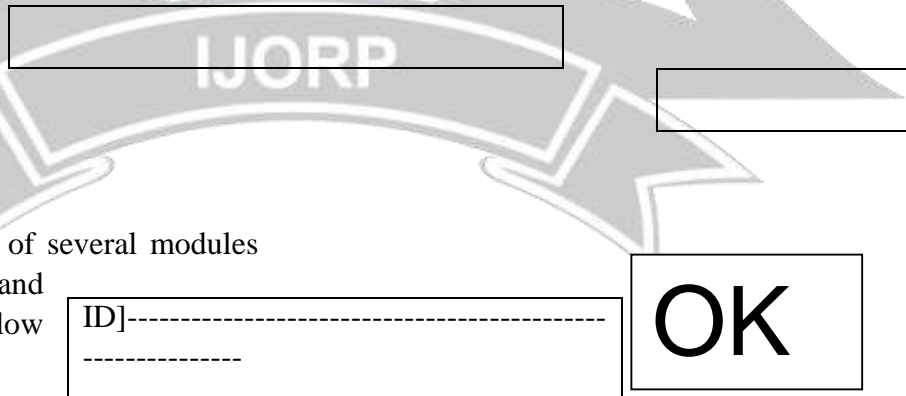
successful student because the database management does the balloting. This module can be called the client and the server module.

### Menu And Submenus

On the client side we have one menu which is for the student to complete the hostel form and submit at the end. On the server side we have the control center and this is where the user selects other submenu for hostels allocation. The user allocates rooms to all successful HND male students. On clicking the next button will give the user chance to select HND female, ND male and female for allocation of hostel rooms. Diagram at input and output screen. The last at the submenu list is the report which is printable. This report contains all successful students.

### Input/Output Screen

The first screen on the client side is the password form and hostel form.



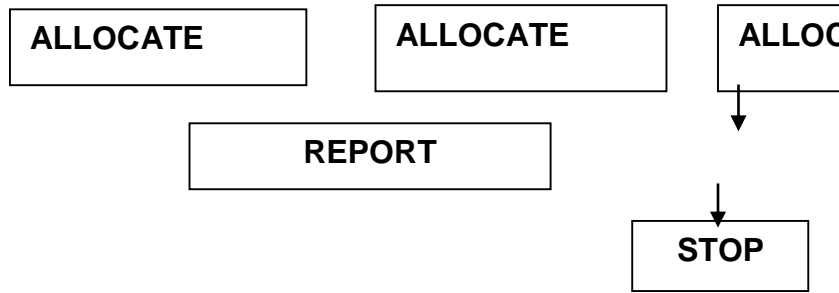
The screenshot shows a form with several input fields. The first field is labeled 'ID]' and contains a dashed line. Below it is another field with a dashed line. To the right of these fields is a large 'OK' button. The background features a watermark of the IJORP logo.

### Password Form

The next is the hostel form

NAME

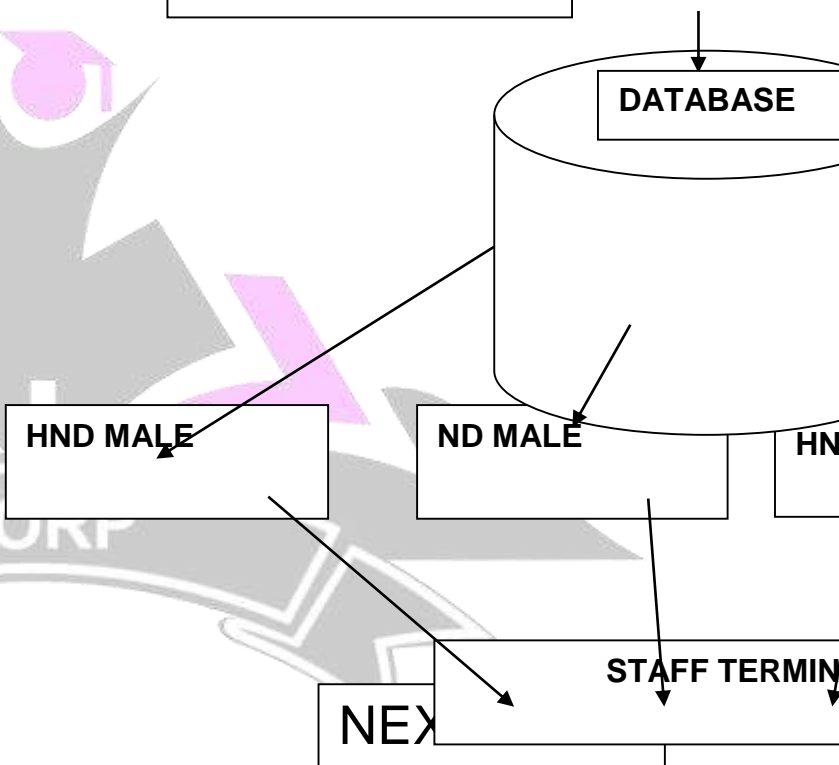
DEPT



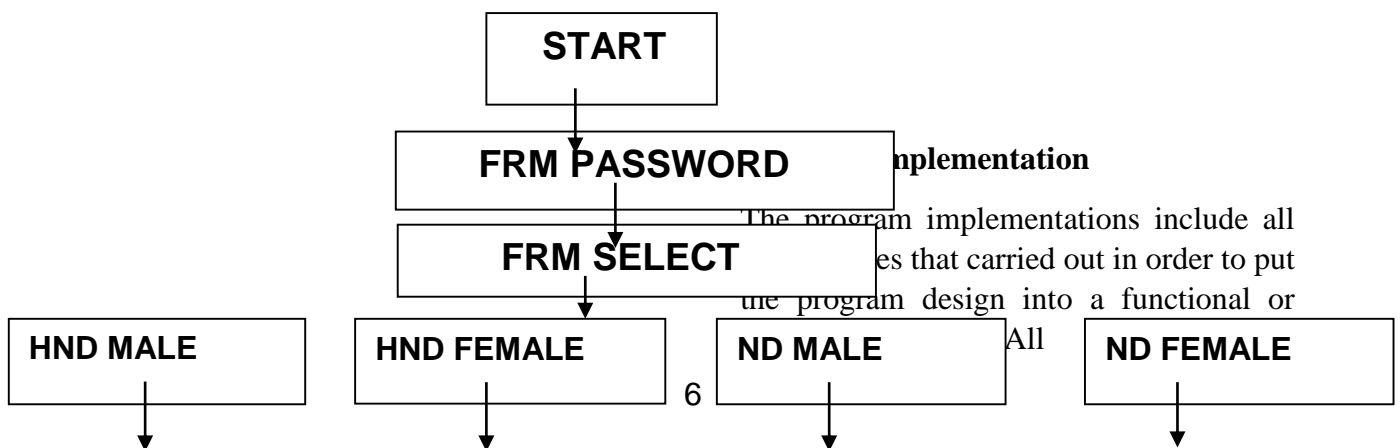
SYSTEM FLOWCHART



The Allocation Form

PROGRAM FLOWCHART



Implementation  
 The program implementations include all  
 es that carried out in order to put  
 the program design into a functional or  
 All

programming installation are coordinated to put the new system in operation.

The implementation stages include data conversation, system testing, system changeover and system maintenance etc.

### **Data Conversion**

This involves the conversion of manual data to electronic data, which are stored in the disk as data can be use as desire by the users.

### **System Testing**

To ensure that individual programs have been written correctly and that the system as a whole will work. The program nodules were test individually before been integrated into the main program during debugging in the application development using test data.

### **System Changeover**

To ensure the workability of the system after the implementation an appropriate mode of changeover to the new system has to be adopted. This mode of changeover adopted here is parallel changeover, that is the concurrent running of the old and new system for sometime in other to compare the output of both systems and they carry out amendment where necessary.

### **System Maintenance**

Maintenance involves keeping the system data after the system is implemented, problem will probably become apparent as the system as operated, this process of maintenance includes correcting residual error, which was not described at earlier stage of their life cycle. It helps in continues performance of the system as expected. And include hardware, software, adaptive and corrective maintenance.

### **Conclusion**

This research work had gone through many processes in finding a way to create development and online hostel allocation system. This is as a result of necessary need of a hostel allocation system for hostel. This project followed a system method through careful data information adopt and design to produce an error proven system.

### **Recommendations**

In carrying this study, there are many problems encountered in the course of the study such problem include finance, time, and shortage of materials and information. Base on this I recommend that further researchers should create more time and finance to dial more deliberately and extensively on the study. I recommend this system for federal polytechnic Nekede in owerri, imo state to easy the work done in this department.

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