

Towards Studying in Telecom Services of e-Governance

Rajeev Kumar

Department of Computer Science, College of Engineering, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh-244001

Email: rajeevprof@gmail.com

Abstract: In the development of this project I have included some appropriate feature which make this Project more reliable to use and implement it, with this project concern organization can handle all type of information. The concern organization, there are so many modules and this project name “**TELECOM SERVICES**”. Here I am going to give some information about this project in introduction.

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INTRODUCTION

Commercial Package is designed to meet the requirements of Telecom Dept. The idea is to set up an application to fill and modify telephone service details and verification of all the entries. This system stores all the details of customer's services in the database and check entries from the stored data.

System has the provision to search candidate details according to different criteria. This filtering can be for any type of services and for any telephone facility. Telecom department staff members maintain this system. This is not online application. First customer fills particular application form and submits in the department, then system verifies details and shows relevant prompts to the user and follows further call flow to fulfill requirement.

This system gives all the facilities to modify or delete any connection details. System generates different reports for all the connections and for all telephone facilities. Administrator creates users and gives rights to access different forms are given to users so that nobody can access confidential information. Users can use facilities as per their permissions given by administrator to access the options.

This module supports security management, which helps to check username password at entry point with list of permissions. Security management module contains facilities to create new user, change user profile, change password, to show list of permissions to administrator, enable or disable user account. It stores user details in database that will allow staff members to operate the software. This system is able to accept the online information's of an application submitted by new customer for new telephone connection and prints a demand note against the application. Customer makes the payment against the demand note. This system sends waiting

list register to Commercial Officer (CO). CO releases connection and sends Order Book (list of connection to be installed) to SDO (Head of Telephone Exchange). SDO gives the connection to the customer according to Order Book. A telephone No is assigned to connection for the customer.

This package is able to show summary reports and day wise collection report. It provides facilities to modify customer master data and order book date and to apply for other telephone facility forms.

Objectives of Telecom Services

2.1 Salient Features of the System

Among the various salient features of the system some of them are as follows:

Administrative Security: Appropriate security arrangement has been made so that invalid users may not be in position to alter the data. Only registered users can use the facilities available on the system. Every user has to enter their username and password before getting access to the facilities. Their accounts are regularly checked by the system. After the expiry date user account will become invalid. To use it again he/she has to register again.

Access Rights: Registered employers have access to the facilities available to the employers only. Different employees can access different options as mentioned in permission list of users and only administrator can assign these permissions. List of permissions and users list is maintained by package and stored in database.

User Security: While registering to the system user have to enter their userID and password. The user knows password only. Users are suggested to user difficult password containing a combination of text as well as numeric, so that unauthorized user cannot guess and access the account.

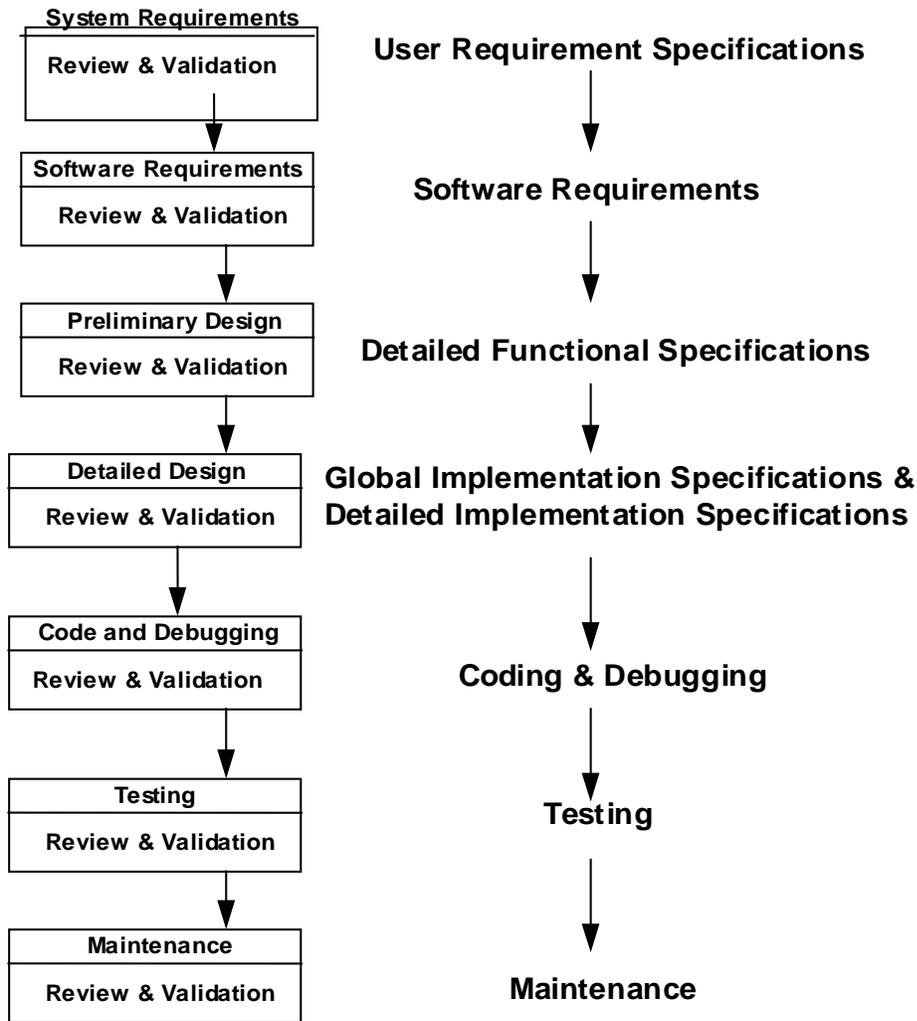
Duplicity Check: While registering any new user the UserID is checked in the registration tables. No two users should have the same UserID.

Seasonal discounts: Company gives seasonal discounts to the users of the system on the registration fees.

Searching: System gives facilities to search details of customers on the basis of connection details or on other searching criteria.

Verification: System provides all facilities to check or verify connection details or to check all relevant entries are filled at the time of creation of new connection.

ANALYSIS



Telecom Life cycle- (SDLC)

➤ **Identification of the need**

Since the world is growing for globalization, every organization wants to beat its competitors and want to grow. Enterprise Resourceful Planning (ERP) is the need of today's organization. Survival on manual system is difficult so, that's why organization

of the corporate world wants to computerize their departments. The modules should be complete database driven and interactive that should provide the proper information about the Placement and Training Organization.

Success of a system depends largely on how accurately a problem is defined, thoroughly investigated and properly carried out to the choice of solution. Analysis is a phase in which the requirements for the new system are identified. System analysis is a detailed study of the various operations performed by a system and their relationship within and outside of the system. The question is: what must be done to solve the problem? One aspect of analysis is defining the boundaries of the system and determining whether or not a candidate system should consider other related system. During analysis data are collected on the available files, decision points and transactions handled by the parent system. Data flow diagram, interviews, onsite observations, questionnaires are used as a logical system model and tools to perform the analysis.

Tasks, which are performed as analyst:

- ❖ Gathered all facts about the present system from the employees.
- ❖ Studied strength and weakness of the current system.
- ❖ Determined “what” must be done to solve the problem.
- ❖ Prepared a functional specifications document.

In order to reduce the time, there is a need for computerized system that can retrieve data, insert data, update existing data or delete existing data. These modules are developed with the aim of reducing time, reducing manpower, reducing cost so that the records can be easily maintained. The volume of work and complexity are increasing year by year. This system reduces complexity and workload.

➤ **Preliminary Investigation:**

A request to take assistance from information system can be made for many reasons, but in each case some one in the organization initiate the request. When the request is made, the first system activity the preliminary investigation begins. This activity has three parts:

- ✓ Request clarification
- ✓ Feasible Study
- ✓ Request approval

Many requests from employees and users in the organization are not clearly defined. Therefore, it becomes necessary that project request must be examined and clarified properly before considering systems investigation.

The feasibility study is carried out by a small group of people who are familiar with information system techniques, understand the parts of the business or organization that will be involved or affected by the project, and are skilled in the system analysis and design process.

Request Approval: It is not necessary that all request projects are desirable or feasible. Some organizations receive so many projects request from employees that only a few of them can be purchased. However, those projects that are feasible and desirable should be put into a schedule. In some cases, development can start immediately, although usually system staff members are busy on other ongoing projects. When such situation arises, management decides which projects are more urgent and schedule them accordingly. After a project request is approved, its cost, priority, completion time and personal requirements are estimated and used to determine where to add it to any existing project list. Later on, when the other projects have been completed, the proposed application development can be initiated.

Analysis is a process of studying a problem and to find the best solution to that problem. System analysis gives us the target for the design and the implementation. Analysis is one phase, which is important phase for system development life cycle. System development is a problem solving techniques. Analysis involves interviewing the client and the user. The people and the existing documents about the current mode of operation are the basic source of information for the analyst.

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➤ **FEASIBILITY STUDY**

The result of the feasibility study is a formal proposal. This is simply report-a formal document detailing the nature and the scope of the proposed solution. The proposals summarize what is known and what is going to be done. Three key considerations are involved in the feasibility analysis: economic, technical and operational behavior.

- **Economic Feasibility:** Economic analysis is the most frequently used method for evaluating the effectiveness of a candidate system. More determine the benefits and the saving that are expressed from a candidate system and compare them costs. If benefits outweigh costs. Otherwise, further justification or alterations in the proposed system will have to be made if it is to have a chance of being approved. This is an ongoing

effort that improves in accuracy at each phase of the system life cycle.

- **Technical Feasibility:** Technical feasibility center around the existing computer system hardware etc. and to what extent it can support the proposed addition. For example, if the current computer is operating at 80% capacity - an arbitrary ceiling – then running another application could over load the system or require additional hardware. This involves financial consideration to accommodate technical enhancements. If the budget is a serious constraint then the project is judged not feasible.
- **Operational Feasibility:** It is common knowledge that computer installations have something to do with turnover, transfers, retraining and changes in employee job status. Therefore, it is understandable that the introduction of a candidate system requires special efforts to educate, sell, and train the staff on new ways of conducting business.
- **Choice of Platform?**

In any organization a lot of data is generated as result of day-to-day operations. In the past, all kind of data – be it business of a company. Since the task was performed manually, it was time consuming and error prone. With the advent of computer, the task of maintaining large amount of data has undergoes a sea change. Today computer system have become so user friendly that even first time users can create their own application with the help of tools such as MS-Access, Fox-Pro and SQL Server. These tools are very visual and hence user friendly. They provide a point and click environment for building applications that can interact with large amount of data.

➤ **Paradigm Applied**

Computer Aided Software Engineering can be as simple as a single tool that support a specific software engineering activity or as complex as a complete “environment “ that encompasses tools, a database, people, hardware, a network, operating system, standards, and myriad other components. Each building block forms a foundation for the next, with tools sitting as the top of the heap. It is interesting to note that the foundation for effective CASE environment has relatively little to do for software engineering tools themselves. Rather, successful environments appropriate hardware and systems software. In addition, the environment architecture must consider the human work patterns that are applied during the software engineering process.

The environment composed of the hardware platform and system support (including networking software, software management, and object management services), the groundwork for CASE. But the CASE environment itself demands other building blocks. A set of portability services provides a bridge between CASE tools and their integration framework and the environment architecture. The integration framework is a collection of specialized programs that enables individual’s CASE tools to communicate one another, to create a project database, and to exhibit the same look and feel to the end user (the software engineer). Portability services allow CASE tools and their integration framework to migrate across different hardware platforms and operating system with out significant adaptive maintenance.

The building blocks represent a comprehensive foundation for the integration of CASE tools. However, most CASE tools in use today have been: constructed using all these building blocks. In fact some CASE tools remain “point solution:” That is, a tool is used to assist in a particular software engineering activity (e.g. analysis modeling) but does not directly communicate with other tools, is not tied into a project database, is not part of an integrated CASE environment (I-CASE). Although this situation is not ideal, a CASE tool can be used quite effectively, even if it is a point solution.

At the low end of the integration spectrum is the individual (point solution) tool. When individual tools can provide tools provide facilities for data exchange, the integration level is improved slightly. Such tools produce output in a standard format that should be compatible with other tools that can read the format. In some cases, the builder of complementary CASE tools work together to form a bridge between the tools (e.g. an analysis and design tool that is coupled with a code generator). Using this approach, the team develops, synergy between the tools separately. Single source integration occurs when a single CASE tools vendor integrates a number of different tools and sells them as a package.

Although this approach is quite effective, the closed architecture of most single source environments precludes easy addition from other vendors.

This system was developed under window 2000XP/Windows 2000 NT. It is complete with all 32-bit versions of windows operating system. Windows is a popular and largest used operating system in the world because it is easy to understand and provides an easy interface to users.

Windows 2000XP/Windows 2000 NT Operating System

The main responsibility of an operating system is to manage computer's resources. All activities in the system scheduling application programs, waiting files to disk, sending data across a network and so on should function as seamlessly and transparently as possible. Windows 98 makes your computer easier to use, with new and enhanced feature.

Improved Reliability: Window 98 improves computer reliability by introducing new wizards, utilities and resources that keep your system running smoothly.

Faster Operating System: Windows 98 includes tools that help your computer run faster than Windows 95 with out adding new hardware. Window 98 includes a suite of programs designed to optimized you're web.

Integration: Windows 98 Explorer and Internet Explorer integrate local and Web-based resources in a single viewer computer's efficiency, especially when used together. Window 98 makes your computer more entertaining by new hardware. These enhancements provide you with hours of fun.

Multitasking Concepts: Multitasking in general refers to an operating system's capability to load and execute several applications concurrently. A multitasking operating system is consider a robust and reliable one if it successful shields concurrent applications from each other, making them believe that they system also shields application from other's bugs.

To a large extent, multitasking operating system relay on system hardware to implement these capabilities. Another important aspect of multitasking is process scheduling. As process are capable of executing only a single stream of instruction at any given, multitasking would obviously not be possible without the technique of the context switching. A context switch, triggered by a specific event (such as an interrupt from a timer circuit or a call by the running application to a specific function), essentially consist of saving the processor context (instruction pointer, stack pointer, register contents) of one running program and loading that of another.

In a cooperative multitasking environment, the operating system relies explicitly on applications to yield control by regularly calling a specific set of operating system functions. Context switching takes place at well-defined point during the execution of a program.

In a preemptive multitasking environment, the operating system can interrupt the execution of an application at any time. This usually happens when the operating system responds to hardware events, such as a interrupt from a timer circuit. An application's flow of execution can be interrupted at

any point, not only at predefined spots. This realizes the complexity of the system.

DESIGN: The most creative and challenging phase of the system life cycle is system design. The term design describes a final system and the process by which it is developed. It refers to the technical specifications that will be applied in implementing the candidate system.

The **first** step is to determine how the output is to be produced and in what format. Samples for the output (and input) are also presented. The **second** step is input data and master files (data base) have to be designed to meet the requirements of the proposed output. The operational (processing) phases are handled through program construction and testing including a list of the programs needed to meet the system's objective and complete documentation. Finally, details related to justification of the system on the user and the organization are documented and evaluated by management as a step toward implementation. To design the system we must note the following points:

- ❖ To identify the Software Components which satisfy the System Design.

- ❖ To design and document the Software Components and their linkage.

In this component the software components and relevant interfaces such as, interactions with existing internal and external systems, network connections, standard input an output formats are to be identified.

Identify Relevant Interfaces

- ❖ Interaction with existing internal systems.
- ❖ Interaction with external systems.
- ❖ Network Connections.
- ❖ Standard Input Formats
- ❖ Standard Output Formats.

Program Specification

Elements of Specifications required are

- ❖ How it is being accessed.
- ❖ Function called.
- ❖ Program Security.
- ❖ Field Details.
- ❖ Program Functions.

DFD: The Data flow Diagram shows the flow of data. It is generally made of symbols given below :-

A square shows the Entity.

A Circle shows the Process

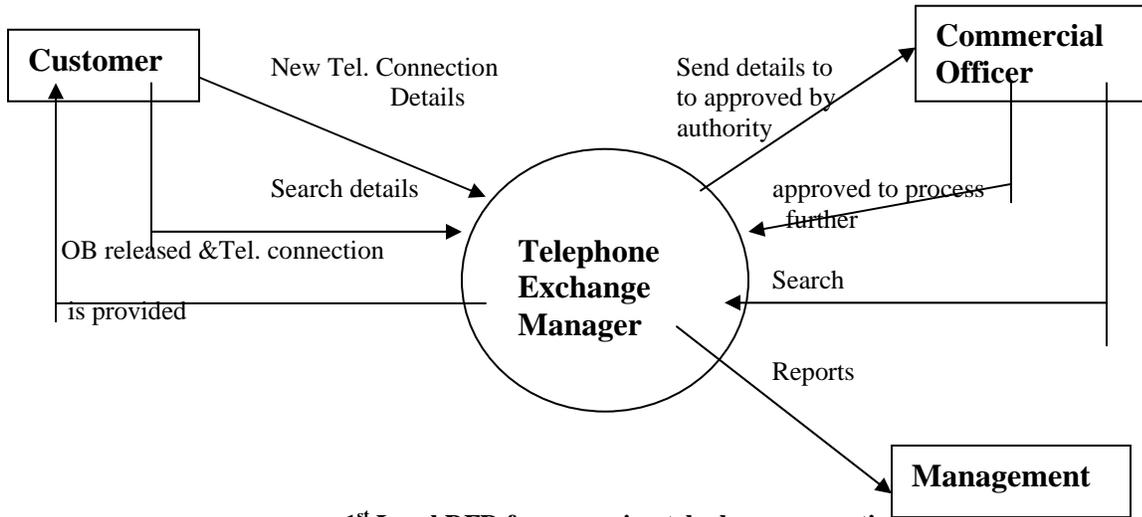
An open Ended Rectangle shows the data store.

An arrow shows the data flow.

The DFD can be up to several levels. The 0 level DFD states the flow of data in the system as seen from the outward in each module.

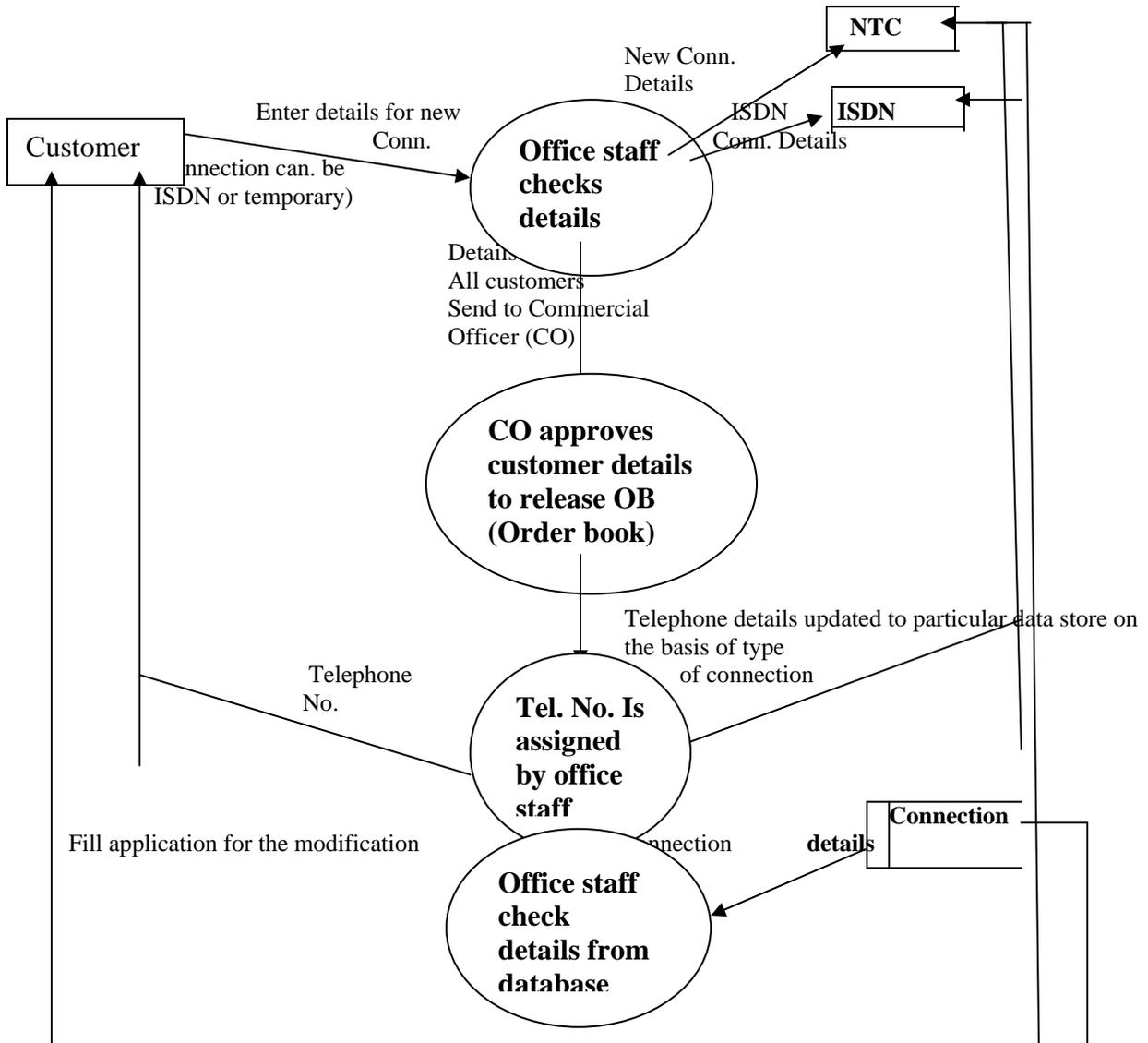
The first level DFD shows more detail, about the single process of 0 level DFD.

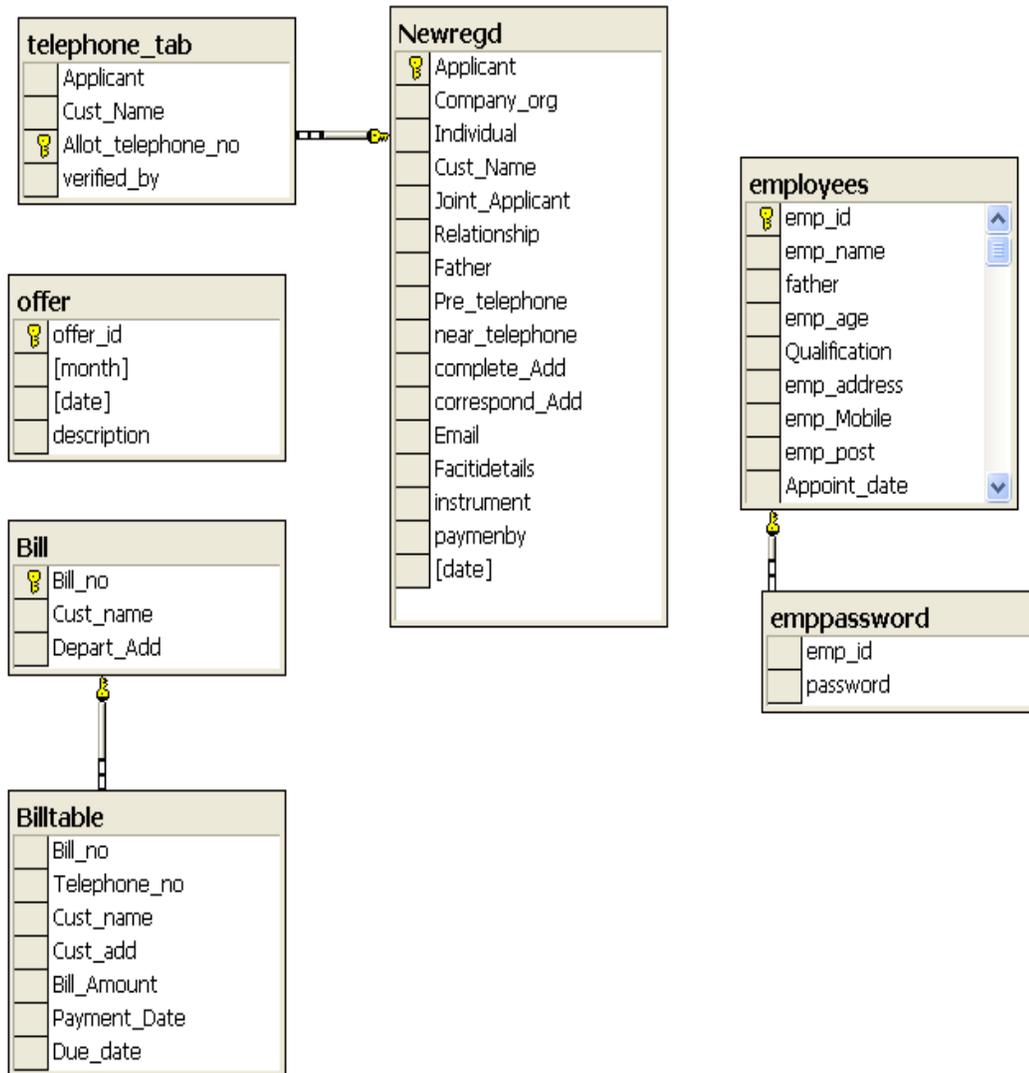
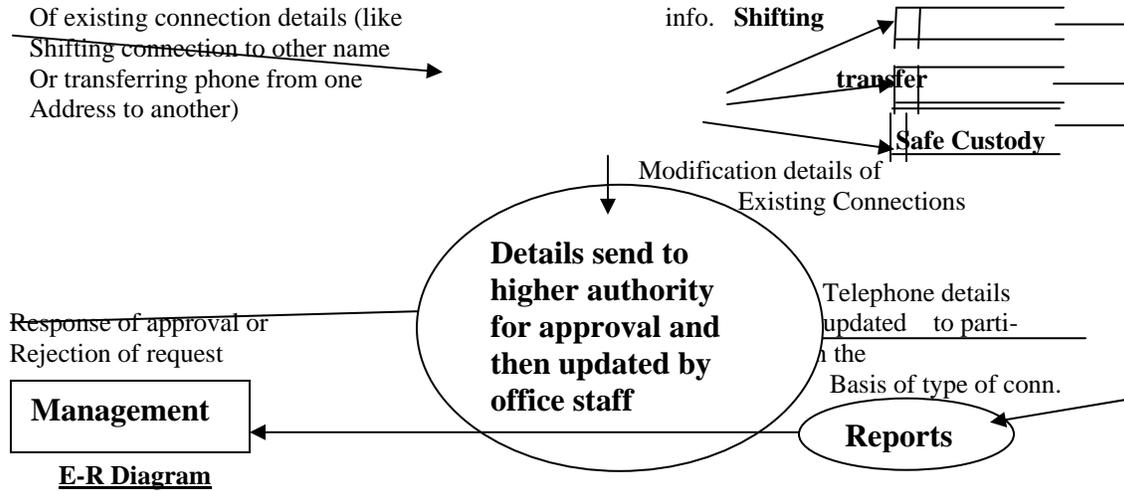
Context Analysis Diagram or zero level DFD: -



1st Level DFD for managing telephone connections

1st Level DFD :-





CONCLUSION OF TELECOM

ADVANTAGES: -

On the basis of the work done in dissertation entitled “Commercial Package of Telecom Dept”, the following conclusions emerge from the development.

1. This project has achieved the objective of replacing/augmenting the conventional system of arranging manpower as could be conducted by a typical telecom dept.
2. The development of this package has been achieved by using VB.NET, which is very conducive to develop the package with regard to time and specific need to the user.
3. This package is highly user friendly, required an optimal minimal input from user while providing highly relevant and focused outputs.
4. Fully automated, avoiding human intervention. Hence it provides a very rapid cost effective alternative to the conventional manual operation/procedures, the visual outputs are more reliable than the audio forms of manual communication.
5. The system can further extended as per user and administrative requirements to encompass other aspects of connection management for telecom dept.

LIMITATIONS: -

- ❖ This project does not Edit the date of connection or store the date of transfer in case of connection transfer.
- ❖ System date for the project is like as backbone for the human, i.e. proposed system is depends on system date so it must be correct.
- ❖ Cannot be connected to the Internet.
- ❖ There are some inherent problems like time, finance etc. to elaborate further study.

References:**Websites**

1. www.java.sun.com
2. www.w3schools.com
3. www.hotscripts.com
4. www.codeguru.com
5. www.google.com
6. www.wikipedia.org

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