

IT-ITES
DOMESTIC DATA ENTRY OPERATOR

REFERENCE ID: SSC/Q2212



WELCOME NOTE

Information Technology (IT) and Information Technology-enabled Services (ITeS) are one of the most significant growth stimulators of the Indian economy. IT industry has not only influenced the employment prospects of the people but also affected the social lives of the people by connecting them through network and social websites. The major segments of the Industry are IT Services, Business Process Outsourcing (BPO), engineering services, research and development and products. IT Products being manufactured in India include personal computers, servers, workstations, supercomputers, data processing equipment, printers, digitizers, etc. Much of the IT related activities are centred on services in Banking, Financial Services, Insurance, Telecommunication, Manufacturing, and Retail.

Indian IT Industry has been contributing substantially to India's Gross Domestic Product, exports and employment. The sector is responsible for enabling employment to an additional 8.9 million people in various associated sectors, such as security, transportation, housekeeping, catering, etc. It has grown tremendously over the last 15 years. The industry employs around 2.2 million people.

IT Helpdesk Attendant in IT-ITeS Industry is also known as Helpdesk Executive, Service Desk Executive, Technology Support Executive, IT Support Executive, and Helpdesk Coordinator. An IT helpdesk attendant is the initial point of contact for internal company customers seeking assistance and support with the company's intranet, desktop devices, and other business applications that are maintained by the support team. Primary responsibility of individuals at this job is to provide user support, managing Customer Service Desk application, responding to all incoming service requests and customer service; quickly diagnose technical issues and arrange solutions during normal operational business hours. He/she should be responsible for the smooth running of computer systems and ensuring users get maximum benefits from them.

The tasks of a Helpdesk Attendant vary depending on the size and structure of the organization and may include installing and configuring computer hardware operating systems and applications; monitoring and maintaining computer systems and networks; dealing with staff/clients either face to face or over the telephone to help set up systems or resolve issues; troubleshooting network problems and diagnosing and solving hardware/software faults of IT Helpdesk Attendant.

The job of IT Helpdesk Attendant requires the individual to have thorough knowledge of various technology trends and processes as well as have updated knowledge about IT initiatives. He/she should be highly motivated and energetic to timely respond to all issues, updates internal customers on status, solicits additional information, and troubleshoots issues. IT Helpdesk Attendant can explore job opportunities in IT multi-national companies, private IT organizations, IT call centers, IT software or equipment suppliers, IT maintenance companies, etc.

This Student Handbook will help you learn and practice the skills required to become a Domestic IT Helpdesk Attendant. You can highlight the important points and make notes too. The more you interact with the handbook, the more you learn.

It contains Activities to be performed in class and at home as well as Study Material for you to read.

This handbook will help you to learn better during the course and be useful later as a reference.

You will find this course material useful both for studying and as future reference. We welcome your feedback on any issue relating to this course and wish you all the best. Happy Learning!

Objectives of the Course

Upon completion of this course, you will be able to:

- Demonstrate the knowledge of modern computers and their parts and peripherals
- Communicate effectively at workplace
- Describe the use of various operating systems and software
- Demonstrate the knowledge of health, safety and security issues and follow best practices
- Demonstrate the knowledge of helpdesk system fundamentals
- Demonstrate the knowledge of fundamentals of network operating systems

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Unit 1 – Introduction to IT-ITES Industry

Learning Objectives:

- Introduction to IT-ITES Industry
- Objectives of the Course
- Meaning of Domestic Data Entry Operator
- Roles & Responsibilities of Domestic Data Entry Operator
- Required Skills to become a Domestic Data Entry Operator

Introduction to IT-ITES Services

Information Technology (IT) and Information Technology-enabled Services (ITeS) are one of the most significant growth stimulators of the Indian economy. IT industry has not only influenced the employment prospects of the people but also affected the social lives of the people by connecting them through network and social websites.

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Indian IT Industry has been contributing substantially to India's Gross Domestic Product, exports and employment. The sector is responsible for enabling employment to an additional 8.9 million people in various associated sectors, such as security, transportation, housekeeping, catering, etc. It has grown tremendously over the last 15 years. The industry employs around 2.2 million people.

Internet has made revolutionary changes with possibilities of online booking of tickets rail or air, filing Income Tax returns, online application for passports, online banking, etc. With an internet user-base of over 125 million, which is likely to grow to about half-a-billion over the next few years, and also an established base of 950 million mobile users, India will be a key player in the cyber-world.

With biometric technology fast maturing and becoming increasingly sophisticated, biometric solutions are starting to make serious inroads as a high-tech identity management and verification tool within the society. Such momentum has introduced the new possible markets for biometric data operator which has the largest impact on future societies. Future scope of the biometric systems in customer's identification and authentication is seen in access and attendance control, travel control, financial and other transactions requiring authorization, remote voting (authorization) and use in automatic working devices.

Objectives of the Course

Upon completion of this course, you will be able to:

- Demonstrate the knowledge of modern computers and their parts and peripherals
- Demonstrate the knowledge of using keyboard with specific speed limit
- Communicate effectively at workplace
- Describe the use of various operating systems and software
- Demonstrate the knowledge of health, safety and security issues and follow best practices

- Demonstrate various data entry services

Data Entry Operator

Domestic Data Entry Operator in IT-ITeS Industry is also known as Data Entry Operator.

A Data Entry Operator is an individual responsible to provide daily work reports.

Roles & Responsibilities of Domestic Data Entry Operator

A data entry operator types information into a computer program using a keyboard and/or a computerized 10-key pad. These workers may enter names, addresses, statistical information, business information, account numbers, or other data. They are hired by companies and organizations that need to have large quantities of data processed quickly, and on a regular basis.

The most important skills in a data entry operator's arsenal are speed and accuracy. Employers want to hire the operator that can enter the most amount of information in the least amount of time. Quick entry means fewer labour hours per project, which saves the company money over time.

While speed is important, an employer must also be confident that the operator is entering the information accurately. Incorrect information is usually useless and can be dangerous. For example, an operator at a hospital might enter that John Smith is allergic to a common antibiotic. If, in fact, it is John Smithe that has the allergy, a clinician who looks up John Smithe's chart will not find the warning and may inject the patient with a drug that could kill him.

Other job competencies that are important to data entry operators are basic computer skills and 10-key skills. Operators most often enter information into basic database forms, so advanced computer skills are rarely required. The ability to start a program, open a window, use a mouse, and submit a form are vital, however. Use of a 10-key pad is critical to those entering a lot of numbers because 10-key entry is much faster than entry using the number keys on a standard keyboard. Since operators are often exposed to highly-sensitive information – such as Social Security numbers, account numbers, and sales data – discretion and honesty are also valuable traits.

A data entry operator can work in a wide array of fields and settings. Hospitals employ them to enter patient information, vendor data, and compliance reports. Direct marketing firms hire them to enter prospective customer information. Many businesses hire such workers in their accounts payable, accounts receivable, sales, marketing, logistics, or operations departments.

The Necessary Skills

If you're an IT worker, these skills are the basics that IT help desks look for:

1. Troubleshooting PC problems in real life

Can you diagnose malware incidents quickly? Are you the person your neighbours/roommates/family call when they can't get the printer to work?

2. You know when it's time to do an OS reload

Knowing when to cut your losses is both an art and a science.

3. You have good research capabilities on Google and other search engines

When your grasp of terminology helps you do great research for figuring out unusual problems, your value to an IT help desk increases.

4. You have your A+, Microsoft-certified desktop support technician, and Network+ certifications

Help desk workers generally have an associate's or bachelor's degree, certifications, or diplomas in information technology and a handful of basic certifications.

5. You understand the importance of good customer service skills.

After all, it isn't just about technology. It's about helping people do their jobs.

Great Bonus Qualifications

1. Excellent writing skills.

If you write clearly and grammatically and can express technical problems and solutions that the average end user can understand, then you will be a big asset to an IT help desk, particularly if it uses help desk software that builds a knowledge base from resolved tickets.

2. Great phone skills.

Your phone interview is extremely important, not just for discussing qualifications, but also because your potential employer can gauge your phone skills. If you make it clear that you're listening, don't interrupt, and answer in a friendly and thoughtful manner, you're gold.

3. Good mechanical skills.

If you have skills making mechanical and electrical things work, this can be a big plus to an IT help desk.

Skills That Say, "Hire This Person Immediately."

There are few more skills that should prompt a smart IT recruiter to hire you:

1. Direct experience with (or certifications from) software and hardware vendors

If these match up with the vendors the employer uses, you have a huge advantage over applicants without this experience.

2. Freelance developer experience

If you have freelance developer experience, not only do you have the technical skills necessary for IT help desk work, you also have the initiative and discipline to get things done without being micromanaged.

3. Programming language certifications.

If you have experience or certifications, you probably have the strong attention to details plus the analytical skills that any company would like to have in a help desk worker.

Great IT help desk workers and great help desk software are two of the best investments a company can make. A consistently updated knowledge base with resolved service tickets and a self-service portal that allows motivated end users to solve their own minor IT problems, help desk workers are free to tackle the more difficult IT issues that arise, allowing your business to run smoothly and prevent wasted time.

The organization you work for would normally have its standards, policies, procedures and best practices spelt out as its data policy which is appropriately documented and made available to employees and other stake holders as guidelines for data handling and management. Each organization would usually have its own policies depending on the kind of work it is involved in. However, there are some generic policies, procedures and best practices as listed below which should give a fairly clear idea in the context.

Key Parameter	How it relates to Data Entry Functions
Data Ownership	This pertains to who has the ownership and rights to the data and who retains the data during and after the corresponding work is completed.
Data Collection	This pertains to collecting data in a consistent, systematic manner (i.e., reliability) and establishing an ongoing system for evaluating and recording changes to the work protocol (i.e., validity).
Data Validation	This pertains to validation and correction of collected data as per established and documented guidelines prior to use of the data in the concerned work or project.
Data Formatting	This pertains to the formats (font, size, colour, indentation, structuring, etc.) to be followed for data entry.
Data Storage	This concerns where and in what format should the data be stored. It also pertains to amount of data that should be stored --enough so that work results can be reconstructed. Data backup procedure, frequency, etc. are also a part of this policy.
Data Protection	This relates to protecting written and electronic data from physical damage and protecting data integrity, including damage from tampering or theft.
Data Retention	This refers to the length of time one needs to keep the data according to the sponsor's or funder's guidelines. It also includes secure destruction of data.
Data Analysis	This pertains to how raw data are chosen, evaluated, and interpreted into meaningful and

How to engage with both internal and external specialists for support in order to perform the desired task

The job data entry involves multiple functions yielding collective team delivery. Understandably, several internal and external experts and specialists are engaged during the delivery process. Following are some tools used to engage the specialists.

Intranet Tools:

An **intranet** is a computer network that uses Internet Protocol technology to share information, operational systems, or computing services within an organization. This term is used in contrast to *internet*, a network between organizations, and instead refers to a network within an organization. Sometimes, the term refers only to the organization's internal website, but may be a more extensive part of the organization's information technology infrastructure, and may be composed of multiple local area networks.

The objective is to organize each individual's desktop with minimal cost, time and effort to be more productive, cost efficient, timely, and competitive.

Significance of Intranet:

- **Workforce productivity:** Intranets can help users to locate and view information faster and use applications relevant to their roles and responsibilities. With the help of a web browser interface, users can access data held in any database the organization wants to make available, anytime and – subject to security provisions – from anywhere within the company workstations, increasing employees' ability to perform their jobs faster, more accurately, and with confidence that they have the right information. It also helps to improve the services provided to the users.
- **Time:** Intranets allow organizations to distribute information to employees on an *as-needed* basis; Employees may link to relevant information at their convenience, rather than being distracted indiscriminately by email.
- **Communication:** Intranets can serve as powerful tools for communication within an organization, vertically strategic initiatives that have a global reach throughout the organization. The type of information that can easily be conveyed is the purpose of the initiative and what the initiative is aiming to achieve, who is driving the initiative, results achieved to date, and who to speak to for more information. By providing this information on the intranet, staffs have the opportunity to keep up-to-date with the strategic focus of the organization. Some examples of communication would be chat, email, and or blogs. A great real world example of where an intranet helped a company communicate is when Nestle had a number of food processing plants in Scandinavia. Their central support system had to deal with a number of queries every day. When Nestle decided to invest in an intranet, they quickly realized the savings. McGovern says the savings from the reduction in query calls was substantially greater than the investment in the intranet.
- **Web publishing** allows cumbersome corporate knowledge to be maintained and easily accessed throughout the company using hypermedia and Web technologies. Examples include: employee manuals, benefits documents, company policies, business standards, news feeds, and even training, can be accessed using common Internet standards (Acrobat files, Flash files,). Because each business unit can update the online copy of a document, the most recent version is usually available to employees using the intranet.

- **Business operations and management:** Intranets are also being used as a platform for developing and deploying applications to support business operations and decisions across the internetworked enterprise.
- **Cost-effective:** Users can view information and data via web-browser rather than maintaining physical documents such as procedure manuals, internal phone list and requisition forms. This can potentially save the business money on printing, duplicating documents, and the environment as well as document maintenance overhead. For example, the HRM company PeopleSoft "derived significant cost savings by shifting HR processes to the intranet".
- **Enhance collaboration:** Information is easily accessible by all authorized users, which enables teamwork.
- **Cross-platform capability:** Standards-compliant web browsers are available for Windows, Mac, and UNIX.
- **Built for one audience:** Many companies dictate computer specifications which, in turn, may allow Intranet developers to write applications that only have to work on one browser (no cross-browser compatibility issues). Being able to specifically address your "viewer" is a great advantage. Since Intranets are user-specific (requiring database/network authentication prior to access), you know exactly who you are interfacing with and can personalize.
- **Promote common corporate culture:** Every user has the ability to view the same information within the Intranet.
- **Immediate updates:** When dealing with the public in any capacity, laws, specifications, and parameters can change. Intranets make it possible to provide your audience with "live" changes so they are kept up-to-date, which can limit a company's liability.
- **Supports a distributed computing architecture:** The intranet can also be linked to a company's management information system, for example a time keeping system.

Intranet tools:

These are the 5 intranet software tools that have proven to be cost-effective and productive web-based tools for organizations of all sizes.

Igloo Software - Igloo specializes in social intranets for document management, including version control and commenting on all content types (micro blogs, wikis, discussion forums, tasks and documents). Community channels for ongoing employee interactions called Spaces can be administered by specific functional group, like HR, sales, or engineering. Igloo Software is a 100 percent cloud-based platform, and also deploys extranets, external facing communities or a mixed hybrid of public and private areas.

Interact-Intranet - Users particularly like the unity of forums for discussions, ideas, and questions, where everyone can post answers, likes and votes. Offering cloud services or on premises software, Interact-Intranet takes pride in the fact that it has been built in-house from the ground up and runs on the Microsoft technology stack.

Moxie Software - Moxie Software's Collaboration Spaces are designed with the user in mind, especially its well developed employee profile pages. The central intranet platform, a hub and spoke-like network,

keeps employees connected. A broad range of web 2.0 tools are included, like the newsfeed, blogs, idea storms (for managing innovation challenges), discussion forum, task lists, wikis, and others.

Podio - Podio, owned by Citrix Systems, Inc. is a contemporary model for intranets, providing ready-built and build-your-own apps to fill the employee's workspace. The Employee Network is the common area where interactions in real time in the activity stream provide visibility for employees online. Groups can get creative using the Intranet App Pack, presented as a collection of apps to share documents, host meetings, and track corporate communications.

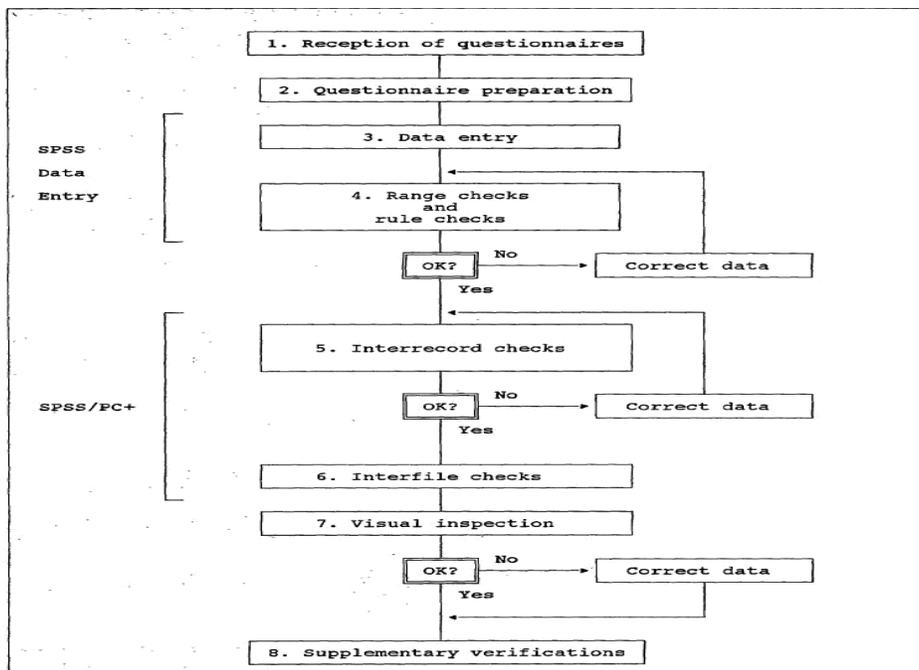
XWiki - XWiki™ is owned by XWiki SAS, a French company. XWiki offers a cloud services model or downloadable open source software to run on your company server, where you can also design your own apps. XWiki helps groups organize workspaces, organize and manage documents, and utilize web 2.0 tools, including blogging, discussion forums, wikis, and a variety of applications for tasks, budgets, and reports, among other uses.

Data entry procedures, tools, and techniques

The process of data entry involves not only typing information into the computer, but also implementing a whole set of procedures for preparing and organizing the questionnaires and processing and verifying the data. Although most people focus on the computer aspect of data entry, many of the problems involved in successfully organizing a data entry system are related to management rather than to the computer.

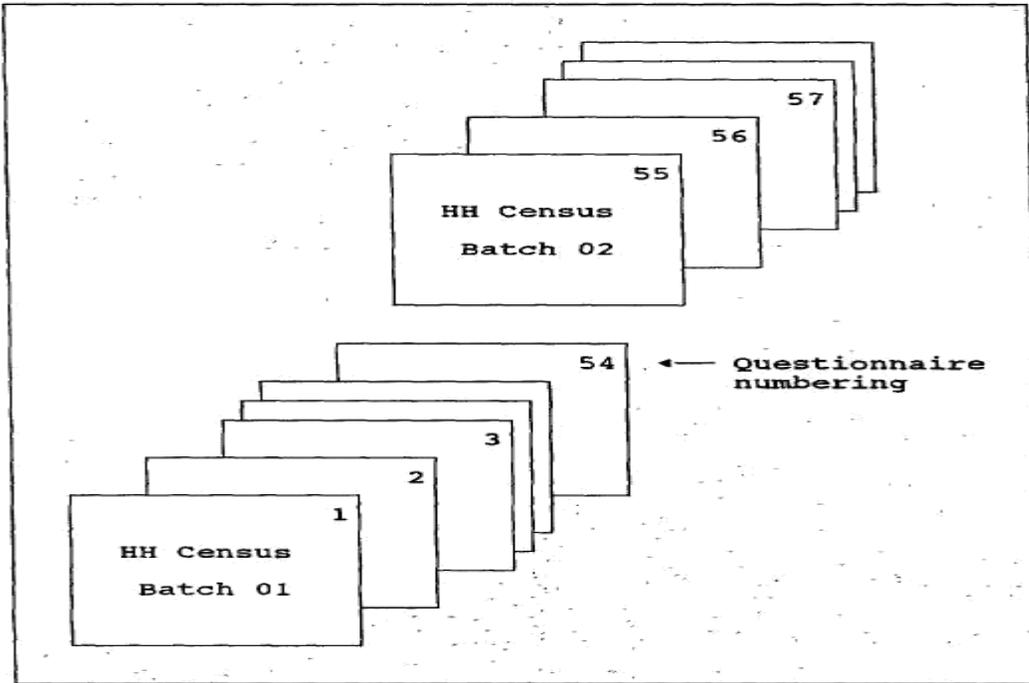
In this system, data entry is carried out concurrently with data collection. A flow chart of the complete system begins when the questionnaires are first received in the office and continues through several levels of data verification (see Figure KA3.1). This chapter covers the steps from questionnaire reception through data entry followed by data verifications and cleaning.

Figure KA3.1 - Flow chart of data entry and verification system



It is beneficial to include a list of instructions covering all data entry and verification procedures in a procedures manual. This manual should be in the form of a loose-leaf notebook, so that it can be augmented and modified as procedures are revised. It might include specific instructions for correcting certain types of errors or key-stroke-by-key-stroke descriptions of how to use the data entry and analysis software. The manual would serve as a reference to all staff and help ensure that everyone is following the same procedures.

Figure KA3.2 - Batch and questionnaire numbering



STEP 1 - Reception of Questionnaire

It is important to have established procedures for collecting questionnaires from the field and for handling them once they have been received. During a long survey, the questionnaires should be collected periodically from the enumerators so that they may be entered into computer files. Upon receiving the questionnaires, they should be separated into *batches* by type. That is, all the questionnaires should be put in one batch, all the crop transaction questionnaires in another, and so forth. If the batches are quite large, they may be further separated by region or village.

Once the questionnaires have been separated into batches, they are sorted by their key variables and numbered sequentially. In the case of the household census, the questionnaires would be sorted by village, household, and the ID number of the household member. The questionnaire numbering is very important because it keeps the questionnaires in order and allows one to see quickly if a questionnaire is missing. The questionnaire numbers can also be entered into the data file, making it easier to find the questionnaire corresponding to a particular record. For multiple page questionnaires, each sheet within a particular questionnaire should have the same number.

Figure KA3.3 - Data entry and verification batch control form

DATA ENTRY AND VERIFICATION CONTROL FORM

Date Received _____	Questionnaire ID No. _____	Batch No. _____
---------------------	----------------------------	-----------------

Preparations _____	Interfile checks _____
Data entry _____	Visual inspection _____
Ranges/rules _____	Approved _____
Interrecord checks _____	Forward to supervisor _____

QUESTIONNAIRE PREPARATION

Vil	Questionnaire No.	Date	By

Vil	Questionnaire No.	Date	By

Level 1

DATA ENTRY

Level 2

File: _____

File: _____

Vil	Questionnaire No.	Date	By

Vil	Questionnaire No.	Date	By

(continued)

Figure KA3.2 - Continued

SPSS DATA ENTRY CHECKS (RANGES/RULES)

Level 1				Level 2			
1st Report:	Date _____	By _____		1st Report:	Date _____	By _____	
Final Report:	Date _____	By _____		Final Report:	Date _____	By _____	

INTERRECORD CHECKS

1st Report:	Date _____	By _____		1st Report:	Date _____	By _____	
Final Report:	Date _____	By _____		Final Report:	Date _____	By _____	

INTERFILE CHECKS

1st Report:	Date _____	By _____		1st Report:	Date _____	By _____	
Final Report:	Date _____	By _____		Final Report:	Date _____	By _____	

VISUAL INSPECTION

Level 1				Level 2			
Vil	Questionnaire No.	Date	By	Vil	Questionnaire No.	Date	By

Approved: Date _____ Forward to supervisor: Date _____

The questionnaire numbering should continue from one batch to the next for the same type of questionnaire. For example, if the last page number in the first batch of household census questionnaires was 54, the numbering of the next batch of census questionnaires should start with 55. In this way, no two questionnaires of a given type will have the same number. The batches themselves are also numbered, so that the first batch of census questionnaires will be number 01, the second 02, and so forth (see Figure KA3.2).

Once the questionnaires have been sorted and numbered, a *Data Entry and Verification Control Form* (Figure KA3.3) is attached to each batch. This form is used to record the completion of the different steps in the data entry and verification process. The following information is entered in the form header: the date when the batch was received, the questionnaire ID number (which identifies the questionnaire type), and the batch number. The summary box below the header has a check list of all the major steps and allows one to see immediately the status of the questionnaire.

The receipt of the questionnaires is recorded in a logbook as shown in Figure KA3.4. The logbook is divided into separate sections for each questionnaire type. Each time questionnaires are delivered to the

office, the batch number and the date the batch was received are entered in the logbook. In addition, each village included in the batch is listed along with the number of questionnaires and the dates of the first and last interviews. This allows one to keep track of which questionnaires have been brought in for data entry and which are still in the field. The number of questionnaires is totaled at the end of each entry.

Figure KA3.4 - Logbook entry for recording the receipt of questionnaires

CROP PURCHASE QUESTIONNAIRE					
<u>Batch Number</u>	<u>Date Received</u>	<u>Village</u>	<u>Number of Questionnaires</u>	<u>First Interview</u>	<u>Last Interview</u>
01	12/04/88	Sagatta	17	10/19/88	11/02/88
		Khelcome Peulh	14	10/19/88	11/12/88
		Darou Cissé	11	10/17/88	11/27/88
		TOTAL	42		
02	12/20/88	Touba Toul	18	10/30/88	12/01/88
		Thylla Boubou	16	10/30/88	12/01/88
		Niakhar	18	11/05/88	12/01/88
		TOTAL	52		

STEP 2 - Questionnaire Preparation

Before the questionnaires can be entered, they must be prepared, which involves a visual inspection of each questionnaire for missing or inconsistent information. (Of course, the questionnaires should also be inspected in the field by the enumerator or the field supervisor before they are brought to the office.)

Questionnaire preparation is an extremely important step that is often omitted for the sake of expediency. Experience has shown, however, that this step can reveal many data collection problems and that more time is wasted by allowing such problems to go undetected until the later stages. In the quest to find data errors, the motto must be "the sooner, the better."

The person preparing the questionnaires must be quite familiar with them so that he or she will be able to interpret correctly the information on them. The preparer writes in codes for any uncoded responses and searches for missing responses, inconsistent information, or entries that simply "don't look right." This requires someone with a careful eye and a good "feel" for the data.