

ELECTRONIC ATTENDANCE PROCESSING

PROJECT REPORT

P-992

*Submitted in partial fulfillment of the requirements
for the award of the degree of*

MASTER OF COMPUTER APPLICATIONS

Of Bharathiar University

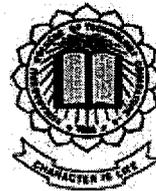
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“ELECTRONIC ATTENDANCE PROCESSING”

Done by

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*Submitted in partial fulfillment of the requirement for the award of the degree of
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Submitted for the university examination held on ..16..04..2003...

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TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms.M.Kirubalakshmi. Who is pursuing her final year M.C.A (Master of Computer Applications) at Kumaraguru College of Technology, Coimbatore has successfully completed her project work entitled "**ELECTRONIC ATTENDANCE PROCESSING**" as part of her academic curriculum during December 2002 and March 2003.

During the project tenure her attendance was found to be regular.

Due to operational reasons, we are not in a position to give the source code to the student.

We wish her all the best in her future endeavors.


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DECLARATION

DECLARATION

I here by declare that the project work entitled
"Electronic Attendance Processing"

done at

**NEW WALK TECHNOLOGIES LIMITED
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and submitted to

KUMARAGURU COLLEGE OF TECHNOLOGY
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in partial fulfillment of the requirement for the award of the degree of

MASTER OF COMPUTER APPLICATIONS

is a report of work done by me during my period of study in
Kumaraguru College of Technology, Coimbatore – 641 006.

**Under the supervision of
Ms. P.Sudha, B.E., Lecturer, Dept. of CSE**

Name of the candidate

Register Number

Signature of the candidate

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0038M1033



Date : 10/04/03

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ACKNOWLEDGEMENT

At the outset, I would like to remember the sacrifices made by two people, who have all along been with me, and who are mainly responsible for what I am today – **MY PARENTS**.

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SYNOPSIS

SYNOPSIS

The Project entitled “**Electronic Attendance Processing**” keeps track of the attendance details of an employee working in an organization. Attendance processing involves processing the attendance using the input gained from a smart card reader and generating the pay slip of an employee. The work that is currently manual is computerized. The details, which are maintained in the form of papers, has to be maintained as records in the database. The computerization includes getting the input from a smart card reader, dumping the input into a database, inputting and maintaining the master details, determining the shifts the employee has to work in, processing the leave taken by an employee, calculating the earnings and deductions and finally generating the pay slip of an employee.

The system helps in easy maintenance of the attendance details of the employees. Reports can be generated quickly. This also helps in evaluating the performance of an employee.

The tools used are **Visual Basic6.0** and **Oracle 8i**. The system is an effective and efficient one in providing information about an employee’s attendance to the company.

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INTRODUCTION

1. INTRODUCTION

1.1 PROJECT OVERVIEW

The organization has to keep control of the attendance details of all the employees working in it. The electronic attendance processing is partitioned into six modules such as:

- Card Reader Value
- Shift Updation
- Leave & Attendance Processing
- Pay Processing
- Reports

MASTER MAINTENANCE:

The company is responsible for maintaining some master details, which plays an essential part in calculating the attendance of an employee. The master details include:

Employee details where the personal details of the employee are maintained.
Department details, which contain the details of the department, the employee works for.
Designation details say about the designation of a particular employee in the concern.
Shift details in which the employee has to work in are maintained.

Holiday details, which contain the available list of holidays, are maintained. Leave details consist of the list of leave an employee can avail without loss of pay. The salary structure of the employee is maintained having the Provident Fund (PF) fixed as 12% and Citizen Investment Trust (CIT) fixed as 1.75% of the basic pay.

CARD READER VALUE:

The input for processing the attendance is obtained from a secondary device called the Smart Card Reader. So every employee is provided with a smart card with his code and station code on it. When an employee enters the concern for his shift, he swipes his card against the card reader. He does the same when he leaves the concern after his shift, when he leaves for break and comes back after it and also when he is on tour, permission or works overtime. The Card Reader is connected to a terminal through an interface and hence the value obtained from the card reader which is an ASCII file is segregated according to the fields available and dumped into the database as such.

SHIFT UPDATION:

Every employee working in the concern is provided with a shift even before he starts working in it. The employee is supposed to work in the shift provided to him. The shifts allowed to the employee are basically of two types namely the General Shift and Rotatory shift. The general shift includes the regular basis of working while the rotatory shift may be clockwise or anti clockwise shifts.

LEAVE & ATTENDANCE PROCESSING:

If an employee applies for leave, the type of leave if casual/sick/paid/loss of pay is noted and it is checked referencing the database if the employee has got enough leave to take without loss of pay. If he has got leave available, then leave processing includes entering the leave start date, leave end date and also specifying if the leave is complete/forenoon/afternoon. Also there is a possibility of the employee going on tour on official basis. In that case proper authorization has to be produced from his department for avoiding loss of pay. When an employee works overtime he is given a grace time after his regular working hours, only after which overtime is taken into account. After taking into account all these details such as the card value, the shift of an employee, the leave taken and the overtime worked the daily and monthly attendance of the employee can be calculated by giving date as input.

PAY PROCESSING:

The system also facilitates generating the pay slip of an employee taking all the above details such as card value, leave, shift and overtime into consideration. Taking the monthly attendance, allowances and deductions of an employee into account the pay processing is done and pay slip is generated. The pay slip is generated abiding the rules of the company.

REPORTS:

The various kinds of reports generated include

- Employee Id wise
- Company wise
- Designation wise
- Department wise
- Payment wise
- Daily Attendance wise
- Monthly Attendance wise

The reports can be viewed on the screen or can be taken as a hard copy. **Sample Screens and reports** are shown in the appendices.

1.2 ORGANIZATION PROFILE:

New Walk Technologies Limited is reputed for its strong all round technical expertise, efficient support and customer care.

- New Walk Technologies Limited, a recent invention is a leading software developer in Coimbatore.
- The company is specialized in customizing corporate projects.
- It has a clear vision of a completely integrated infrastructure that provides new perspective to any area requiring IT solutions.
- The company conducts periodic training programs to meet both the in-house and open market needs.
- The company is full of spirit with bubbling IT professionals working for the global expansion and growth of the company.

SYSTEM STUDY AND ANALYSIS

2. SYSTEM STUDY & ANALYSIS

2.1 EXISTING SYSTEM :

The existing system involves the manual maintenance of the attendance of the employees. Manual work is a tedious process. Right from recruiting an employee the company has to keep track of various information of an employee related to his department, designation, shift he is to work in, the leave available and the leave availed by him and payment. All the information are maintained in the form of papers. Performing all the work in papers will increase the amount of paper and error occurrence is easier. The manual work also occupies a lot of time and sometimes it leads to delay also. The generation of report is difficult.

2.2 USER CHARACTERISTICS:

As far as Electronic Attendance Processing is concerned, the users are classified into three categories. The first user is the manager, a person responsible for keying in the details and maintaining them. This user should have basic knowledge about computers. The second user is the administrator, a person who can have access over the overall details of the concern. The third user is the end user, who will make the queries and view the reports. It is sufficient if this user knows how to operate the package.

2.3 PROPOSED SYSTEM :

The proposed system involves the conversion of manual work into the computerized form. Queries regarding the system can be made. Doing the work in computerized form will generate accurate results. The maintenance of papers will be reduced. Instead of proceeding the work in a manual way, performing the work in a computerized form will reduce the occurrence of errors as much as possible. The proposed system saves a plenty of time. The main purpose of the proposed system is that the generation of the report is faster. This helps the management to keep track of happenings and to take management decisions.

2.4 FEASIBILITY STUDY :

Feasibility study is a system proposal according to its work ability, impact on the operation, ability to meet user needs, and efficient use of resources. Three key considerations are involved in the feasibility

- Economical
- Technical
- Behavioral

ECONOMICAL FEASIBILITY:

Economic Analysis is the most frequently used method for evaluating the effectiveness of the software, most commonly known as cost (Benefit analysis). The procedure is to determine the benefits and savings that are expected from an employee system and compare them with costs. If the benefits outweigh costs, the decision is made to design and implement the system, otherwise further alterations will have to be made. This made aims at reducing time, effort and cost. The project is cost-effective because of its accuracy, faster and user-friendly nature.

TECHNICAL FEASIBILITY:

Technical feasibility emphasis on the existing computer systems (hardware, software) and to what extent it can support the proposed system. The facilities of the package are available to meet the user demands. This acquires user-friendliness and for scientific applications, GUI is desired. The GUI chosen for this package is Visual Basic 6.0. It will support the backend database Oracle 8i.

BEHAVIORAL FEASIBILITY:

People are inherently resistant to change and computers have been known to facilitate such change. Since the system is user-friendly, user training can be done easily and effectively. Visual Basic is a GUI, so anyone can easily use it without prior knowledge of Visual Basic.

PROGRAMMING ENVIRONMENT

3. PROGRAMMING ENVIRONMENT

“Electronic Attendance Processing” system has been developed under the following Hardware/Software configuration. Also why the particular software have been chosen and its features are also specified.

3.1 HARDWARE CONFIGURATION :

Processor	:	Pentium 111
Hard disk	:	15 GB
RAM	:	64 MB

3.2 SOFTWARE CONFIGURATION :

Platform	:	Windows 2000
Front End	:	Visual Basic 6.0
Back End	:	Oracle 8

3.3 ABOUT THE SOFTWARE :

This system has been developed in **Visual Basic 6.0** as Front End and **Oracle 8i** as Back End. The description of the VB & Oracle is as follows.

VISUAL BASIC – AN OVERVIEW

Visual Basic 6.0 is an ideal programming language for developing sophisticated professional applications for Microsoft Windows, which was developed from the Basic Programming Language. Although Visual Basic goes far beyond BASIC and makes BASIC suitable for windowed environments, one of Visual Basic’s greatest strength is its basic foundation. It makes use of graphical user interface for creating robust and

powerful applications. The graphical user interface as the name suggests, uses illustrations for text, which enable user to interact with the application. This feature makes it to comprehend things in a quicker and easier way. Coding in GUI environment is quite a transition to traditional, linear programming methods where the user is guided through a linear path of execution and is limited to a small set of operations – Features such as easier comprehension, user-friendliness, faster application development and many other aspects such as introduction to Active X technology and internet features makes Visual Basic an interesting tool to work with.

A complete installation of the most powerful version of Visual Basic 6.0, requires more than 250 MB hard disk space.

Visual Basic takes the ease of BASIC a step further. Not only is Visual Basic a language greatly improved over BASIC (and most other modern and classic programming languages), Visual Basic includes the following components.

- A complete full-screen editor which can write your program and which works like a word processor.
- A run time environment that lets you see the results of your program and which works a lot like a word processor.
- A project manager that lets you create multiple file Visual Basic windows applications.
- An interactive testing platform that helps you locate and find program bugs.
- Visual tools that let you manage the controls and icons that make programs function properly under the Visual windows environment.

Even though Visual Basic sometimes resembles a programming language when you've buried in the middle of code (code is another word for program instructions), Visual Basic resembles several software packages in that you use menu items, tool bars and the graphical user interface to develop applications.

ORACLE 8 - AN OVERVIEW:

A database management system is essentially a collection of interrelated data and set of programs to access the data. This collection of data is called the database. RDBMS is the acronym for Relational Database Management System. Oracle 8 is an objection Relational Database Management System (ORDBMS). It offers capabilities of both relational and object oriented database systems. In general, objects can be defined as reusable software codes which are location independent and perform a specific task on any application environment with little or no change to the code.

Oracle products are based on a concept known as the 'Client Server Technology'. This concept involves segregating the processing of an application between two systems. One performs all the activities related to the database (server) and the other performs activities that help the user to interact with the application (client). A client or front end database application also interacts with the database by requesting and receiving information from the 'database server'. It acts as an interface between the user and the database. Further it also checks for validation against the data entered by the user.

The database server or back end is used to manage the database tables optimally among multiple clients who concurrently request the server for the same data. It also enforces data integrity across all client applications and controls database access and other security requirements.

*SYSTEM DESIGN AND
DEVELOPMENT*

4. SYSTEM DESIGN & DEVELOPMENT

The process of design involves “conceiving and planning out in the mind “and” making a drawing, pattern or sketch of”. The design is concerned with identifying software components, the general modular structure of the software, the function provided by each module and the internal data streams and stores that make up the interface between modules.

4.1 INPUT DESIGN :

Input plays the most important role in the completion of the system. Input forms the core of the process, which will be carried out in the system. Thus detailed study has to be done in identifying the inputs that are required for various processes which are to be carefully analyzed and care has to be taken to avoid recurring of the same inputs. Input design is the process of converting user-originated inputs into computer based format. The goal of designing input data is to make data-entry as easy as possible and error-free. Web-designed input serves 4 purposes

- To control work flow
- To reduce redundancies in recording data
- To allow easier checking of data
- To increase clerical accuracy

When data is kept into the system, the operator must receive the data in a form that can be easily understood. It should be simple, clear, precise and easier to operate and store. It should be self-explanatory and provide sufficient information to the user for ease of entry of inputs. Forms are designed for retrieving inputs from the user. It is used to enter data and it allows correcting the incorrect entry of data.

The system is a menu driven one. This simplifies the computer data access or data entry. The data that can be accessed by each user can be specified so that, the reports will be restricted to that level only. In fact, the system allows the definition of data access rights for each user for each function. This ensured that only the right user gets the

information. The database operations like Save, Modify, Delete, Update, List, Quit has been taken care of in all the forms. These are in the form of buttons. If the user clicks the save button, the information entered recently could be added to the database. If the user clicks the modify button, he/she is allowed to modify the existing information. If the user clicks the delete button, he/she is allowed to delete the existing information. The update button is used to update the particular operation. The list button when clicked, lists the existing database entries. If the quit button is clicked, that particular screen will get exited at any point of time with no restrictions. The validation for each input column is done whenever the user the user tries to move out of the input column. However, validation is not done if the user tries to move to the previous column. After each database operation, the successful completion of the operation is checked.

The system engages the user in an interactive dialogue. The system is able to extract the missing or omitted information from the user by directing the user through appropriate dialogues.

4.2 OUTPUT DESIGN :

The main idea of developing this software system is to generate various outputs in necessary format, which will aid in planning and decision making. The outputs should include all the necessary details and the required information. The primary consideration in output design is to arrange the data in a form, that is convenient to the user. The layouts of the form should be pleasing care should be taken that the prompts and icons are positioned at the correct place. Also the size of the form should be appropriate depending on its contents. Whenever error messages are displayed it should be as long as possible and meaningful. All headers and displays should be relevant to the message. Error messages should not contain any programming related terminology.

This system helps to provide two types of outputs, one is Document based and the other one is report based. All the document-based outputs can be taken through the print option of the appropriate form. The output just gives information available in the form.

Also this output can be viewed either in screen or it can be taken as a hard copy. Provision is available to make the choice.

The other type of output is report based. This is having explicit option in the main menu through which detailed report can be arrived. This can also be viewed in the screen or can be taken as hard copy. Some of this kind of output titles are listed here :

- ❖ Employee Id wise
- ❖ Company wise
- ❖ Designation wise
- ❖ Department wise
- ❖ Payment wise
- ❖ Daily Attendance wise
- ❖ Monthly Attendance wise

4.3 DATABASE DESIGN :

Before the database concepts became operational, users had programs that handled their own data independent of other users. It was a conventional file environment where data integration or sharing of common data source applications was possible. In a database environment, common data is available across several applications and are used by several users. Instead of each program managing its own data, data across applications are shared by authorized users with a database software managing the database as an entity.

Data structuring is refined through a process called Normalization. Data are grouped in the simplest way possible, so that later changes can be made with a minimum of impart on the data structure.

Normalization is the process of simplifying the relation between data elements in the record. Through normalization, a collection of data in a record structure is replaced by successive record structures. They are simple and more predictable and therefore manageable.

Various objectives are considered for designing the database such as,

- ◆ Control of data integrity
- ◆ Control of redundancy
- ◆ Control of data security
- ◆ Data independence
- ◆ System performance
- ◆ System compatibility

The Data Dictionary is included in the appendices.

4.4 MODULE DESIGN :

The electronic attendance processing is partitioned into six modules such as:

- Master Entries
- Card Reader Value
- Shift Updating
- Leave & Attendance Processing
- Pay Processing
- Reports

MASTER ENTRIES:

The master details include Employee details, Department details, Designation details, Holiday details, Leave details, Basic pay.

CARD READER VALUE :

The data is read from the secondary device called smart card reader.

The data's from the card is stored in the database and taken for later processing.

SHIFT UPDATION :

The shifts allowed to the employee are basically of two types :

- 1) General Shift
- 2) Rotatory shift

The general shifts include the regular basis of working and while the rotatory shift may be clockwise or anti clockwise shifts.

LEAVE AND ATTENDANCE PROCESSING:

Leave is allotted to the employee on any one of the following types of leave.

- Casual leave
- Sick Leave
- Loss Of Pay

If the employee applies for tour permission, he is considered as on duty and the permission will be granted. Employee overtime work is calculate depending upon the time he had worked after completion after his shift.

PAY PROCESSING:

Pay slip is generated in the concern for every month. The pay value is generated by calculating the deduction, allowances and overtime pay. Deduction includes the values such as loan, tax and so on. Allowances includes such as medical expenses, house rent allowances and so on.

4.5 PROCESS DESIGN :

Once the outputs, inputs and stored data have been defined, it is necessary to decide what procedures are required to process the input, keep the record up-to-date and produce the outputs. The decision about the nature of processing is accomplished by considering the following.

RESPONSE TIME:

Response time refers to the maximum acceptance time interval between a request for information and its receipts by a user.

FREQUENCY:

Frequency refers to how often the users require retrieving information from the computer system.

DATA VOLUMES:

One of the factors, which will greatly affect the cost of an online system, is the volume of data at specific pointers in time.

HARDWARE CONSTRAINTS:

One of the major constraints on the type of processing is hardware availability in the organization. Data, which cannot be easily keyed in, cannot be handled easily in an on-line transaction processing system.

SECURITY REQUIREMENT:

The security requirement of a system can have a significant impact on the nature of processing in the proposed system. Security is more expensive and more difficult to achieve in an on-line system.

COST:

Cost can be an inhibiting factor. The cost of an on-line processing cannot be justified in simple comparison with the previous system. When the method of processing has been decided, the necessary processes must be identified and broke down into appropriate electrical and computer procedures.

*SYSTEM TESTING AND
IMPLEMENTATION*

5. SYSTEM TESTING AND IMPLEMENTATION

Testing and implementation is the final phase of any software development. In this phase most possible errors are identified and rectified to make the system an error-free one. Given here are all the testing and implementation.

5.1 SYSTEM TESTING :

It is human ability to perform and communicate with perfection and that has been the reason why software development is always accompanied with software testing. Software testing is a critical element of software quality assurance. It represents the ultimate review of specification, design and coding the software.

Testing is called a destructive activity. It is the process of executing a program in the intent of finding errors. Good testing is that which has the high probability of finding an error which is yet undiscovered. A successful test uncovers a yet undiscovered error in the software. The final goal of testing is to see the system performs its intended purpose satisfactorily. This system has undergone various stages for validations of results and for its integrity.

5.1.1. UNIT TESTING:

In unit testing, the program units making up a system are tested. Unit testing first focuses on modules, independent of one another to locate errors. This enables to detect errors in coding and the logic within the module alone. This testing is also used to ensure the integrity of data stored temporarily. Some of the various test cases to test the system are as follows:

- Giving inconsistent data and out of range values in form level and module level.
- Raising unhandled exception causes explicitly.
- Auto generation of codes in normal and query mode.
- Boundary cases.

UNIT TESTING FOR ELECTRONIC ATTENDANCE PROCESSING:

Each module of the system is tested individually. The data are related to Employee personal, Department, Designation, Shift, Holiday, Leave available, Payment are validated and tested to avoid inconsistency in data. Every module is tested with invalid and redundant data. Unit testing done on all these modules helps us to ensure the correct functionality of the modules.

5.1.2. INTEGRATION TESTING :

Integration testing is a systematic testing for constructing the program structure, while at the same time conducting tests to uncover errors associated with interfacing. That is the program is constructed and tested in small segments, which makes it easier to isolate and correct. The sandwich approach combines the top-down strategy for the upper levels of the program structure coupled with a bottom-up strategy for subordinate levels.

INTEGRATION TESTING FOR ELECTRONIC ATTENDANCE PROCESSING :

The system was developed as 6 different modules and when integrated as a whole, it was tested to check if there was proper flow in the entire system. The system when integrated should update the data entered in the previous module as we enter into the next module.

5.1.3. SYSTEM TESTING :

System testing is actually a series of different tests, whose primary purpose is to fully exercise the computer-based system. Although each test has different purpose, We should verify that all the system elements have been properly integrated and perform the allocated functions.

SYSTEM TESTING FOR ELECTRONIC ATTENDANCE PROCESSING:

The system was tested after integrating all the 6 modules which were developed individually and tested to check if the flow of data through the system was correct, the testing process worked out smoothly and tested as mentioned above.

5.1.4. SECURITY TESTING :

Security testing attempts to verify the protection mechanisms built into a system. This will protect the system from improper penetration. Security testing is done in general for the systems which have been developed.

5.1.5. PERFORMANCE TESTING :

Performance testing is designed to test the run-time performance of the software, within the context of an integrated system.

5.2 . SYSTEM IMPLEMENTATION :

System implementation is the process of making the newly designed system fully operational and consistent in performance. That is, implementation is the process of having the personal check out and put new equipment into use, train the users to use new system and construct any file that are needed to use it. At this stage the main workload, the greatest upheaval and the major impact on the existing practices shifts to the user department. If the implementation is not carefully planned and controlled, it can cause chaws. Thus it can be considered to be the most crucial stage in achieving a successful new system and in giving the users confidence that the new system will work well and be effective.

Before the development of the system, the user specifications, the forms and the validations based on the forms and the respective reports are prepared. The user can specify the changes if any, then the design department examine the changes and if accepted then the requirement of the user is taken care of. This is the stage where system design begins, i.e., the theoretical design is converted into a working system. A mock data sheet is prepared which contains the results for each form. All the technical errors are fixed and the test data is entered. Then the reports are prepared and compared

with that of the existing system. If the new system is not working properly, then once again we can go back to the existing system and after rectification, the new system can be installed.

Good documentation although essential, doesn't replace training. There is no substitute for hands on operation of the system. Vendors, in service training's on-site and in-house training are the various types of training. The users are observed over a period of time and all the problems encountered during this stage are taken care of and the system is again updated in order to meet the customer's requirements.

CONCLUSION

6. CONCLUSION

The system "Electronic Attendance Processing" has been developed satisfying the requirements specification since it is developed in ORACLE, it provides all security features of relational database. Testing has been carried out to ensure that the system is functioning correctly and it is error free.

The Electronic Attendance Processing reduces the burden of the concern for efficiently maintaining their employee, personal, department, designation, shift, attendance, leave, payment & their benefits. The project will be successfully helpful.

*SCOPE FOR FURTHER
DEVELOPMENT*

7. SCOPE FOR FUTURE DEVELOPMENT

The electronic attendance processing helps in easy maintenance of the attendance details of the employees. Reports can be generated quickly. The system also helps to store more number of records. The system can be further designed to include the management of human resources. Performance evaluation of any employee can be done using the system.

Proper documentation has been made. Proper modular design has been made and the coding with enough comment statements makes the program self explanatory. This helps in adding or removing new modules to the system.

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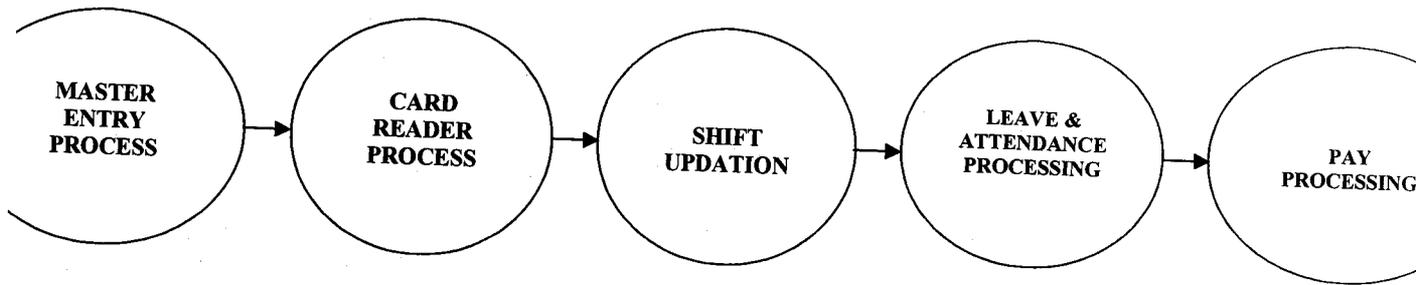
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APPENDICES

10. APPENDICES

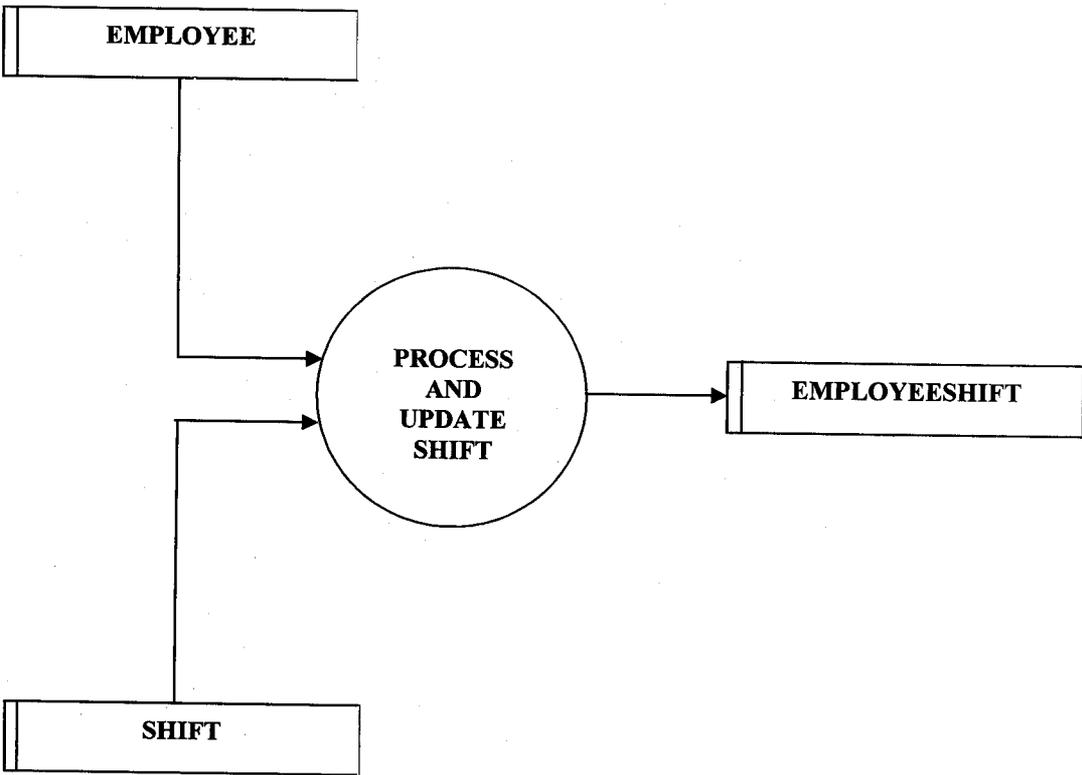
CONTEXT ANALYSIS DIAGRAM



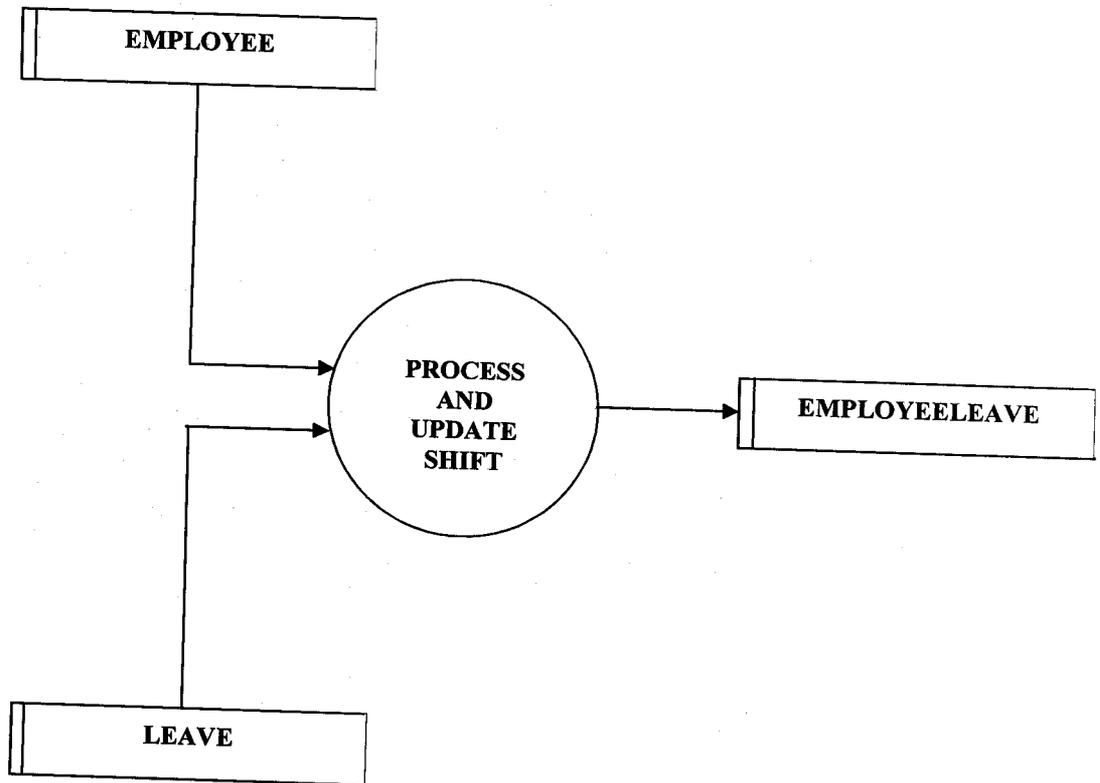
DATAFLOW DIAGRAM

LEVEL - 1 DFD

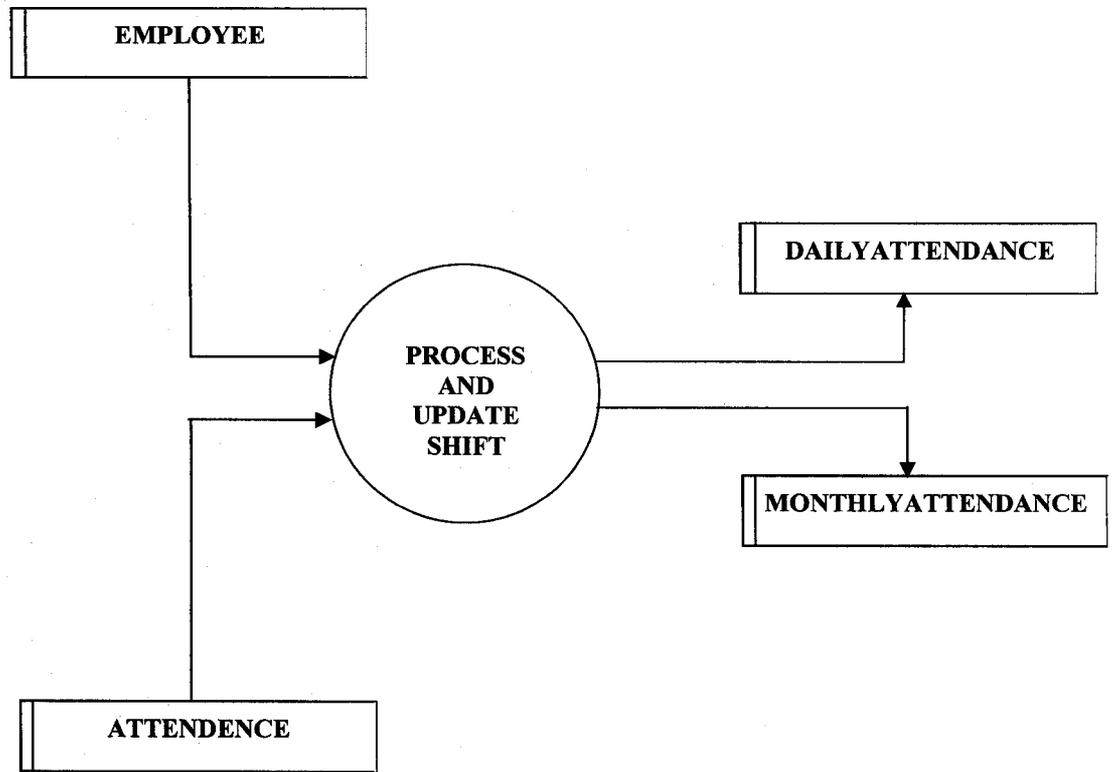
SHIFT UPDATING



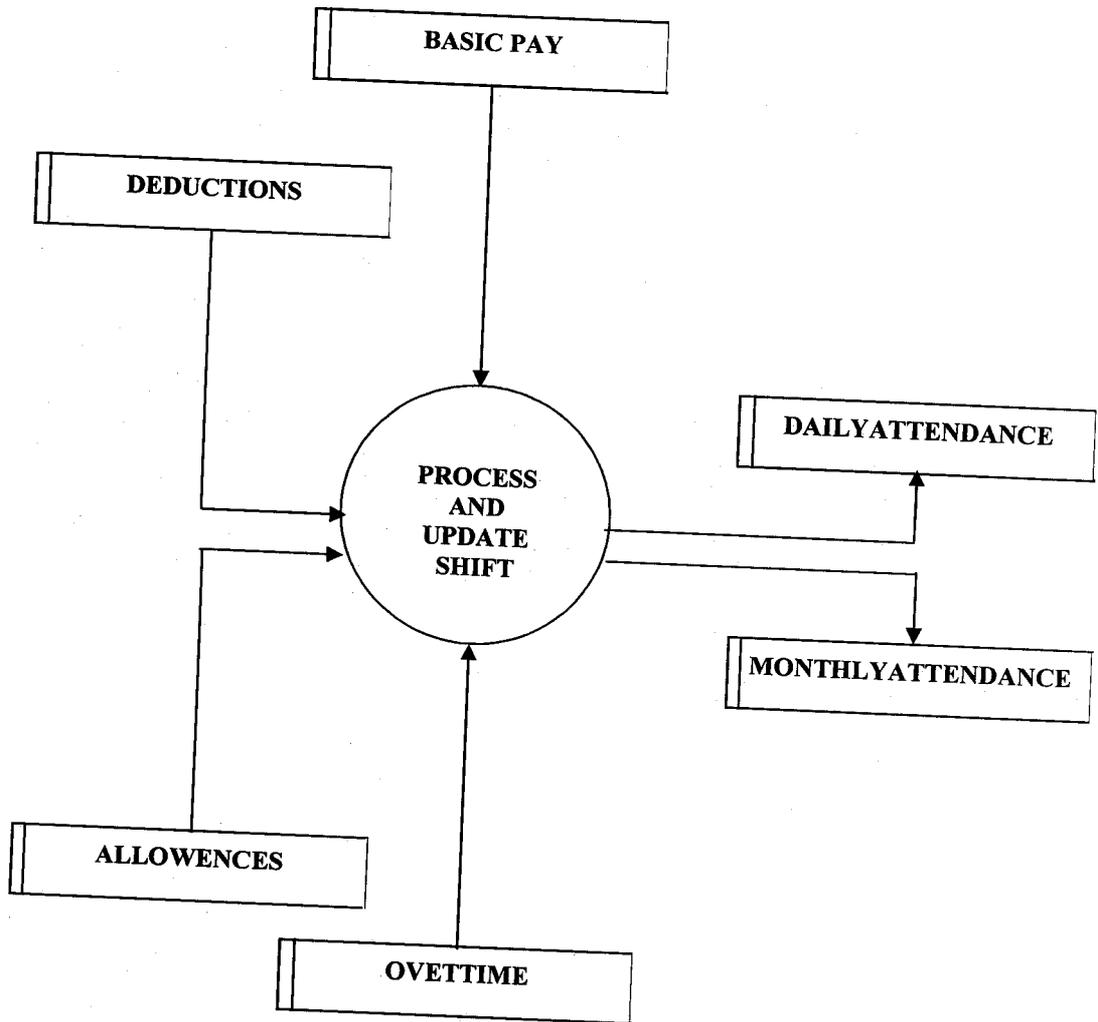
LEAVE PROCESSING



ATTENDANCE PROCESSING



PAY PROCESSING



ENTITY – RELATIONSHIP DIAGRAM

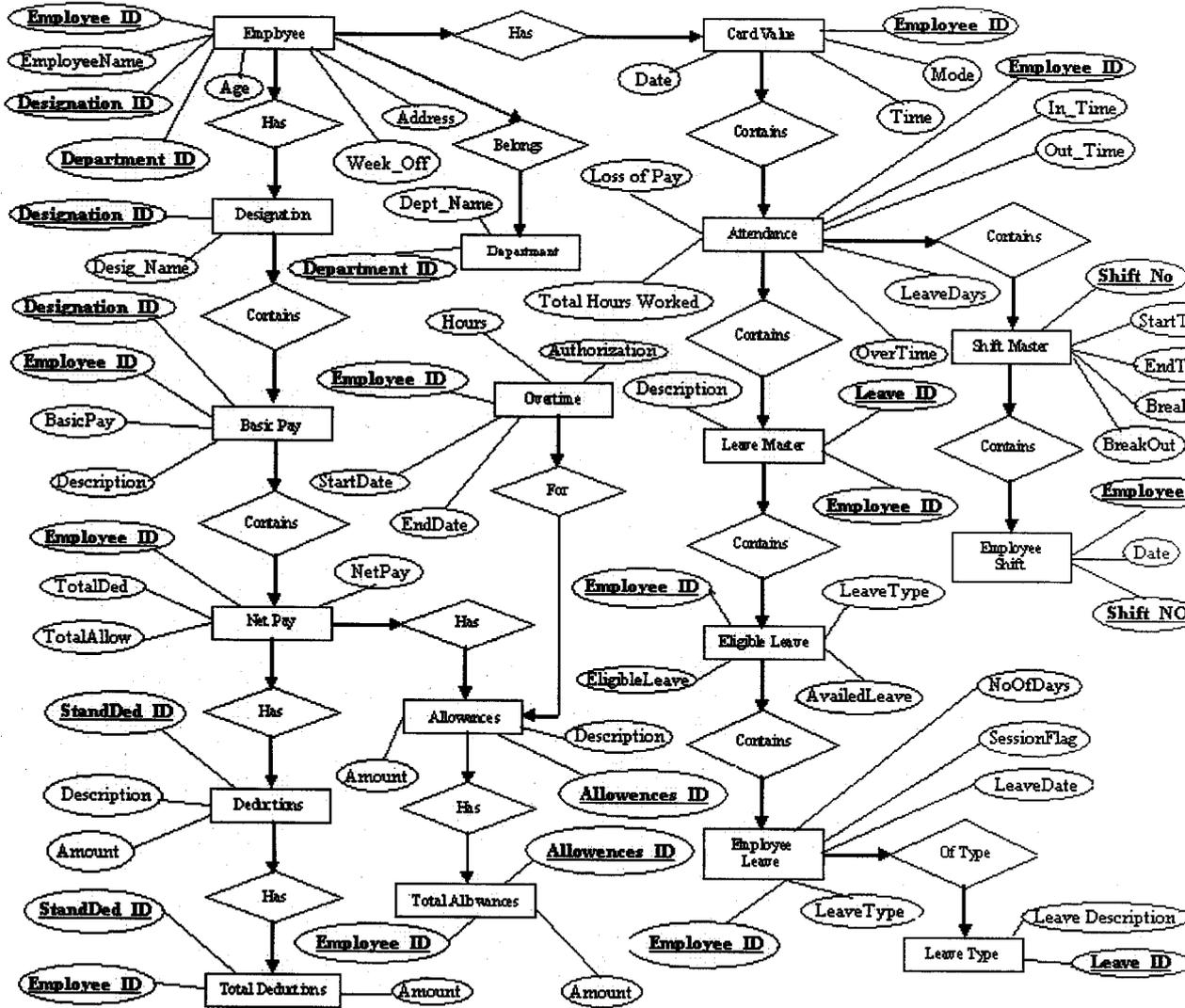


TABLE DETAILS:**EMPLOYEE**

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Primary Key
Employee name	Varchar(20)	
Age	Number(2)	
Gender	Char(1)	
Address	Varchar(20)	
Designation_ID	Char(2)	Foreign Key
Week_off	Number(1)	
Department_ID	Char(2)	Foreign Key

DEPARTMENT

FIELD NAME	DATA TYPE	DESCRIPTION
Department_ID	Varchar(2)	Primary Key
Dept_Name	Varchar(15)	

DESIGNATION

FIELD NAME	DATA TYPE	DESCRIPTION
Designation_ID	Varchar(2)	Primary Key
Desig_Name	Varchar(20)	

LEAVETYPE

FIELD NAME	DATA TYPE	DESCRIPTION
Leave_id	Number(2)	Primary Key
Leave Description	Varchar(25)	

HOLIDAYMASTER

FIELD NAME	DATA TYPE	DESCRIPTION
Holiday_ID	Varchar(3)	Primary Key
HolidayDate	Date	
Duration	Number(2)	
Description	Varchar(25)	

SHIFTMASTER

FIELD NAME	DATA TYPE	DESCRIPTION
Shift_No	Number(2)	Primary Key
Starttime	Date	
Endtime	Date	
Breakin	Date	
Breakout	Date	

EMPLOYEEESHIFT

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Foreign Key
Date	Date	
Shift_No	Number(2)	

CARDVALUE

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Foreign Key
Date	Date	
Time	Time	
Mode	Char(1)	
Station_Code	Number(1)	

EILIGIBLELEAVE

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Foreign Key
EligibleLeave	Number(5,2)	
LeaveType	Varchar(1)	
AvailedLeave	Number(5,2)	

EMPLOYEELEAVE

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Foreign Key
LeaveDate	Date	
LeaveType	Char(1)	
NoOfDays	Number(5,2)	
SessinFlag	Char(1)	

ATTENDANCE

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_ID	Varchar(6)	Foreign Key
Attd_Date	Date	
In_Time	Time	
Out_Time	Time	
Total Hours Worked	Number(5,2)	
MonthYear	Number(6)	
TotalDays	Number(5,2)	
Present	Number(5,2)	
Absent	Number(5,2)	
Leave Days	Number(5,2)	
Loss of Pay	Number(2)	

PAY DETAILS

FIELD NAME	DATA TYPE	DESCRIPTION
Designation_id	Varchar(6)	Foreign Key
Description	Varchar(20)	
BasicPay	Number(7,2)	

LEAVE

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_id	Varchar(6)	Foreign Key
Leave_id	Number(2)	
Leave Description	Varchar(25)	

DEDUCTIONS

FIELD NAME	DATA TYPE	DESCRIPTION
StandDed_id	Number(2)	Primary Key
Description	Number(7,2)	

TOTALDEUCTION

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_id	Varchar(6)	Foreign Key
StandDed_id	Number(2)	Foreign Key
Amount	Number(7,2)	

ALLOWENCES

FIELD NAME	DATA TYPE	DESCRIPTION
Allowences_id	Number(2)	Primary Key
Description	Number(7,2)	

TOTALALLOWENCES

FIELD NAME	DATA TYPE	DESCRIPTION
Employee_id	Varchar(6)	Foreign Key
Allowences_id	Number(2)	Foreign Key
Amount	Number(7,2)	

OVERTIME

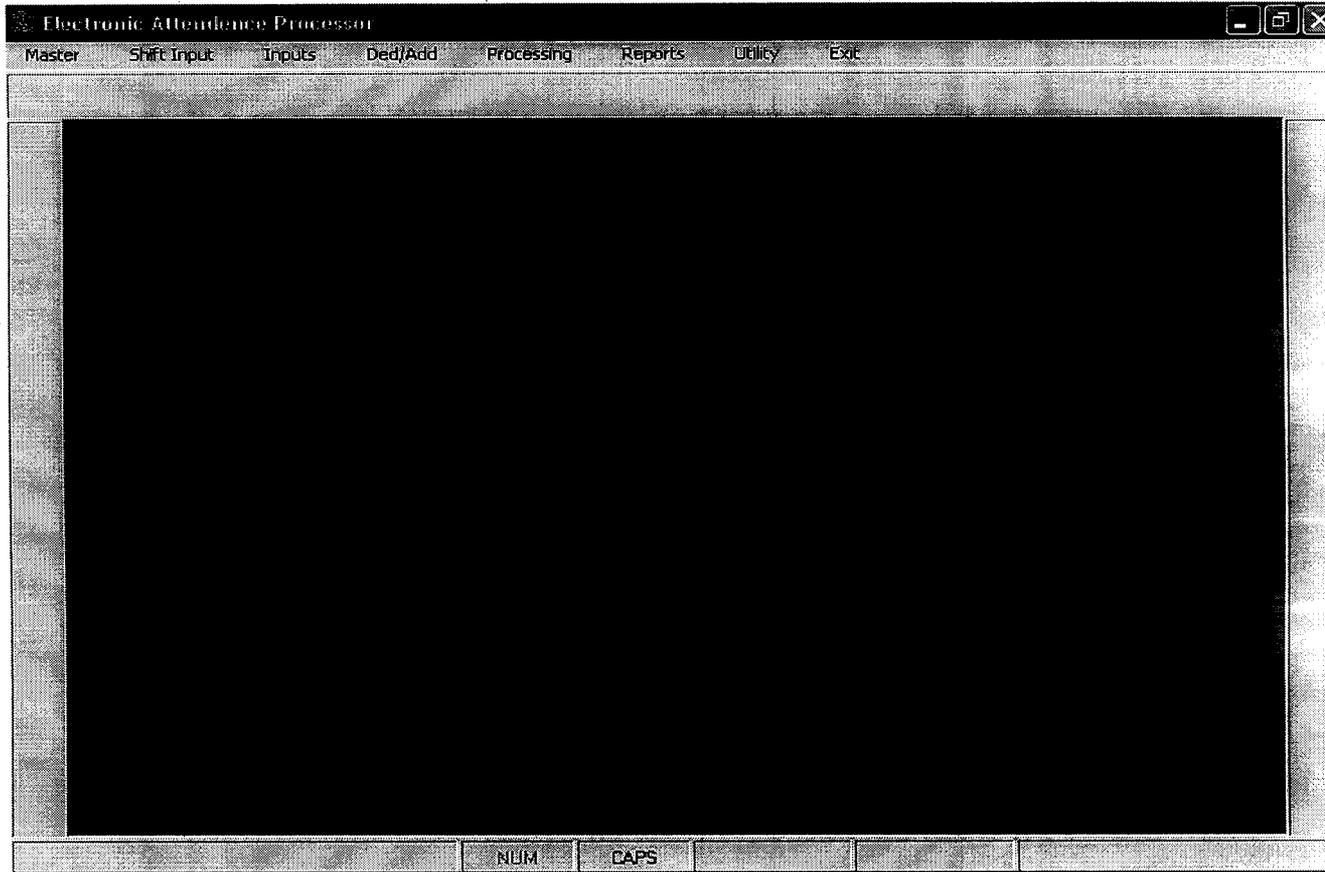
FIELD NAME	DATA TYPE	DESCRIPTION
Employee_id	Varchar(6)	Foreign Key
StartDate	Date	
EndDate	Date	
Hours	Date	
Authorization	Char(1)	

NETPAY

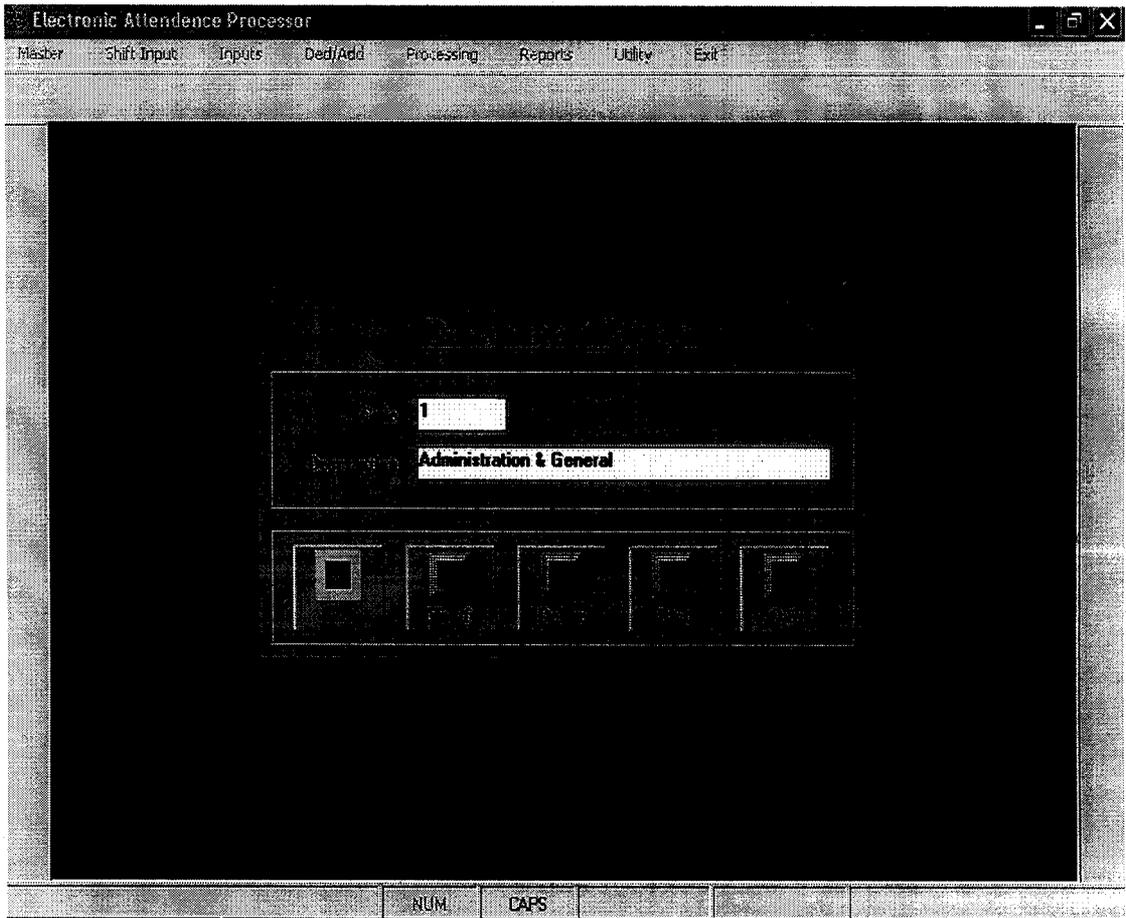
FIELD NAME	DATA TYPE	DESCRIPTION
Employee_id	Varchar(6)	Foreign Key
TotalDeud	Number(7,2)	
TotalAllow	Number(7,2)	
NetPay	Number(7,2)	

SAMPLE SCREENS

MAIN SCREEN



DEPARTMENT MASTER



SHIFT MODIFICATION

The screenshot shows a software window titled "Electronic Attendance Processor" with a menu bar containing "Master", "Shift Input", "Inputs", "Ded/Add", "Processing", "Reports", "Utility", and "Exit". The main interface is dark with a central panel containing several input fields and date pickers. At the top of the panel, there are two date pickers: one showing "April" and another showing "2003". Below these is a text input field containing the number "1". In the center of the panel, there are two radio buttons. Below the radio buttons is a large rectangular area containing three date pickers: "04/28/03", "05/06/03", and "2". To the right of this central area is a vertical sidebar with two rectangular buttons. At the bottom of the window, there is a status bar with buttons for "NUM" and "CAPS".

LEAVE ENTRY

Electronic Attendance Processor

Master Shift Input Inputs Ded/Add Processing Reports Utility Exit

1 BISHWA RATNA SHAKYA
2nd Grade Executive
Corporate

lev Type	EL
Balance	0

UP [UNPAID LEAVE]

Valid Start & End Dates/Details

20 04/28/03

Accept OK

NUM CAPS

LEAVE MASTER

The screenshot shows a software window titled "Electronic Attendance Processor" with a menu bar containing "Master", "Shift Input", "Inputs", "Deaf/Add", "Processing", "Reports", "Utilities", and "Exit". The main content area is a form titled "EL [SPECIAL LEAVE]". The form includes several input fields with the following values: "1", "7", "2", and "2". To the right of these fields is a button labeled "E". Below the input fields are five checkboxes, the first two of which are checked. At the bottom of the window, there are two checkboxes labeled "NUM" and "CAPS", both of which are checked.

LEAVE TOUR ENTRY

Electronic Attendance Processor

Master Shift Input Inputs Des/Add Processing Reports Ability Exit

1 **BISHWA RATNA SHAKYA**
2nd Grade Executive
Corporate

Lev Type	EL
Balance	0

UP [UNPAID LEAVE]

2.5 02/26/03

DATE		
02/26/03	Wednesday	C
02/27/03	Thursday	C
02/28/03	Friday	C

Accept
Quit

NUM CAPS

LEAVE TOUR DELETEION

Electronic Attendance Processor

Master Shift Input Inputs Ded/Add Processing Reports Utility Exit

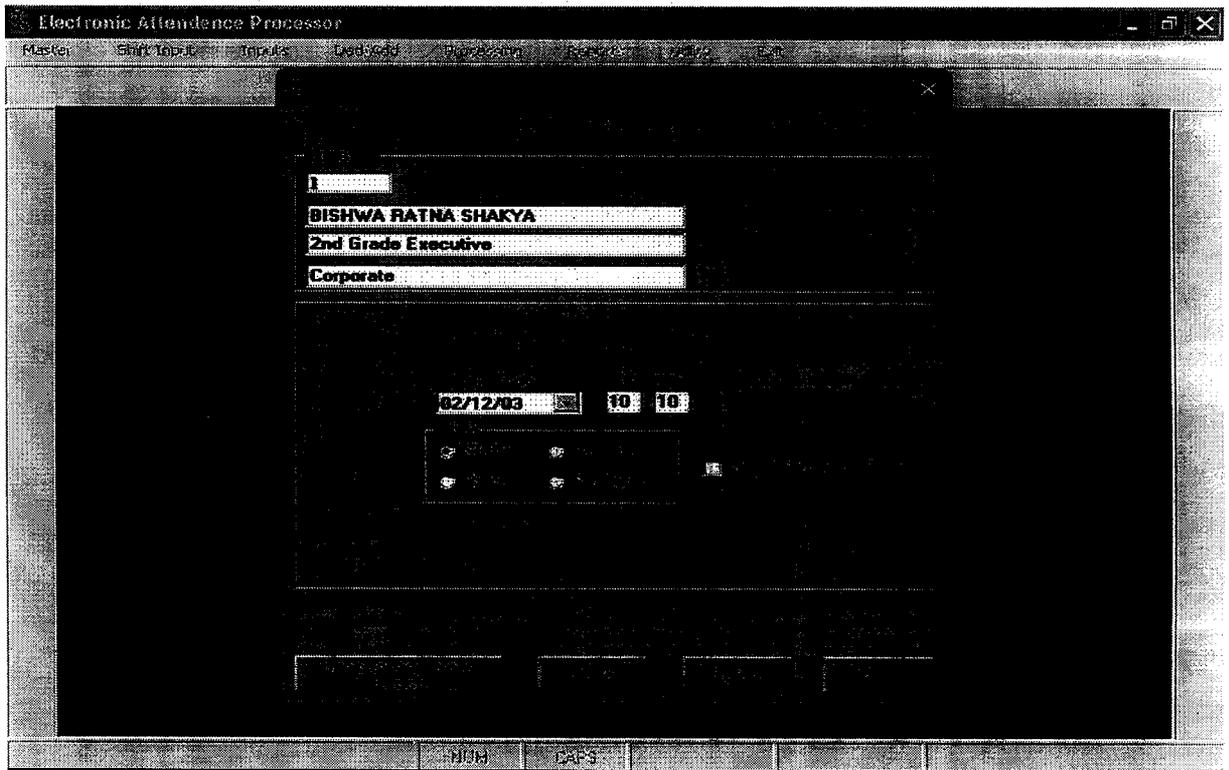
1 BISHWA RATNA SHAKYA
2nd Grade Executive
Corporate
02/16/2003

02/16/2003	Sunday	L	Full Day	1533
02/17/2003	Monday	L	Full Day	1533

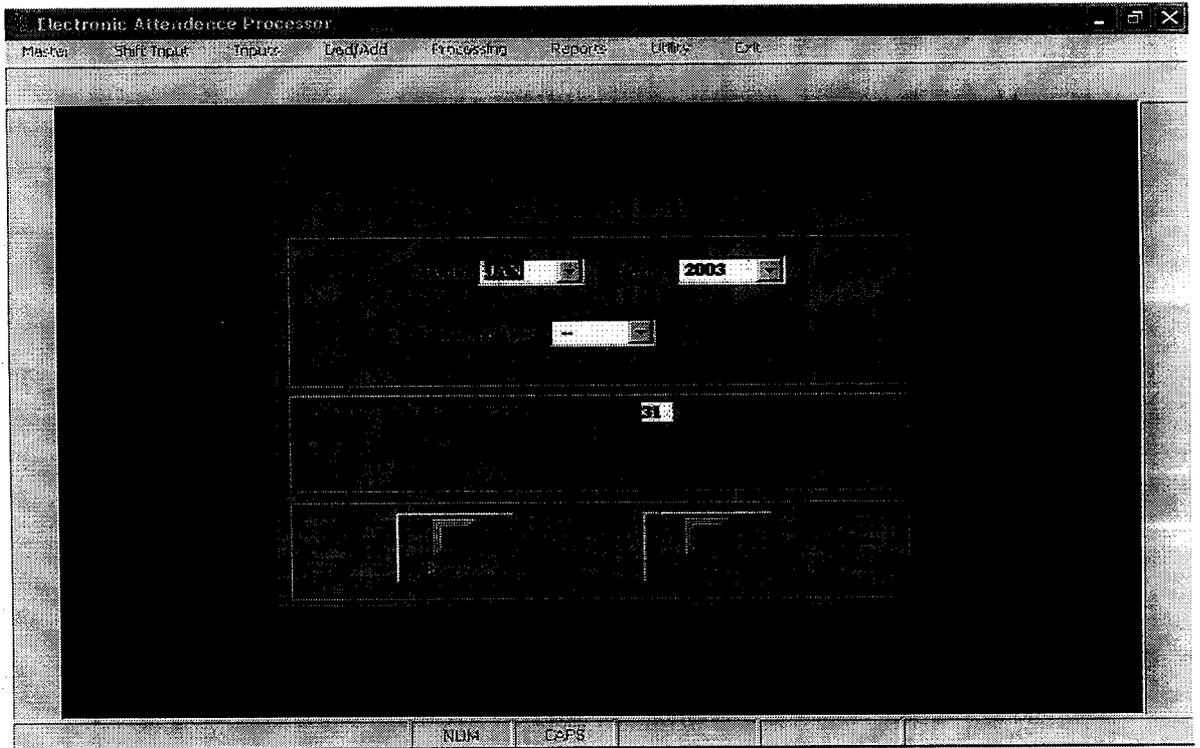
1533

NUM CAPS

MANNUAL PUNCH

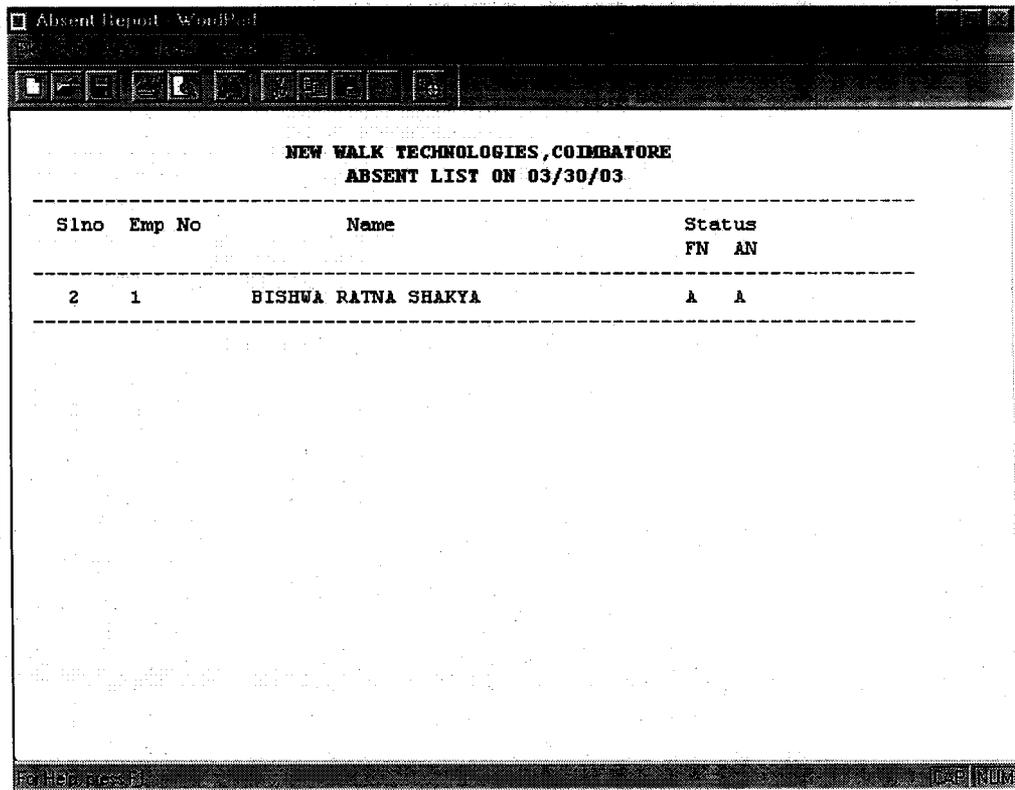


PAY SLIP GENERATION



REPORTS

ABSENT REPORT



NEW WALK TECHNOLOGIES, COIMBATORE
ABSENT LIST ON 03/30/03

Sino	Emp No	Name	Status	
			FN	AN
2	1	BISHWA RATNA SHARYA	A	A

LEAVE REPORT

LeaveReport - WordPad

NEW WALK TECHNOLOGIES, COIMBATORE
LEAVE REPORT ON 03/03/2003

Sl.No	M_Code	Name	CASUAL LEAVE		SICK LEAVE	
			BALANCE	AVAILED	BALANCE	AVAILED
1	1	BISHWA RATNA SHAKYA	4	3	30	7
2	10	HUKUNDA SHARMA	2	1	30	9

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PAYSLIP

PaySlip - WordPad

NEW WALK TECHNOLOGIES, COIMBATORE
PAY SLIP FOR THE MONTH OF MARCH-2003 Page: 1

NAME	: BISHWA RATNA SHAKYA
EMPLOYEE ID	: 1
DEPARTMENT	: ACCOUNTS
BASIC	: 10000
HRA	: 1500
DEARNNESS	: 750
OVERTIME	: 1200
MEDICAL	: 350
TAX	: 400
ADVANCE	: 1000
INSURANCE	: 200
LOAN	: 300
PF	: 600

TOTAL EARNINGS	: 13800
TOTAL DEDUCTIONS	: 2500

NET PAY	: 11200
---------	---------

POP: C:\PDS\SI... CAP NUM