COMPUTERISED PAY-AS-YOU-EARN TAX SYSTEM
A Case Study of National Orientation
Agency Federal Ministry of Information
ABUJA.

BY

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PGD/MCS/001

A project submitted in partial fulfilment of the
requirement for the award of Post-Graduate Diploma
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MARCH, 1994

CERTIFICATION

This is to certify that this project "Computerised[●] paye tax
System" has been presented by Aliyu Umaru of Department of
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ACKNOWLEDGEMENT

My overwhelming gratitude goes to my project supervisor, Mallam Sadiq Umar for his professional counsel and construvtive comments on various section of the manuscript.

I express my sincere gratitude to Audit Staff NOA, National Headquarters, Abuja for their moral support and co-operation while under taking this course.

Special thanks and appreciations go to my brothers and friends for their moral and financial supports.

THE PROJECT OUTLINE

CERTIFICATION

ACKNOWLEDGMENT

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CHAPTER ONE

1.0 OBJECTIVE OF THE PROJECT

The main objective of this project is to have a computer based system for pay-as-you-earn (PAYE) Scheme to be used by Accounts Department of National orientation Agency (NOA), National Headquarters, Abuja. However there is a need to have a knowledge on tax interms of its history and objectives. It would also help to have a literature review on NOA before jumping to computer system.

1.1 INTRODUCTION

Personal income tax in Nigeria.

Historically the development of income taxation in Nigeria can be traced under four distinct periods namely: pre-colonial, 1900 - 1918, 1918 - 1943 and 1943 to present day.

1.   Pre-colonial era

Before the advert of British rule, there was a well organised system of income tax in the North under the autocratic rule of the Hausa - Fulani.   However, the system of taxation was less organised in Southern part of the country.

2.   1900 - 1918

When the British came, they made use of existing system of tax collection in their adminstration. All various traditional taxes in all regions were brought under a single general tax payable on a single demand in cash instead of in kind.

3. <u>1919 - 43</u>

By 1920, Direct tax was introduced in most part of
the South. 1937 Direct taxation levied tax on all
adult males, and salaries, bonus and profit being
the sources of taxable income. New ordinanace was
later introduced defining the income tax liability
as those with less than f50 (₦100) income to pay a
flat rate 5/- (5kobo). However special allowances
were granted for dependencies. Such as wife and
children.

4. 1943 - present day

1943 Income tax ordinance was introduced and it had
an important feature of paye system of taxation.
Under the system, taxes are deducted at source
by employers before pay-packages are handled to
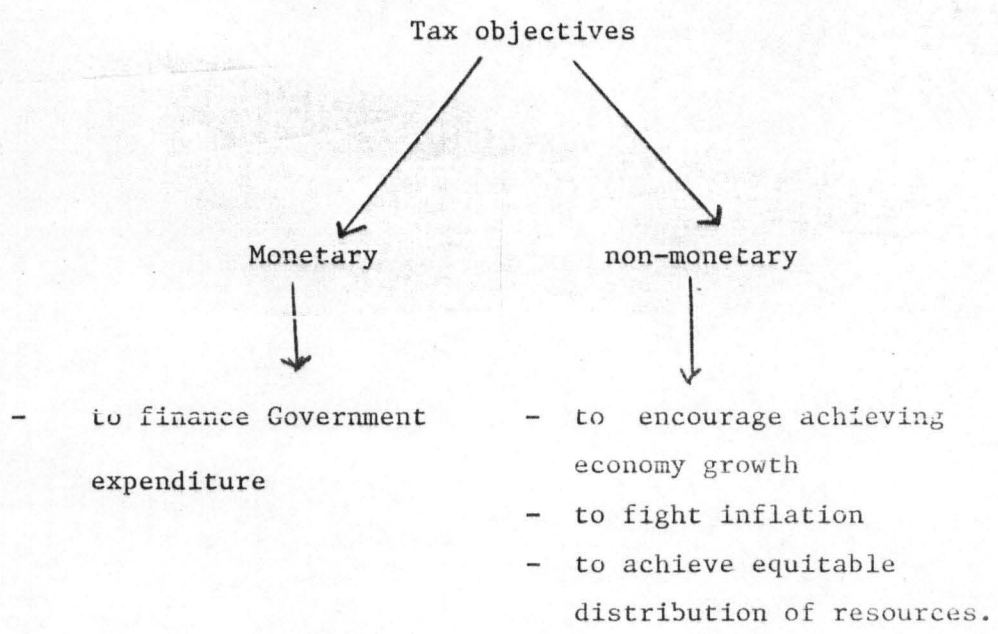employees' However each region practised different
ordinances.

The introduction of the Income Tax Management Act 1961
hermonised all income tax laws of various regions.

Income Tax Management Decree No.7, 1975 amended the Act
of 1961. The new Decree provided a uniformity measure in the
taxation of individual throughout the country. Therefore,
all rates, reliefs and allowances have been unified.

Due to importance of taxation in the country's economy,
in recent years, the Federal Government introduced a tax
measure in its annual budgets to curtail inflation, increase
government revenue, redistribution of national income and
reduce the burden of the tax payer under PAYE Scheme.

1.2 Objectives of levying taxation on individual by the government .

The objectives can be either monetary or non-monetary

It is shown in a form of flow-chart

```
                        Tax objectives
                       /              \
                      /                \
                     ↓                  ↓
                Monetary            non-monetary
                    |                    |
                    ↓                    ↓
-    to finance Government      -  to  encourage achieving
     expenditure                   economy growth
                                -  to fight inflation
                                -  to achieve equitable
                                   distribution of resources.
```

1.3 National Orientation Agency

The National Orientation Agency (NOA) is a corporate body
which resulted from the merger of the Public enlightment (PE)
and the War Against indiscipline (WAI), National Orientation
Movement (NOM) Divisions under the Federal Ministry of Information
and culture with the Directorate for Social Mobilisation (MAMSER).
The merger was necessitated by the need to pool together and
consolidate all efforts and resources utilised by those divisions
in the fields of public enlightment, social mobilisation and

The Agency was formally establsihed in August by the National Orientation Agency Decree of 1993.

Structurally, the Agency is a three tier organisation related to the federal set up of the country. It therefore has a National Headquarters, State Directorates and Local government formations.

Objectives and Functions:- These include:- enlightenment of the general public an government policies, programmes and activities; mobilisation of favourable public opinion and support for government policies, programmes and activities and mobilise Nigerians for positive patriotic participation in and identification with national affairs and issues.

In National Headquarters, the Director General/Chief Executive heads the Agency and the six (6) Directors heading the departments namely:- administration, mass mobilisation, public enlightment Research and statistics, finance and supplies with over 500 staff at National HQ and over 2500 staff nation wide.

Accounts department is solely responsible for preparing staff salary on monthly basis. After the salary has been prepared by the Accounts dept and scrutinised by Audit department the Director General pays tax deducted at from salary through PAYE scheme to Inland Revenue service within 10 days of the month succeeding that in which deductions are made.

1.4   COMPUTER

Since the objective of this project is to computerise PAYE scheme of National orientation Agency, Abuja, there is a need to have a little knowledge about computer.

Computer is defined as an electronic device that acts under instruction stored in its memory, takes in raw data changing it into useful information through the process of arithmetic and logical operation and gives out result without human intervention. Computer programs are written to satisfy criteria for correctness and reliabilitiness, and they terminate at a fixed point and may then be repeated using fresh data.

According to the current availability of computers, they can be classified as follows:

(a)   personal microcomputers

(b)   super microcomputers

(c)   large computers

(d)   supercomputers

(A) Personal Microcomputer - A personal computer (PC) is at the lower end of the range of computers. It has 640 megabytes of main memory, with one or two diskette drives of 360 kilobytes each.

It also supports a keyboard, a visual display unit and a dot matrix printer. A PC is generally meant for a single user.

(b)   Super Microcomputer - these computers use 32-bit microprocessors. they have multiple input-output devices and are meant for mattle users. Super microcomputers are used for commercial data processing and managerial applications.

(c)   Large computer - has a large capacity of main memory and almost unlimited amount of secondary memory. They also have hard disks. Large computers are used for large data processing and commercial and data management applications.

(d)   Supercomputer - is the largest computer system available today with a 4 gigabytes of main memory. These computers are expected to be used for defence needs and meterological applications.

CHAPTER TWO

2.1   RESEARCH METHODOLOGY

The research is concerned with the collection of information about the existing manual system used for computing PAYE TAX scheme from staff salaries monthly; the identification of problems and difficulties encountered by Accountants (salary): the identification of factors influenced the management to introduce computer; and then what the proposed system is expected to fulfil.

The research is undertaken in the following stages:

2.1.1   Problem Definition

Before problem can be solved there must be a clear definition of such problem. However the following questions may help in defining the problem

-        What is the problem?

-        Details of the problem

-        How significant is the problem?

-        what does the user feels is the solution?

In the cause of defining the problem, computerised PAYE scheme is considered to be the solution.

2.1.2   Feasibility Study

This is a preliminary investigation stage that determines whether or not the proposed system is desirable. Therefore it involves the study of the existing system in depth in order to provide the management with vital information about the proposed system.

The objective which the analysis under the feasibility study is to clarify and understand the new (proposed) system.

The investigation covers 3 major areas namely;- analysis of the present manual system; design of the compuurised system; and testing and implementation of the new system.

2.1.3 Facts finding Technique

Methods employed for collecting data about the present are interview and questionnaire

1.   Interview - is a fact-finding tool used for collecting information from individuals or groups. The respondance generally are the current users of the existing system or potential users of the new system. The interview technique is the best source of qualitative information such as opinion and policy.

2.   Questionnaire - it is an instrument used to collect information in written form about various aspect of an investigation from large number of persons.

2.1.4. System Analysis

The system under investigation needs to be thoroughly understood in detail to be able to analysis and assemble recommendation for system design.

2.1.5 System Design

This is a stage where a proposed system is designed for both clerical and computer procedure, data capture among other things. The best of several methods for the new system is selected.

The files and programs are kept as simple as possible in relation to monthly computation of PAYE scheme from the staff salareis of National Orientation Agency, Abuja.

2.2   Operations of PAYE Systems

PAYE applies to an employee or a pensonee in respect of weekly, monthly or annually slaries or wages, bonus, commissions or directors fees, pensions or any other form of income from employment or office or appointment for which remuneration is payable.

PAYE is deducted at source and collected through an employer. The tax liability is therefore determined or computal by the employer through the use of the following formular.

Total pay - Relief and other allowable expenses = chargeable
                      pay.

Those subjected to PAYE includes:

-        minister

-        chief

-        local government councillor

-        public servant

-        company director, secretary and other employees

-        pensionee

-        employee.

Employers remit amount deducted for tax to Inland Revenue service.

All those people subjected to PAYE scheme are expected to collect forms from Inland Revenue. On the forms one states his/her annual income, annual claims for allowance and reliefs.

When the forms are filled and returned by employees (those people subjected to PAYE scheme) to Inland Revenue, they are examined and file up in respective personal files together with working papers ready for coding. In coding, tax officer determines the relief or free-pay allowance due to an employee by referring to his/her claims for relief on the forms filled.

Example

Let us use Mr. Attah as our case study. He earns ₦1,314 a mouth as his basic salary (gross pay). At the beginning of the year he filled tax releif forms and returned them to Inland Revenue where ₦664.00 is determined to be his total-pay for the month.

	₦
Gross Income per month	1,314.00
Free-pay (income) as determined by Inland Revenue	664.00
Taxable income	650.00
Tax due for the month (10% of ₦650)	65.00

See appendix attached.

Mr. Attach therefore pays a flat rate of ₦65.00 as tax every month until the year runs out. However, every month it is calculated in cumulative form. In January he pays ₦65.00 while in December, the amount totals to ₦780.00

There are exceptionals where more than 10% is chargeable as tax.

Example

Mallam Umar earns ₦2,017.00 per month as his gross pay. He has filled Relief forms and returned to Inland Revenue and determined his free-pay.

However, the Accountant responsible for computation of salary has to use tax rate table to determine Mallam's tax due.

Basic income per month	₦2,017.00
Basic income per annual (12x2017)	₦24,204.00

Using the tax rate table

for the first ₦10,000 at 10%   =   10% of ₦10,000 - 1000.00

for the next ₦15,000 at 15%   =

$$24,204$$
$$\text{Less} \underline{10,000}$$
$$14,204$$

15% of 14,204   = $\underline{2,130.6}$

Tax due for the whole year $\underline{3130.6}$

Tax due per month 3130.6/12   =   ₦260.88

In January he pays ₦260.00, and it accumulates to ₦3130.60 in December.

In cases where employees failed to fill Relief forms then those civil servants on salary grade level 01 to 06 and their equivalent in public sector are taxed 0.5% of their basic salary (gross pay) monthly, whereas those on 07 and above pay 10% of their gross pay as a tax on month basis.

2.3   Difficulties and problems

Faced with the operation of Manual Systems

In the cause of our investigation, the difficulties and problems associated with the existing manual system are identified as follows:-

1.   complexity in computation of PAYE scheme.

2.   Lack of knowledge of the schem:- after the preparation of Tax deduction card by Inland Revenue and returned to employers to make decutions on monthly basis, more employers lack the knowledge of PAYE scheme because of the various complications involved.

3.   Time lag in computation of PAYE from staff salaries.

4.   Personal problems:- Accountants (salary) are few in number and not be able to cope up volumous and complex computation of PAYE scheme.

5.   errors associated with manual system.

6.   Inadequate security:- as there is no adequate security confidential information can easily be removed or missed from files.

7.   Misplacement of documents/files:- documents in salary files(s) can easily be misplaced which eventually·result to delay in processing salary:-

8.   Data redundancy:- it leads to data redundancy because every year new personal.emulment card with new Tax deduction card containing the same informations as previous year are open for every employee (staff).

2.4. Factors influencing Introduction of Computer

It is a necessaty for Accounts department to have a computer-based system for computing PAYE scheme due to the following factors:

i.   computer has the ability to handle large amount of data that need to be processed.

ii.   complex calculations can be processed by computers once they are programmed.

iii.   speed and ability to access data directly from remote location.

vi.   increased efficiency, accuracy and consistency,

vii.   repeatitiveness, processing cycle that repeat themselves are ideally suited for computers.

However other things need to be considered for the proposed system includes:

-       ensuring that the new system supports/help the Agency performance. This can be achieved by making the design to fit the way the Agency conducts its accounting procedure.

-       Meeting users' requirements in a form of helping users to perform appropriate procedure correctly to get accurate result.

-       the system must be easy to use by staff in accountant department particularly those involve in preparing salary.

2.5   Recommended Computer System

After discussions with some computer firms, an   AT
processor, colour graphic microcompter system is recommended
for the Accounts department of National orientation Agency,
Abuja.

Microcomputer has comparative advantages over large
computer in a such way that it does not require a critical
controlled environment; it does not need highly trained staff
to operate it; despite all these, it still has complex features
to run sophisticated softwres.

2.6   Cost analysis of the proposed system

See   appendix I attached.

CHAPTER THREE

3.1 SYSTEM DESIGN

After the system Analysis phase which produces detail descriptions of the existing manual system and points out area where improvement is needed then detailed system Design.

The first step towards system design is the identification of system requirements then followed by the formulation of design alternatives (i.e. recommendations/strategy for designing a proposed system).

The requirements are those features or details that must be inco-orporated to the propose system to produce the desired improvement.

In designing the system, the following system requirements are taken into consideration:

1. capacity:- design a strategy for the system to have ability to achieve the basic purpose and objective of the organisation (Agency)

2. Control:- design strategy/mechanism that would increase activities affecting the Accountants responsible for preparing salaries. And the mechanism should be able to detect and report instances when such activities are not carried out.

3. Information accessibility - there must be availability and accessibility of informatino when needed to accomplish an objective.

Other requirements to be considered include

4.   flexibility:- making it possible to modify

5.   Maintainability: the system should be easy to

        maintain

-       to minimise human eeror associated with a manual system

-       able to cope with complex calculation

-       efficiency

-       portability

-       user friendly

3.2   DATABASE

It is recommended that the propsed system is going to be
database system.

        What is DataBAse?

A computer data base is an organised collection of information
stored on a computer disk and accessed with a database management
system (DBMS). A database management system is a computer
program which allows the user to manipulate the database. the program
is used to arrange, edit, update and so on the data within the
database.

A database is made up of records. A record is the collection
of all information on are particular item in the database.   Records
are divided into fields; any field contains a specific information
for the record. In summary, a collection fields makes a record,
and a collection of records make a database.

The main purpose of DBMS is to organise data into easy form

for useful information. To achieve this goal, database management software programs provide the following features:-

- creating the database

- querying the database

- updating the database.

Creation:- Sorting data in a data base consists of two steps:

(1) defining a database - is involves describing the characteristics of the data items in each file. A data item (field) is characterised by its name type, and width.

(ii) populating a database - once a database has been defined, it must be created on the system:

Covering - queries are input of data base using sample commands as in English

Updating - this involves adding, deleting, editing or upadating a given set of data items

Advantages of database magement systems

Data base management systems help users to achieve the following:-

i.   -   increase the integrity of data

ii.   -   reduce data duplication and inconsistency

iii. -   provide a single information source for accurate

iv.   -   data processing

v.   -   offer data/program independence to application

3.3   Input Specification

It describes all data inputs of the proposed system in proper order.

Before data modelling there is a need to identify the data items; to design nor malised files and to design the data structure.

However, a data model is a structure of files and defines the data needs of a business (operation).   the model helps to segregate data into seprate files or assists to integrate data structure when developing database.

Data item.

Payroll accounting uses data on employees.   "Employee" is the entity which is described by a set of attributes such as name, department number, basic pay.   Each attribute is called a DATA ITEM or a FIELD.

Normalisation

is an initial requirement for data modelling.   It is a process of separating items which are independent of one another into groups for recording in different files.   It is also important that each file has a key which identifies the objective that the data describes.

There may be instances a record relating to an entity may have two or more distinct groups of data which should be separated into different files.

An example of employee data items:

1.   employee name

2.   department number

3.   bank code

4.   basic salary

5.   acting allowance

6.   over-time

7.   salary arears

8.   gross pay

9.   free pay

10.   tax due

11.   tax refund

12.   Is tas relief forms approved by Inland Revenue?

13.   employee status.

The employee data is more broad them that required for tax processing, and therefore can be segregated into two.

Data I   Data II

- employee name   - employee name

- department no.   - gross pay

- bank code   - Is tax Relief formapproved?

- acting allowance   - Relief

- salary arears.

DataBase Structure

A Databse structure contains descriptions of each field in a data record. these include:

- Field name: name or identification of data field

- field type: kind of data field

- field width: dimension of the data field.

Field Type:

C   character   (alphabetic)

N   Numeric fields

D   Date fields   (mm/dd/yy)

L   Logical field   T/F.

Defining the structure of a Data file

Fields	Field Name	Type	Width	Decimal
1	FName	C	15	
2	MName	C	15	
3	LName	C	15	
4	Status	C	14	
5	DEpt.No.	N	4	−
6	Basic-Sd	N	8	2
7	ACT-ALL	N	7	2
8	OVER-TM	N	7	2
9	SAL-ARO	N	7	2
10	GR-PAY	N	8.	2
11	FR-PAY	N	8	2
12	TAX-DUE	N	7	2
13	TAX-RD	N	7	2
14	BANK_CD	N	4	−
15	TAX RL	L	3	
16	Month	C	9	

CHAPTER FOUR

4.0 System Development

The development of the proposed systems takes into consideration the idea of, and the need for an orderly structuring of interdependent activities for computing tax from staff salary. This project, computerised PAYE Tax system involves phases of problem definition, procedure and program development.

Program development involves the following: written program, testing of the program, installation and maintenance.

4.1 Program writing and testing

This involves designing programs that confirm to the requirements set out in the system specification.

4.1.1 System testing

It ensures both that all programs have been written correctly and that the system as a whole works i.e, the link between the programs in a suite.

Specifically, the programs involve add routine, delete routine and transaction routine.

4.1.2. Add routine

It is used to enter information into data base file. If involves creation of formatted screen display, verifacation of data among other things.

The first task was the opening of the data base file called icome dbf to which records are going to be added.

The next stage was the establishment of a loop that allows one to enter as many data/records as deserved. However by typing yes, the loop continues while no, it terminates.

4.1.3   Delete routine

It is used for erasing information in data base file. Loop is established for erasing as many records as one desires.

4.1.4.   Transaction program.

This involves calculation of Taxabale income and Tax-due for both senior and junior staff.

4.1.   Installation

This is the process of physically placing the computer equipment on the site and making it operational. this affects only a small number of people. the manufacturer's engineers will be responsible for installation of the computer equipment in conjunction with the computer manager or his representative. After that, the machine is tested by the engineer and handed over.

4.111   Maintenance

Life automobilies, computer systems should be maintained periodically. Maintenance of the hardware and software will normally be the subject of an agreement that will ensure the machine is always in working order and spare parts available when required.

4.2   Implementation

Implementation consists of:

(a)   Training

(b)   Conversion

(c)   Review and maintenance

(a)   Training: This involves training of personnels for the new
system.   The systems analyst would be required to ensure that
all persons involved with the new system are capable of making
it an operational success.

(b)   Conversion - This is a process of changing from old to
new systems.   there two methods involved.

1.   Parallel -

 The old and new systems are run concurrently, using the same inputs

2.   Direct (Cut-over)

    The old system is discontinued completely and the new system
becomes operational immediately.

(c)   Review and maintenance

    Once the system has become operational, there is a need to
examine it to see if it has met its objective.   For example, interms
of cost and benefits, The system will also need to be reviewed
and maintained periodically due to the following reasons:

(i)   to deal with unforseen problems arigins in operation;

(ii)   to confirm that the planned objectives are being met and
        to take action if they are not;

(iii)   to ensure that the system is able to cope with the

changing requirement of the organistion's activities.

CHAPTER   FIVE

CONCLUSION AND RECOMMENDATION

5.1   Conclusion

It is evident that the advantages of the computer system facilitate handling of large amounts of data; a high degree of accuracy; suitability for processing cycles that repeat themselves over and over again; suitabtibility for performing the most complex calculations; speed and using common data for several different procedures.

It is usually the combination of two or more advantages listed above, people should be aware of the potentialities of the computer in our society at large. However, in order to judge the suitability of applications of computerisation, there are three main questions that will require satisfactory answers. The main questions will be;

(a)   Is the use of a computer for appliction technically feasible? i.e., can it be done with the computer technology currently available?

(b)   Would the use of a computer be cost effective? i.e. would the computer pay for itself in terms of the benefits it would provide?

(c)   would the use of a computer be socially acceptable? i.e., would the impact of the computer on people's work, job or general lifestyle be acceptable.

Unless therefore the proposed system passes all the three tests mentioned above or else the project is not feasible.

RECOMMENDATIO

From our feasiblity study, the computerisation of PAYE Tax system can be pursued to enhance smooth computing of tax-due from staff salary.

It can be suggested that the proper functioning of a computer system requires joint efforts of human resources procedural and physical components which generate and feed desired information to and from for better production and output.

APPENDIX I

An organisation with 2,500 names on its payroll wants to computerise its salary system.

1.   Recommended computer hardware: 80386/100% IBM compatible having the following specifications:

-    At Processor: 80386/25 MHz clock speed

-    RAM: 2 MB RAM/ Vo MB Hard Disk

-    Diskette drive 3.5" (1.44FDU)

-    Operating system: MS DOS 3.0
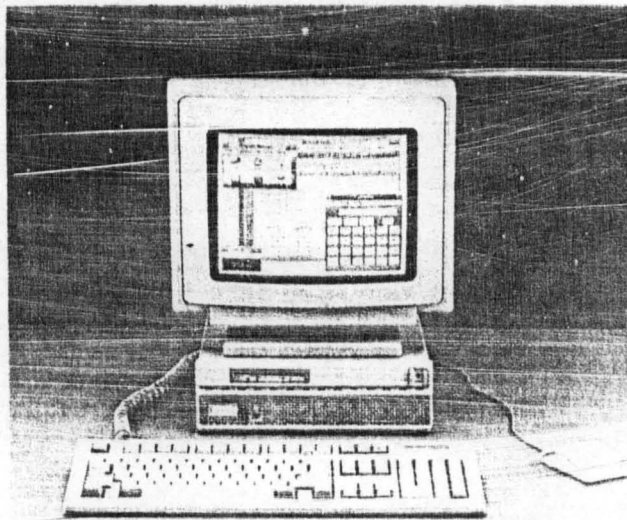
-    Printer: 24 Pin Dotmatrix

2.   Cost Analysis of the proposed system

-    At Processor: ₦60,000.00

-    Operating system: ₦4,500.00

-    Printer: ₦32,000.00

-    Development Cost: ₦10,000.00

-    Installation Cost ₦7,800.00

-    Operating Cost:

(i)   Paper 11x 14' 1 ply = ₦960.00
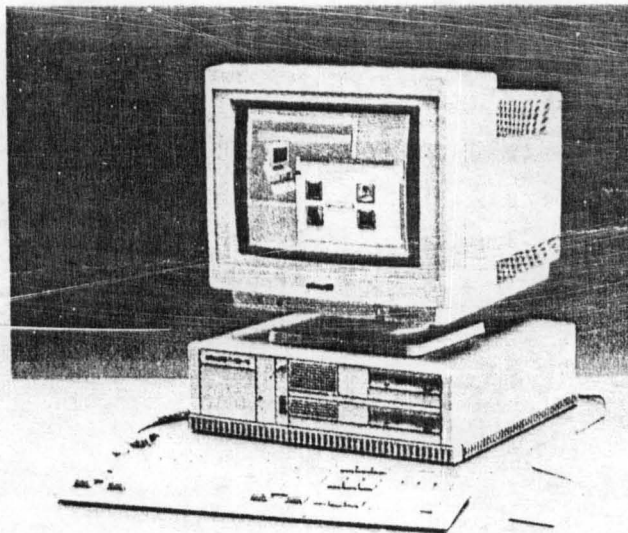
(ii)   Ribbon ₦380.00

(iii) Diskette; 1 Box (10pcs) = ₦650.00

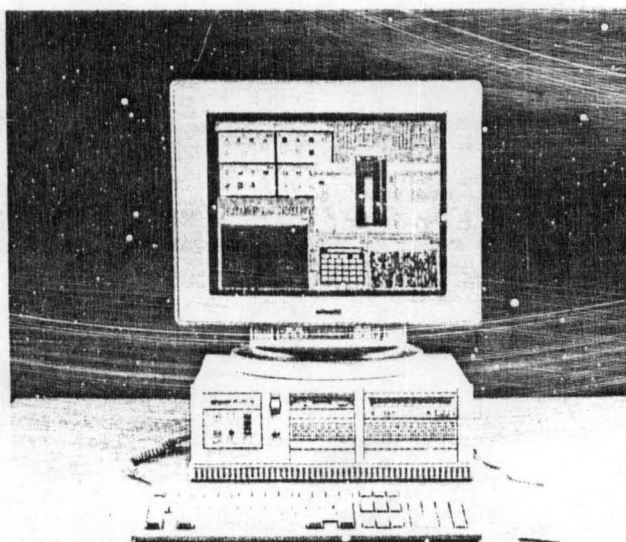ENTRY-LEVEL
WORKSTATION

M300-02

HIGH-END
WORKSTATION

M400-10

HIGH-END
WORKSTATION

M700-10

Reference

F.OLA OGEDENGBE 1988 "Path to Success in Nigerian taxation"
NPS Educational Publishing

OLUWALE AKANLE 1988 "The Power to tax and federalism in Nigeria"
Published by Centre for Business and Investment Studies
Lagos.

C.S FRENCH 1990 "Computer Science – The complete course Text"
DP Publishing London.

RALPH M. STAIR JR. 1986 "Computers in Today's world"
IRWIN Homewood publishing Ilinois.

Database File
Income.dbf.

S/No.	Fieldname	Type	Width	Dec.
1.	fname	C	15	
2.	Mname	C	15	
3.	lname	C	15	
4.	dept.	C	20	
5.	status	C	6	
6.	Gr-lev	N	4	
7.	Bas-py	N	8	2
8.	Fr-py	N	8	2
9.	Txable-y	N	7	2
10.	ATax-due	N	7	2
11.	BTax-due	N	7	2
12.	Bk-NM	C	10	
13.	Acc-NO	C	7	

Person Format file

Income-FMT

```
@    2.1  say  "Enter firstname" get frame pickt "@!"

@    3,1  say  "Enter Middlename" get Mname pict "@!"

@    4,1  say  "Enter Lastname" get Lname pict "@!"

@    5,1  say  "Enter Bankname" get BK-nM pict "@!"

@    6,1  say  "Enter Employee rank" get status pict "@!"

@    7,1  say  "Enter salary Grade level" get Gr-lev pict "@!"

@    8,1  say  "Enter Basic Salary "get Bas-py pict "99999.99"

@    9,1  say  "Enter Relief and Allowance" get Fr-py pict "9999.99"
```

Add program.

Add.prg.

```
Clear

Set talk off

Set Bell off

Set scoreboard off

clear

@ 15,0

wait  "press any key to start entering records"

    Use income

    Begin  =  Reccount( )

    Enter  =  .T.

    Do while Exter

    Clear

    Append blank.

    Set format to income

    Read

    Close format

@    22,0 say "*** Record entered ***"

    More   =  .T.

@    24, 0 say "enter another? (Y/N) Get more pict "y"

    Read

    If   more

    clear

    Loop

    else

    clear

    Exit

    Endif
```

```
Enddo

Clear

@ 15,0 say "you have added" + Ltrim(str(recount( ) - Begin,2))

   + "Records"

   Wait "press any key to exit entry program"

   Close database

   Set talk on

   Set bell on

   Set scoreboard on

   Return

   * * *  e  of    of  Add program * * *
```

Delete program

Delete.prg

```
Set talk off

Set bell off

set scoreboard off

clear

@  10,0

   wait  "press any key to erase any record"

   Use income

   Tax  = .T.

   Do while Tax

   Clear

   Delete

   Pack

   Set format to income

   Read

   Close format

@ 20,0 say "* * * Record deleted * * * "

   More   =   .T.

@ 22,0  say  "Delete another? (Y/N) "get more pict "y"

   Read

@ 24,0 say "Delete Record number" get pict "9"

   Read

   If more

   clear

   Loop

   Else

   Clear

   Exit
```

```
Endif

Enddo

Wait "press any key to exit. delete. program"

Close Database

Set talk on

Set bell on

Set score boarden

Return

*  * *  e of of delete program * * *
```

```
* * *   Transaction program * * *

2  Subprograms

1  main program


    Senior prog.

    Set talk off

    Set bell off

    Txable-y = QQ QQQ.QQ

    ATax-due = QQ QQQ.QQ

    Use income.dbf

    Do while .not. e of ( )

    Txable-y  =  Bas-py-Fr-py

    ATax-due  =  (Txable-y *10)/100

    Enddo

    Set talk on

    Set bell on

    Return

    * * * eof of senior staff program * * *


    Junior.prog

Set talk off

set bell off

Txable-y = QQQQQ.QQ

BTax-due = QQ QQQ.QQ

Use income.dbf

Do while .not. e of ( )

Txable-y = Bas-y - Fr-py

BTax-due  = (Tsable-y * 0.5)/100

Enddo

        lk on
```

```
set bell on

Return


    Main.prg.

Set talk off

Set bell off

Set scoreboard off

Do while .not. e of ( )

Choice  =   "    "

@  4,6  to  15,30  Double

@  6,8 say "I .. senior"

@  8,8 say "2..junior"

@  10,8 say "0 Exit"

@  12,8 say "enter your choice" get choice pict "q"

    Read

    Do case

    Case choice  =  "1"

    Do senior

    Case choice  =  "2"

    Do junior

    Case choice = "0"

@  18,1 say  "* * * enter a number from 1 to 2"

@  19,1 say "you entered" + str(choice, 1)

Encase

Wait

Enddo.
```