PROJECT REPORT

ACCOUNTING SYSTEM
for
IATA
TRAVEL AGENCY

(BESTWAYS TRAVELS)

BY

SYED HASEEB SAJJAD

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IN GOD WE BELIEVE
THE BENEFICENT AND THE MERCIFUL

QUAID-I-AZAM UNIVERSITY
COMPUTER CENTER
ISLAMABAD
FINAL APPROVAL

Certified that we have read the thesis submitted by
Mr. Syed Haseeb Sajjad and found it of sufficient standard to
warrant its acceptance by the Quaid-i-Azam University, Islamabad,
for the Diploma in Computer Science.

COMMITTEE :

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PROJECT BRIEF

ROJECT TITLE:	Accounting System for IATA travel Agency.
JECTIVE:	To develop a stocking and accounting package for an IATA travel agency.
RPOSE:	A project report for the partial fulfillment of Post Graduate Diploma in Computer Science.
ROJECT VENUE:	Computer Center Quaid-i-Azam University Islamabad.
IDERTAKEN BY:	Syed Haseeb Sajjad.
JPERVISED BY:	Mr. Javed Hanif
	Quaid-i-Azam University Islamabad.
ARTING MONTH:	August 01,1995
IDING MONTH:	May 30,1996
NGUAGE USED:	Borland Turbo C++ (1.01)
ERATING SYSTEM:	Ms-Dos 6.0
STEM USED:	IBM-PS1 (486-SX)

ACKNOWLEDGEMENT

DEDICATED TO MY FATHER WHO IS NOT WITH ME

NOW, BUT HIS BLESSING WILL ALWAYS REMAIN

WITH ME BY THE GRACE OF ALMIGHTY ALLAH

ABSTRACT

BestWays Travels is an IATA accredited travel
gency where the process of stocking and accounting of
ir tickets is done manually. As this job is labour
ntensive and there are great chances of error, the
anual system is very slow and ineffective. Due to the
ature of the accounting process errors creep in, despite
reat care. The tracing and correction of errors is also
ery difficult and time consuming. The new computerised
ystem is designed in a way to overcome the above
entioned problems. The new system has reduced the whole
ob to mere data entry and retrieval. The user only
nters or edits data, the rest of the job of creating the
ntries, posting them to the appropriate accounts and
reparation of reports is done by the program
utomaticaly. The nem system is also very fast and hence
ich more effective compared to the existing system.

CONTENTS AT A GLANCE

TABLE OF CONTENTS

EXISTING   SYSTEM

EXISTING   SYSTEM

The existing system which is prevailing in the Travel
ency is relatively an old one. This system of stocking and
counting of Air tickets works manually where data is stored and
avels from one place to another through receipts, books, etc. This
nual system has its own demerits such as there is duplication of
cords, unnecessary data is also maintained. There is also a
oblem to handle the whole process when more than one customer
rives, because everything is done manually.

Moreover, in this system accounts section receives cash
ok and stock book at the end of day, so the next day they perform
eir duty. If a new customer comes, sales counter has to make sales
try in stock book which has to be brought from accounts section
aving the accounts process for the previous day in halt position.

Since sales report must be generated daily, i.e. at the
d of each day, in this case it is generated with a one day delay
d infact, it shows the sales report for the previous day. This
ads to a major inefficiency. The entries related to stock done in
irnal are necessary and in this way the data is duplicated in

nual system which can be avoided.

RKING:

When the customer comes to the agency and asks for a
cket the sales man at the sales counter checks if the ticket is
ailable or not. In case the ticket is available the customer is
ferred to cash counter. On cash counter he receives a receipt
ter paying the fare for ticket. On this receipt he receives ticket
om sales counter.

Sales man after selling the ticket to the customer
ores all the relevant information such as name of customer, ticket
, sector, amount received, rebate given, return ticket or not etc.
stock book. This stock book is maintained and upgraded at sales
unter every time a new customer arrives.

In case a customer asks for a ticket which is not at
it time available for a particular airline, then an Exo no is
sued. This entry is also maintained in stock book. Customer can
e use of this Exo-No. and get ticket for airline booking office
discount. At cash counter there are cash vouchers/cash leaflets

d cash book. Whenever a customer pays the bill, a receipt is given

 the customer and a copy of it is kept for future reference.

tries are made in Cash book through cash leaflets/cash vouchers at

e end of the day. This batching process is done at Cash counter

ily. Cash leaflets are only consulted when there is certain error.

CCOUNTS SECTION:

Accounts section does its job by utilizing the
formation from cash book and stock book.

OCK BOOK:

Stock book contains the most important information
lating to accounts. Data items such as clients code/name, ticket
, cash paid or amount payable, commission earned etc, for each
ssenger are extracted from the stock records. A journal is
epared from this information.

3H BOOK:

Cash book contains information such as cash receipts

(along with the necessary information) and cash payments for

aily & monthly expenses. These expenses include stationary, rent,
ntertainment and salary expenses etc. The expense entries are also
ade in journal. The receipts no. and the relevant information in
he cash book is normally used to compare the corresponding fields
n the stock book. If the fields do not match then the cash receipts
ook is consulted to correct the entries.

OURNAL:

A daily journal is finally prepared from these two books. A
ales report is generated by using the journal. Journal entries are
han posted to ledger. Journal entries can be classified into three
ain categories:-

1) Entries relating to cash customers.

2) Entries in which there is some balance payable/
receivable.

3) Entries relating to permanent clients.

Entries relating to cash customers which are not
rmanent clients are posted to the cash, saving and airline

counts. An example of such an entry is:-

DESCRIPTION	DEBIT	CREDIT
Cash	6000	
Saving		500
Raza/MR (TK No:--------- BA)		5500

(Ticket sold to Mr. Raza)

If the entry is such that there is some cash payable or
ceivable then it is posted to the corresponding creditor/debtor,
ving and airline accounts. If the creditor/debtor account is not
esent in the ledger a new account is created.An example is as
llows:-

DESCRIPTION	DEBIT	CREDIT
Zafar/MR (debtor)	6000	
Saving		500
Tk No:----------- PK		5500

(sale of TK to Mr. Zafar)

The entries of permanent clients are also of the above
m and are posted in a similar way.

The expense entries are also posted to the ledger.
Examples of these entries are:-

DESCRIPTION	DEBIT	CREDIT
Salary	2000	
Cash		2000

(Salary paid to Mr. ABC)

DESCRIPTION	DEBIT	CREDIT
Stationary	50	
Cash		50

(Purchase of a Cash book)

LEDGER:

As mentioned above all the journal entries are posted to
ledger. Ledger contains a number of accounts. The important accounts
are as follows:-

1) Debtors.

The clients which are liable to pay us are called

btors. This is a head account i.e it does not have any entries but
ntain the accounts of all the debtors.

2) Creditors.

The agencies or airlines to whom we are liable to pay
e called Creditors. This is also a head account which contains the
counts of all the creditors.

3) Saving.

The commission earned by the agency from the sale of
ckets is posted to this account.

4) Cash.

All cash entries are posted to this account.

5) Expense.

If there are more than one expense accounts then this
ount also becomes a head account. The normal expense accounts are

lary expense, rent expense, stationary expense etc.

6) Capital.

This account shows any investment by the manager for the pansion of business.

7) Profit & Loss.

At the time of closing all the accounts are closed to is account. From this account the net profit of the agency is termined.

After every fifteen days all the accounts are closed. By osing it means that the balances of all the accounts all ansferred to the profit & loss account. The P&L account is finally osed to Capital account.

PORTS GENERATED BY THE ACCOUNTS SECTION:

Accounts section generates the following reports:-

1) Daily Sales Report:

A sales report is generated at the end of each day. This
ort shows the sales of each day and the savings of that day. The
mat of sales report is shown in the appendix.

2) External Sales Report:

An external sales report for each airline is generated
er every one month. This report lists the tickets sold and the
unt payable by the agency to them.

3) Trial balance:

A trial balance is prepared at the request of the user
confirm the accuracy of accounts upto that time.

4) Profit & Loss Statement:

A temporary profit and loss statement is prepared when
r it is requested. A permanent profit and loss statement is
erated after closing the accounts.

5) Balance Sheet:

Like the profit and loss statement a temporary balance
eet can be prepared at any time while permanent balance sheet is
epared after closing.

PROPOSED SYSTEM

PROPOSED SYSTEM

The initial working of the proposed system is similar to
existing system. The customer requests the ticket from the Sales
unter. If the ticket is available then the customer gets a receipt
om the Cash counter after paying the fare. Showing this receipt on
Sales counter the customer gets the ticket. The Sales person
cords the information related to customer in the stock book.
milarly the Cashier records the receipt No.s in the cash book
ong with some necessary data.

This process is repeated every time a customer arrives.
the end of the day both the books are transferred to the accounts
ction.

COUNTS SECTION:

The job of accounts section is very labor intensive in
existing system. They prepare Journal entries from the stock

ords and the cash book. Then post them to the Ledger, prepare a

es report daily etc.

In the proposed system their only job is to feed the

ck records to the stock entry procedure and cash book records to

procedure which accepts the Journal entries in the computer.

The stock entry procedure saves these records in the

ck file. A separate file is maintained for each day. The

cedure generates journal entries from these records and post

se entries to the appropriate account files of the ledger.

The procedure for accepting journal entries similarly

t the entries to the account files of the ledger. All types of

orts are generated by the computer by just selecting the report

n the menu. In this way the whole accounting process is reduced

feeding the information in the computer.

The management can have a report at any time. While in

existing system this is not possible because all the data is

: in registers and it takes a lot of time to extract the required

ormation and prepare a report.

In the existing system there are always great chances of
error in posting and retrieving the information from the accounts or
records. In the computerized system the chance of error is only at
the initial stage i.e. when the records are fed in the computer. The
rest of the process is fully error proof and very fast. Even the
correction of error is very easy at any time.

DESIGN OF THE PROPOSED SYSTEM

DESIGN OF THE PROPOSED SYSTEM

Proposed system is designed keeping in view its
equirements and the drawbacks of the existing system. The new
esign allows :-

1) An easy update of stock and journal record
files.

2) Maintenance and modification of list of
accounts.

3) Automatic generation of journal entries from
stock file.

4) Automatic posting of entries in the account
files and undating of these files.

5) Preparation of permanat and temporary reports at any
time.

6) Fast retrieval of information.

All files are saved sequentially, but these files are
cessed sequentially and some times randomly depending on the
ture of the task.

Formats of different files and their description are
iven below :-

JOURNAL FILE

NAME: Current   date   is   taken   as

                                file name.

EXTENSION: .JUR

CREATION CRITERIA: A   separate   file   is   created

                                for each day.

FORMAT: First   data   type   is   an

                                integer   which   represents

                                the   number   of   journal

                                records   in   the   file.   The

                                rest   of   the   file   contains

                                the journal records.

STOCK FILE

NAME: Current date is taken as

                                file name.

EXTENSION:	.STK
CREATION CRITERIA:	A separate file is created for each day.
FORMAT:	First data type is an integer which represents the number of stock records in the file. The rest of the file contains the stock records.

ACCOUNT FILE

NAME:	It is the account no. which program allots to an account.
EXTENSION:	.ACN
CREATION CRITERIA:	A separate file is created for each account.
FORMAT:	First data type is an integer which shows the number of account records in the file. Each account

record contains the name of
stock or journal file and
the relevant record number
in that file.

DATA FILE

NAME: ACCOUNT

EXTENSION: .DAT

CREATION CRITERIA: Created at first running of
                         the program.

FORMAT: The first record is a data
                         header while the rest of
                         the records are data
                         records. The data header
                         shows how many accounts of
                         type asset, contra-asset,
                         receivable, payable,
                         income, expense, capital
                         and drawing respectively,
                         exist. Each data record in
                         the file contains

information about different
account files. This
includes the account title,
type of the account and
account number.

BALANCE FILE

NAME:	BALANCE
EXTENSION:	.DAT
CREATION CRITERIA:	File is created or updated before the preparation of reports.
FORMAT:	File contains a pair of long integers for each account. The first integer shows the debit total and the second shows the credit total of the account.

WORKING OF THE PROGRAM

WORKING OF THE PROGRAM

The program is divided into two main parts:-

1- Data entry.

2- Data retrieval and report generation.

DATA ENTRY:

There are two procedures for data entry:-

1- Stock record entry procedure.

2- Procedure for passing journal entries.

The 1st procedure accepts the records from the keyboard. Save these records in a file. Prepare journal entries and post these entries to the appropriate account files.

To accept the records a window appears on the screen.

The user enters the customers data in front of different headings of the stock record. When a record is entered the window is cleared for accepting the new record. The computer creates a double linked list of these records so that the customer can move to any record he has entered and edit the record if necessary. The records can be inserted or deleted very easily. When the user has entered all the records the program

saves them in a database file for that day. These records are analyzed and journal entries are prepared. These entries are posted to the relevant account files. If an account file is not present a new file is created.

The second procedure accepts journal entries. Save them in a journal file of that day and post them to the ledger.

Like the stock entry procedure the user can add, insert or delete the entries. The rest of the procedure is same as for the stock files. However in this procedure we don't have to analyze the entries.

The account files in the computerized system represent the accounts in the ledger in a manual system. To prevent the unnecessary duplication of data the account files only contain the

names of the stock or journal files and a reference to the records in those files.

DATA RETRIEVAL:

To retrieve the records the program opens the accounts file. Gets the stock file name and record number. It opens that stock file and reads the record. This is the basic procedure in which the information is retrieved from the files. This information is used for preparing different types of reports or modifying the existing data. The report generation is just the presentation of information in a given format.

In addition to the above there are procedures for closing the accounts making trial balance, income statement and balance sheet.

Some procedures are meant for controlling the flow of the program e.g. if a stock or journal entry function is active we cannot open another such procedure.

SYSTEM FLOW CHART

BESTWAYS TRAVELS
SYSTEM FOLW CHART

	MASTER	PROCESS	TRANSACTION	OUTPUT

K

Y

ANAYSE AND CORRECT THE RECORDS

JOUR-NAL

STOCK

DATA FILE

A/C FILES

POSTING

BALANCING AND POSTING

A/C BALA-NCES

PREPAIRING REPORTS

P&L STATEMENT

BALANCE SHEET

SALES REPORTS

TRIAL BALANCE
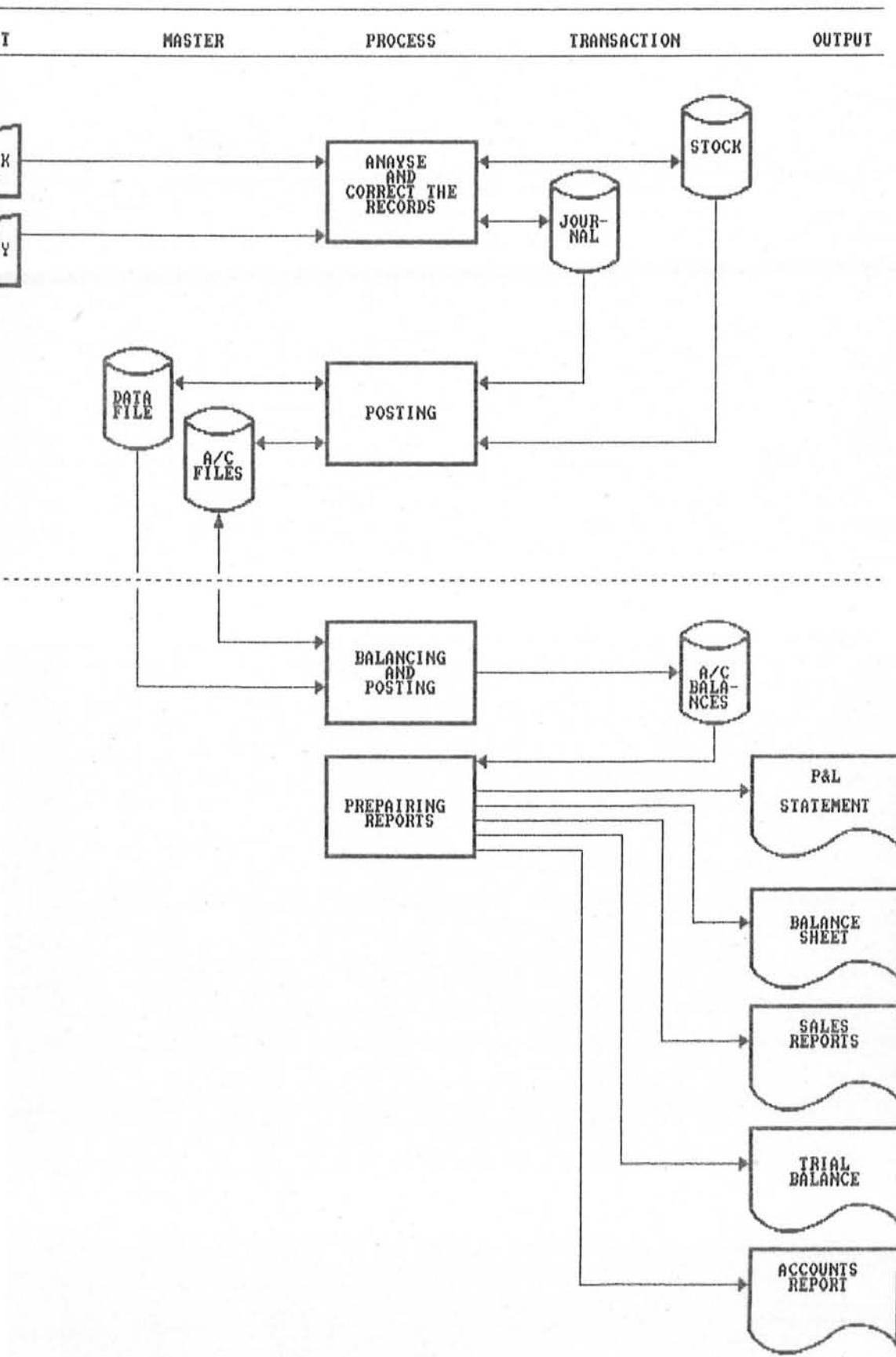
ACCOUNTS REPORT

CONTEXT DIAGRAM

BESTWAYS TRAVELS
CONTEXT DIAGRAM

TICKETS STOCK STATUS

SALES REPORT

MANAGEMENT
STOCK BOOK

TICKETS STOCK BOOK

ACCOUNTS

ACCOUNTS DETAIL

ACCOUNTS STATUS

INQUIRY CALL

CASH BOOK

CASH
COUNTER

INQUIRY CALL

DFDS

```
                          1.1a
                       ┌──────────┐      INCORRECT DATA
                       │  CHECK   │ ──────────────────────────►
DAILY STOCK BOOK ─────►│VALIDITY OF│
                       │FIELDS IN │      CORRECTED DATA
                       │THE STOCK │ ◄──────────────────────────
                       │ RECORDS  │
                       └──────────┘
                            │
                        V   D
                        A   A
                        L   T
                        I   A
                        D
                            ▼
                          1.1b
                       ┌──────────┐      INCORRECT DATA
                       │  CHECK   │ ──────────────────────────►
CASH BOOK ────────────►│VALIDITY OF│
                       │FIELDS IN │      CORRECTED DATA
                       │THE CASH  │ ◄──────────────────────────
                       │ RECORDS  │
                       └──────────┘
                            │
                        V   D
                        A   A
                        L   T
                        I   A
                        D
                            ▼
                          1.1c
                       ┌──────────┐      INCORRECT DATA
                       │ COMPARE  │ ──────────────────────────►
                       │   THE    │
                       │APPROPRIATE│     CORRECTED DATA
                       │  FIELDS  │ ◄──────────────────────────
                       └──────────┘
                            │
                        V   D
                        A   A
                        L   T
                        I   A
                        D
                            ▼
```

2ND LEVEL DFD
ACCOUNTS SECTION

INCORRECT DATA →

1.2a
```
┌─────────────┐
│   CORRECT   │
│   INVAID    │ ── INQUIRY CALL →
│   FEILDS    │
└─────────────┘
```

← CORRECTED DATA

INCORRECT DATA →

1.2b
```
┌─────────────┐
│   CORRECT   │
│ MISMATCHING │ ── INQUIRY CALL →
│   RECORDS   │
└─────────────┘
```

← CORRECTED DATA

33
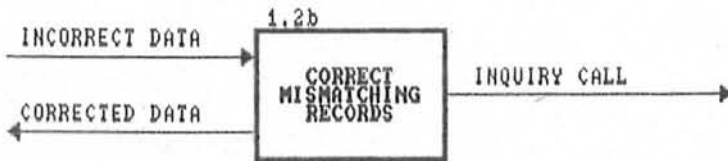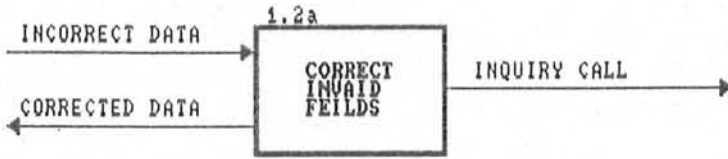
DATA DICTIONARY

REPORT FORMATS

DAILY SALES REPORT
BESTWAYS TRAVELS

PASSENGER NAME/STATUS	TKICKET NO.	AGENCY/ AIRLINE	SECTOR	RETURN	FARE	TAX	COMMISSION	REBATE	TOTAL	CASH RECEIVED	RECIEV- ABLE	SAVING
NET SAVINGS												

EXTERNAL SALES REPORT
for the period ending xxxx

1	2	3	4	5	6	7	8	9	10	11	12	13
DOCUMENTS ISSUED			GROSS CASH SALES BY TYPE OF COMMISSION				CREDIT CARD/ GOM SALES		TAX	EXCHANGED/ REISSUED DOCUMENTS	FOR MAS USE ONLY	
FORM	SERIAL #	FOR MAS USE ONLY	NIL	5%	9%	OTHERS	GROSS SALES	COMMISSION AMOUNT			RECHARGE CONTROL	CROSS-REF FOR COL-12

BESTWAYS TRAVELS
PROFIT $ LOSS STATEMENT
for the period ending xxxx

ned		XXX	
		XXX	XXX
—		XXX	
—		XXX	
—		XXX	
—		XXX	
—		XXX	
			XXX
			XXX

BESTWAYS TRAVELS
BALANCE SHEET
as at xxxx

—	XXX	
—	XXX	
—	XXX	
assets		XXX
ening balance	XXX	
profit	XXX	
s drawings	XXX	
ital as at xx/xx/xx		XXX
ES:		
ables	XXX	
—	XXX	
—	XXX	
liabilities		XXX
By (Capital + Liabilities)		XXX

ACCOUNT FORMAT

	A/C NO.	
CRIPTION	DEBIT	CREDIT

BESTWAYS TRAVELS

TRIAL BALANCE

as at xxxx

	DEBIT	CREDIT