Title of the Paper : PASCAL

Course Number   : CS245 (II), in Computer Centre Laboratory (PRACTICAL EXAMINATION)

Time Allowed   : Three (3) Hours

Instructions: Submit pseudocode, files of program and results. Use the last 10 minutes to check your program and results. Read the paper completely before starting to work on the problem. The program and result files to be submitted are –

    A:\------.PAS and A:\------.TXT

The dashes in file names are six digits of your id.

Special requirements: For each student

1. A networked / stand alone PC with working Turbo Pascal system.
2. An accessible floppy drive & disk.

This paper should not be opened until permission has been granted by the invigilator.

MARKING SCHEME: Pseudocode (30 %), Results (20 %), Program (50 %)

PROBLEM: Information about electric meter readings of Swaziland Electricity Board consumers is given in a text file 'EXAMDATA.TXT'. Each record of this file consists of the following -

    Consumer Name 15 characters
    Consumer Id   4 digit integer
    Meter readings

         Previous   5 digit integer
         Current   5 digit integer

    Carry forward   -----.-- (signed real number)

Each field has been separated by a space character.

Example of a record -

```
BENNET L.A.    2786 08009 10483  1150.50


            1          2          3         4    {THESE ARE COLUMN NOS}
1234567890123456789012345678901234567890 1
```

Write pseudocode and a corresponding well documented and properly indented Pascal program that does the following –

1. Reads in all the data from 'C:\CS245\EXAMDATA.TXT'.
2. Computes the consumption and bill for each consumer and displays the information on a report file
3. ('------.TXT'). The six Dashes are six digits of your idnumber

NOTES:

1. CONSUMPTION is the difference of current reading and previous reading plus carry forward.
2. BILL is the 2.5 times the CONSUMPTION
3. A consumer is commercial if his bill is more than 1000 or above.
5. The contents of 'EXAMDATA.TXT' are -

```
THWALA D.M.     2511 00809 00945  1150.60
BENNET L.A.     2786 00800 01204 -0010.20
BEATRIC S.P.    0869 07020 09060  0000.00
DVUBA M.        4197 00622 00922  1000.70
SIBISI J.N.     0630 07880 08506  2000.00
VILAKATI K.     3246 01009 02105  0000.00
SISA D.M.       2409 08080 09090  0080.50
SENTINEL DATA   0000 00000 00000  0000.00
```

The report lay out should be –

```
REPORT PRODUCED BY THE PROGRAM OF

<YOUR ID, YOUR GROUP>


SWAZILAND ELECTRICITY BOARD, MONTHLY BILLING SYSTEM
          STATEMENT OF BILLS FOR JULY 2006

==================================================================
ID             NAME                CONSUMPTION      BILL
==================================================================
------         ---------------     ------           ----.--
------         ---------------     ------           ----.--
------         ---------------     ------           ----.--

...
==================================================================
SUMMARY
=======

TOTAL OF ALL BILLS = -----.--

COUNT OF CUSTOMERS =  ----

COUNT OF COMMERCIAL CONSUMERS   = ---

COUNT OF NON COMMERCIAL CONSUMERS   = ---
```