UNIVERSITY OF SWAZILAND
MAIN EXAMINATION, MAY, 2010

Title of the Paper : STRUCTURED PROGRAMMING - II

Course Number : CS244
Time Allowed   : Three (3) Hours

Instructions: Submit pseudo code on the answer script and all your files
(program, data, results and any other) in the root directory of your **Examination
userid. The Examination userid, password, tree, context and server** will be
given to you by the chief invigilator. Include all file specifications in your root on
the top of the answer script.

Use the last 10 minutes to check the submitted files and print the program and
report files. Submit the printed copy of your program and report files.

Read the paper completely before starting to work on the problem.

The names of program and report files should be –

```
------.PAS (Program file)and
------.TXT (Result file)
```

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

Special requirements: For each student

1. A networked PC with working Turbo Pascal system.
2. An accessible secure network disk.

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

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

PROBLEM: Information about monthly sales of agents of SWAZI FURNISHERS is given in a text file 'DATA10.TXT'. Each record of this file has the following -

Agent Name	15 characters
Agent Id	6 digits - long integer
Count of orders	2 digits - integer
Sales Amount	Floating (6 digits before decimal, 2 digits after decimal)

Each field has been separated by a space character and Agent Id in sentinel record is zero. Example of a record -

```
BENNET L.A.     120786 35 182270.00

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

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

1. Reads in all the data from 'DATA10.TXT'.
2. Computes the Commission for each agent and displays the information on a report file (`'------.TXT'`).
3. The six dashes in the report file name are six digits of your UNISWA id number.

NOTES:

1. Commission is computed by adding the base (BC) and performance (PC) commissions.
2. The base commission (BC) is 5 times the count of orders only if count of orders is greater than 5, it is zero otherwise.
3. The performance commission (PC) is computed as follows -

   - PC is 15% of the sales amount if sales amount is 10000 or more,
   - PC is 10% of the sales amount if sales amount is below 10000, but above 5000,
   - PC is 5% of the sales amount if sales amount is 5000 or below and
   - PC is zero if sales amount is 1000 or below.

4. The tax is 33 % of the commission.
5. A subprogram (function or procedure) should be declared to find the commission using count of orders and sales amount as parameters.

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6. The contents of 'DATA10.TXT' are -

```
DLAMINI ERIC     100044 03 10100.00
SHONGWE L.A.     120785 05 18227.00
BENNET L.A.      120786 37 50601.50
THWALA D.M.      120251 04 14321.50
BEATRIC S.P.     120786 14 26500.00
DVUBA M.         120197 25 60059.00
SIBISI J.N.      120630 18 18560.00
VILAKATI K.      120246 10 15410.00
SISA D.M.        120240 16 80800.00
SENTINEL DATA    000000 00 00000.00
```

The report lay out should be –

```
REPORT PRODUCED BY THE PROGRAM OF

<YOUR UNISWA ID>


                  SWAZI FURNISHERS, MBABANE
           SALES AGENTS COMMISSION REPORT, MAY 2010

=================================================================
ID      NAME               ORDER SALES      COMMISSION   TAX
                           COUNT AMOUNT
=================================================================
------- ----------------- --    ------.--  ------.--   ------.-
------- ----------------- --    ------.--  ------.--   ------.-
------ ---------------- --      ------.--  ------.--   ------.-


=================================================================

SUMMARY
=======

COUNT OF ALL ORDERS  =   ----

COUNT OF AGENTS      =   ----

TOTAL SALES AMOUNT   =   --------.--

TOTAL COMMISSION     =   --------.--

TOTAL TAX            =   --------.--
```

<END OF EXAMINATION PAPER>

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