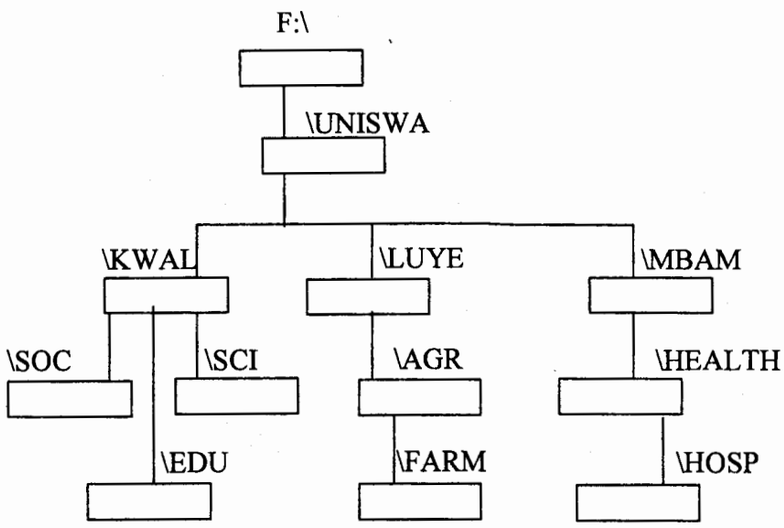
UNIVERSITY OF SWAZILAND
FINAL EXAMINATION, MAY 2007

Title of Paper	:	COMPUTER SCIENCE FOUNDATION COURSE
Course number	:	CSF 100
Time allowed	:	Three (3) hours.
Instructions	:	Answer all the questions. Choose options as written within questions.

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

Q1(a) (5 marks). Starting from the system prompt F:\> , write a sequence of MSDOS commands and system prompts to create the following directory tree structure in the root of F: . Assume that the root of F: is empty at the start.



Q1(b) (5 marks). In the context of the directory structure of Q1(a) above, write the names of all

(i). Directories that are parent directories and also subdirectories
(ii). Directories that are only sub directories, but not parent directories
(ii). Directories that are parent directories but are not subdirectories

Q1(c) (5 marks). Write a **single** MSDOS command along with the correct system prompt to perform each of the following tasks independently. Assume that at the start of each task, the system prompt is F:\>. The context is the directory structure in question 1(a). Answer **any five** of the following. Assume that the display is always on the screen

(i). Display the contents of the file GOD.TXT which is in the subdirectory \FARM.

(ii). Display the contents of the subdirectory \SOC.

(iii). Copy the file TEMP.DOC in \LUYE subdirectory to the file TMP.DOC in \EDU subdirectory.

(iv). Show the directory information in \HOSP whose names start with the letter R.

(v). Change the name of the file TEST.COM to REST.COM. Assume TEST.COM is in \HEALTH subdirectory.

(vi). Remove \SOC subdirectory. Assume \SOC is empty.

Q2 (a) (6 marks). The context is MS Word as implemented in the Computer Centre Lab. Explain the steps to create the following with examples -

(i). Bulleted lists, when list items have already been typed.

(ii). Indentations, when the text has already been typed.

Q2(b) (4 marks). Write clear steps of doing the following. Answer **any two** of the following –

(i). Centering the text, when text has NOT been typed.
(ii). Exchanging the positions of two text lines on a page.
(iii). Making an already typed text bold and underlined.

Q3(a) (3 marks). Following formulas are copied from one cell to another. Write the copied formula in the destination cell. Answer **any three** of the following.

(i). =A2*C2 (is copied from B3 to D4, What is copied in D4 ?).
(ii). =B1*C1 (is copied from A1 to B4, What is copied in B4 ?).
(iii). =A$3+$C3 (is copied from D3 to E4, What is copied in E4 ?).
(iv). =$A4-C$4 (is copied from D4 to F4, What is copied in F4 ?).

Q3(b) (3 marks). Write clearly which cell addresses appearing in Q3(a) (i) to (iv) are absolute, relative and partially relative.

Q3(c) (4 marks). The contents of a clipped spreadsheet file are shown below.

	A	B	C	D	E	F
1	8	12	31	62		
2	3	8				
3	6	12				
4	4	11				
5	2	10				

Assume that A1..B5 has numbers as shown above and contents of D1 and C1are -

C1 = +B1+A1 + B2 + A2 , D1 = +C1+ C1 , The contents of C1..D1 are copied at C2..D4. Write the values stored in C2..D4.

Q4. (4+2+4 marks). The context is the DBMS program (MS Access) as implemented in the Computer Centre Lab. During a hospital survey, the following information was collected from several participating patients.

1. Patient id	4 digit integer
2. Patient name	25 characters, Text
3. Patient age	2 digit integer (in years)
4. Patient weight	Floating number (in Kg in the format xxx.x)
5. Patient gender	1 character (M - for male, F - for female)
6. Patient height	3 digit integer (in cms.)

(a). Write the design / structure of a simple relational database table that can be used to store data of the above survey. Write names of your table and primary key. Give reasons about your primary key choice.

(b). Write three records of patients using suitable data of your choice, exactly in data sheet view.

(c). Now write SELECT query command/s (SQL) to do the following tasks independently. Answer **any four** of the following -

(i). Retrieve Patient id, Patient age and Patient names so that Patient id's are in descending order.

(ii). Retrieve the whole data with Patient names ordered in descending order.

(iii). Retrieve id's, age and height only of female Patients whose height is less than 150 cms.

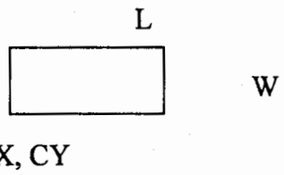
(iv). Retrieve id's and gender of the male Patients who are above 60 years of age.

(v). Retrieve the names and age of all Patients whose weight is greater than 190 Kg. Patient names should be sorted in descending order.

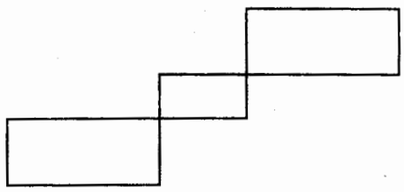
Q5(a) (5 marks). Draw the shape produced when the following screen effecting direct LOGO command is given. Also write the position and direction of the turtle after the command is executed independently. Assume that CLEAR command has already been given.

(i) REPEAT 4 (FORWARD 20 TURN 45)
(ii) REPEAT 3 (TURN 90 FORWARD 10 TURN -90)

Q5(b) (6 marks). Write a LOGO program RECTANGLE to draw a rectangle with left bottom corner at CX, CY. The length and width of the rectangle should be L and W respectively as follows.



Q5(c) (4 marks). Using the RECTANGLE program of Q5(b), write screen effecting direct LOGO commands to draw the following shape on the LOGO display screen. Use your own dimensions.



(End of Examination Paper)