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MAIN EXAMINATION

SEPTEMBER –DECEMBER 2021

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER SCIENCE

REGULAR PROGRAMME

DIT 011: LINUX ESSENTIALS

Date: Dec 2021

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions. Calculators MAY be used for this Examination.

Q1.

- a) The administrator create an account for user Jane and give her the password jane2018a.b. What is the home directory for user Jane **(2 marks)**
- b) Give any five directories that are automatically created for user Jane in Linux? **(5 marks)**
- c) You have heard about a command “comm1” How can you learn to use the command in the most effective way. **(2 marks)**
- d) Give a brief account of the historical development of Linux **(5 marks)**
- e) List any 4 applications area of Linux OS. **(4 marks)**
- f) You are given the Linux kernel **2.6.32** . Explain the significance of each of the numbers. **(6 marks)**
- g) Explain what the commands below do.
- i) cd ~ **(2 marks)**
- ii) mkdir /home/Jane/Expenses **(2 marks)**

iii) `sort -nk 4 juneexpensis.txt` (2 marks)

Q2.

- a) Give any four commands one can use to view the content of a file (4 marks)
- b) Explain what the command `cat file1 file2 file3 >myfiles` do. (4 marks)
- c) Distinguish between absolute and relative path references. Give an example for each. (4 marks)
- d) You have logged in as user Joseph. You want to become the super user so that you create a user John whose password is hohana1028. Explain in details how you can be able to accomplish this. (8 marks)

Q3.

- a) Name the directories that are used for the following scenarios:
 - i. As the default home directory for all the users in Linux. (1 mark)
 - ii. The home directory of the Linux supper user (1 mark)
 - iii. The directory at holds the Linux Kernel (1 mark)
 - iv. To store most of the system configuration files (1 mark)
- a) Below is the content of the file myshopping. The record columns are separated by a tab. The file contains food items to be bought. Use it to answer the questions that follow.

Starch	Unga	2kg	300
Protein	Meat	5kg	2000
Protein	Pork	3kg	1500
Starch	Sugar	1 kg	200
Vegatable	Cabbage	4kg	400
Vegatable	Managu	4kg	200

- i. Explain how you can use the **cat** command to create the file
(2 marks)
- ii. Give the command that will output the number of records in the file.
(1 mark)
- iii. Give the comment that will sort the file numerically using the 4th column
(3 marks)
- iv. Give the command the will display all the starches in the file.
(2 marks)
- v. Give the command statement that will return the number of proteins in the file
(2 marks)
- vi. Give the command statements that will display the most five expensive proteins
(3 marks)
- vii. Give the command statements that will create another file **myvegetables** that contains all the vegetables in the file sorted in order of increasing cost per unit.
(3 marks)

Q4

- a) Distinguish between:
 - i. proprietary and open source software. **(2 marks)**
 - ii. Freeware and open source software **(2 marks)**
 - iii. Shareware and freeware software **(2 marks)**
- a) Discuss any five reasons that will make you choose Linux as an operating system. **(5 marks)**
- b) Give any four office applications that match Microsoft office applications.
(4 marks)
- c) Linux spreadsheet calc provides a rich set of functions that make it one of most powerful applications. Explain what the functions below are doing:
 - i. IF(B1>=80,"DISTINCTION",IF(B1>=60,"CREDIT",IF(B1>=40,"PASS", "FAIL")))). **(3 marks)**
 - ii. RANDBETWEEN(30, 45) **(2 marks)**

Q5

- a) Explain the three states of Vi editor and how one can switch from one state to another.

(6 marks)

- b) Write the vi editor commands that will :

(8marks)

- i. Save the current file and quit the editor:
- ii. Move the cursor to the left
- iii. Move the cursor to the right
- iv. Save a file without quitting the editor
- v. Delete the next four lines
- vi. Delete the next 3 words
- vii. Paste a copied line 3 times
- viii. Save the current file to a new text file named **thefile**

- c) List one user created during the installation of Linux

(1

mark)

- d) List any five directories that are automatically created during the installation of Linux.

(5 marks)

END

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