Question 1: Tutorial Project Progress 5 marks

Demonstrate that you have completed the following practical exercise projects from the tutorials:

- Week 6: Project 4-6 in the Holden textbook, page 132
- Week 7: Project 10-1 in the Ciampa textbook, page 374-375
- Week 7: Project 7A
- Week 8: Project 8-2 in the Ciampa textbook, page 302-303
- Week 9: Project 9-1 in the Ciampa textbook, page 334-335

To demonstrate this:

- write at least three (or more) points to explain the significance of the project in terms of relevance to the practice of network security or a brief step by step description of how you carried out the project
- use at least two (or more) screen shots of each project as you complete it

[½ mark per project for appropriate project notes; ½ mark per project for appropriate screen-shots]
**Question 2: Document your LABSIM Progress**  

8 marks

After completing all LABSIM exercises from the tutorials for each week (weeks 6-9), you need to document your progress as per **Part A Simulation** exercises and **Part B Videos and Demonstrations** lessons explained below.

**Part A Simulation** exercises

**Simulation** tasks are indicated by a mouse symbol in LABSIM.

After completing all LABSIM simulation exercises from the tutorials for each week (weeks 6-9), you need to take a screen-shot of your Progress Report (obtainable from the main menu of the LABSIM software) and paste this into your assignment document.

**Important:** Your FULL NAME must appear at the top of the progress report.

Note: this is the only acceptable method of submitting the progress report, since your assignment needs to be submitted electronically as a Microsoft Word document. Reports printed to paper (by pressing the print button on the progress report screen) and submitted will NOT receive any marks.

Below is an example of a progress report screen with all simulation tasks completed for the week 1 tutorial (LABSIM section 0.0). Note that for full marks in this section your progress report should show every simulation task completed (i.e. with at least one score of 100 against each section name) for the following LABSIM sections:

- 0.1.2 Create a local user account
- 0.1.3 Change the account type
- 0.1.7 Create Domain User Account
- 0.1.8 Disable A User Account
- 0.1.9 Reset the Password
- 0.2.3 Create a User
Note that it does not matter if you have attempted a LABSIM simulation exercise (section name) several times in order to obtain a score of 100 (for example, in the screen shot above the student attempted “Create a User” three times and was successful on the third time with a score of 100).

This task will be easily completed if you take the progress report screen shot each week when completing the tutorials.

**Part B Videos/Demonstrations lessons**

**Videos/demonstrations** are indicated by a screen or symbol in LABSIM.

After completing all LABSIM videos/demonstrations lessons (i.e. not simulations) from the tutorials for each week (weeks 6-9), you need to write at least two points, which are approximately three to six lines of notes, describing each LABSIM videos/demonstrations. For example, in section **0.0 Introduction**, write two points (three to six lines) describing the content discussed in the following sections:

- 0.1.1 Creating Local User Accounts
- 0.1.4 Tour of Active Directory
- 0.1.5 Configuring Group Policy Settings
0.1.6 Managing Domain User Accounts
0.1.10 Using the Run as Option
0.2.1 Tour of eDirectory
0.2.2 Creating an eDirectory User

The goal of this exercise is to show that you have completed the LABSIM video lessons. An example of comments for section 0.1.1 Creating Local User Accounts:

0.1.1 Creating Local User Accounts:

The User Accounts Tool in the Control Panel of Windows XP can be used to create user accounts in a stand alone environment or workgroup networking environment scenario (note: not for Windows Domain Networking situation).

The User Accounts Tool can be used to create accounts, change user privileges, change account passwords etc.

This task will be easily completed if you write two points or more each week when completing the tutorials.

[Marking: There are 18 simulations and 20 video/demonstrations (total of 38 exercises). Each exercise is 0.2 marks. A bonus 0.2 marks are for students who provide more than two points of descriptions for at least ten (10) LabSim video/demonstrations.]
Question 3: Scrambling through Transposition Ciphers 3 marks

Transposition Ciphers are more complicated stream ciphers and can be used to rearranges letters without changing them. You may refer to Ciampa textbook Chapter 8 and the week 8 tutorial document for more information. Use transposition ciphers for the following ciphertext to solve problems/questions given below.

_HETSESM_GEAES_IYCRNDTEPIUS_TG_NSANRIOSPNIOT

3.1 Convert the above ciphertext to plaintext and give the plaintext as your final answer (0.5 marks)

3.2 Demonstrate the process of the decryption, that is, show the steps of your working of decrypting the above ciphertext by using transposition ciphers (1.5 marks)

3.3 What was the encryption key (f) used to create the ciphertext in (i)? (1 mark)
Question 4: GNU Privacy Guard Project  

This question requires that you install GNU Privacy Guard (GPG) software onto your own computer and complete the following activities. Installation instructions for GPG is available at the Resources page on the course website.

Note: GPG is not available in the student laboratories. You will need to complete this question of the assignment on your own computer.

After installing GPG software onto your own computer, complete the following questions.

a) Generate your own key-pair by using GPG software and do not create a passphrase for your private key, and then copy your public key into your assignment document. (0.5 marks)

b) Describe the steps you took to create your key-pair, including the gpg commands, their options, and what the options do. (0.5 marks)

c) Explain the steps how to import your Lecturer’s public key from the key-server http://pgp.mit.edu by using gpg command, including any gpg commands you used and their meaning (including individual command line options. (1 mark)

d) Use or screenshots of web-site interactions, with accompanying explanations of the screenshots to explain the steps how to import your Lecturer’s public key from the key-server http://pgp.mit.edu by using the key-server’s web-site address (http://pgp.mit.edu). (1.5 marks)

e) Create a ASCII text file to store your full-name, your student number, and your CQU email address. Then using your lecturer’s public key, encrypt this text file. The resulting file should also be ASCII armored. Failure to do so will result in loss of marks. (0.5 marks)

Submit the resulting encrypted file via the online submission system, along with your assignment solutions document.
**An Example Explanation**
Here is a specific example for explaining the step of exporting a private key for import onto another computer running GPG. Use this example to guide you in how to give explanations in this question.

To export your private key, you need to execute the following gpg command:

```bash
gpg --output "privkey.txt" --export-secret-keys "Lily Li"
```

The `output` option specifies the filename in which to write the private key into. Finally, the `export-secret-keys` option specifies the name of the private key to be exported. The name is given as “Lily Li”. This option is distinct from the “export” option which exports only public keys.

Now the private key is stored in the file “privkey.txt” unencrypted and can be imported into another version of GPG.

**Hints:**
- Where required be detailed and specific about your actions explaining exactly what you did, and why you did it. Document the exact GPG commands you have used, and provide an explanation of what the command does, including the individual command line options, and/or provide screenshots of any interactions with websites.

- Brendan’s GPG guide is not the only one available on the Internet. There are plenty of other documents on the Internet that explain how to use GPG for various functions.