CSC415-Device-Driver

Build the kernel module and user application

You can build the kernel module by executing the following command in the Module directory.

```
make all
```
The user app can be built using the

```
make cryptographyTest
```
command in the Test directory.

You can clear all the build files using

```
make clean
```
command in both Module and Test directories.

View the kernel logs

kernel logs of the Linux kernel can be seen by using

```
dmesg --following
```
command.

Install the kernel module

You need to install the built kernel module into the kernel using

```
sudo insmode cryptography.ko
```
within the Module directory.

Run the application

After installing the kernel module into the kernel, the user application can be run.

Use the sudo command to run the application, as we are going to access device files with the user application

```
sudo ./cryptographyTest
```

- First, you will be asked to provide a key. For that, you need to insert a single capital English letter.
- Then you will be asked to provide the mode. you need to insert the number of the option.
- Then insert the phrase you need to encrypt or decrypt.
- Finally, you will get the encrypted or decrypted phrase.

Note: as I'm using the symmetric key encryption technique, same key can be used for both encryption and decryption.

Unload the kernel module

After running the user application, the kernel module should be unloaded.

```
sudo rmmode cryptography
```

can be used to unload the module.

Screenshots