1 A large company currently keeps records on paper of all the computing equipment it owns. Every computer device has its information recorded when it is purchased.

The company decided to trial a database to manage its computing equipment records. It is expected that the database should be normalised.

When a computer device is purchased, the following information is recorded:

- `serial_number` – unique serial number of device
- `type` – type of device ('`Monitor`', '`Laptop`', or '`Printer`')
- `model` – model of device
- `location` – where the device is used
- `date_of_purchase` – date of purchase
- `written_off` – whether the device is still in use ('True' means device is written off and NOT in use, 'False' means device is still in use)

For monitors, the following extra information is recorded:

- `date_cleaned` – the last date the monitor was cleaned

For laptops, the following extra information is recorded:

- `weight_kg` – the weight in kilograms

For printers, the following extra information is recorded:

- `toner` – type of toner required
- `date_changed` – the last date the toner cartridge was changed

The information is to be stored in four different tables:

```
Device
Monitor
Laptop
Printer
```

Task 1.1

Create an SQL file called `TASK1_1.sql` to show the SQL code to create the database `equipment.db` with the four tables. The table, `Device`, must use `serial_number` as its **primary key**. The other tables must refer to the `serial_number` as a **foreign key**.

Save your SQL code as
`TASK1_1.sql` [5]

Task 1.2

The files `MONITORS.txt`, `LAPTOPS.txt` and `PRINTERS.txt` contain information about the company's monitors, laptops, and printers respectively for insertion into the equipment database. Each row in the three files is a comma-separated list of information about a single device.

For `MONITORS.txt`, information about each monitor is given in the following order:
serial_number, model, location, date_of_purchase, written_off, date_cleaned

For `LAPTOPS.txt`, information about each laptop is given in the following order:
serial_number, model, location, date_of_purchase, written_off, weight_kg

For `PRINTERS.txt`, information about each printer is given in the following order:
serial_number, model, location, date_of_purchase, written_off, toner, date_changed

Write a Python program to insert all information from the three files into the `equipment` database, `equipment.db`. Run the program.

Save your program code as
`TASK1_2.py` [5]

Task 1.3

Write SQL code to show the serial number, model and the location of each monitor, with the date it was last cleaned. Run this query.

Save this code as
`TASK1_3.sql` [4]

Task 1.4

The company wants to filter the devices by `Location` and the display results in tabular form.

Write a Python program that:

- receives a `Location` string provided by the user, then
- displays a table tabulating the `serial_number` and `Type` of devices still in use at that exact `Location`.

Save your python program as:
`Task_1_4.py` [5]