Task 1: software design and development

Problem description

A research organisation currently gathers and stores data on the salaries paid to the chief executive officers (CEOs) of the top 100 technology companies in the country. They want a program to help them use this data effectively.

Purpose

A CSV file stores the following data about the 100 companies:

♦ company name
♦ number of employees
♦ salary paid to CEO

This data will be read into parallel arrays.

The program will allow the user to enter the name of a company to find and display the difference between that company's CEO's salary and the highest paid CEO of all 100 companies.

The program will also find the highest number of employees employed by a single company, and the number of companies who employ within 10% of that figure.

Examples of the program outputs are shown below.

```
Enter the name of the company you would like to check:

Goldman
GameGo company has the highest paid CEO.
The Goldman CEO earns £222 817 less than the highest paid CEO.



The highest number of employees employed by a single company is 888.
11 companies employ within 10% of 888.
```

Assumptions

♦ the external file is current and updated regularly

Task 1: software design and development (part A)

1a   Using the problem description, identify the missing functional requirements of the program.

(2 marks)

Input(s)

♦ Read the company name, number of employees and CEO salary from the file.

Process(es)

♦ Find the highest CEO salary.

♦ Search for the CEO salary for chosen company.

♦ Find the highest number of employees employed by a single company.

♦ Calculate how many companies employ within 10% of the highest number of employees.

Output(s)

♦ Display the name of the chosen company, the name of the company with the highest CEO salary and the difference between the two salaries or display "Company not found".

♦ Display the number of companies who employ within 10% of the highest number of employees.

♦ Check your answers carefully, as you cannot return to part A after you hand it in.
♦ When you are ready, hand part A to your teacher or lecturer and collect part B.

Candidate name_____ Candidate number_____