



Date handed out: 6 May 2020, Wednesday

Date submission due: 24 May 2020, Sunday 23:59

### Assignment 3

This assignment aims to help you practice the following topics: HTML, CSS, Browser Side Scripting with JavaScript, and Server Side Scripting with Common Gateway Interface (CGI) in Python. Your main task in this assignment is to develop a web application for software companies in the northern part of Cyprus to post their internship positions for undergraduate students.

You are expected to use HTML to define the content of web pages, CSS to design the web pages, JavaScript for browser-side scripting (especially for validation purposes), and Python for server-side scripting. There is no specification regarding the design, and therefore you are expected to design the pages as you like based on the requirements provided below.

#### Web Application Overview

In this assignment, you are expected to develop a simple web application for software companies in the northern part of Cyprus to post their internship positions. Software companies first need to register in order to post their internship positions. These posts will be publicly available which means there is no need to log in to the web application to see and filter the active posts.

#### Web Application Setup

You are expected to work on your local machine and the web application should be accessible with the following link.

`http://localhost/northcyprusswinterns/index.py`

Therefore, you need to put all your source files under a folder called **northcyprusswinterns**.

#### Web Application Functionalities

The application should have the following functionalities for software companies:

- The home page of the application should allow software companies to register and log in to the application.
- Software companies should be able to register with the following details: (1) Username, (2) Password, (3) Company Name, (4) Email address, (5) Telephone number, (6) Website, (7) City, (8) Postal Address. All of these details are mandatory. Each software company should have a unique username.
- Registered software companies should be able to login to the application by using their username and password. They should also be able to log out from the application. When they log out, the application should redirect them to the home page of the application.
- Once the software companies log in to the application, the application should allow them to perform the following operations:
  - Post a new internship with the following details: (1) Position name, (2) Position description, (3) Expectations, (4) Deadline to apply. All of these details are mandatory. The application should automatically assign a unique identifier to each internship position.

- List the previously posted internship positions in a tabular form as follow. These posts should be sorted based on the deadline where the latest deadline will be shown at the top.

| Position Name | Description | Expectations | Deadline |
|---------------|-------------|--------------|----------|
|               |             |              |          |

The application should also allow all people to see and filter the active posts as explained below.

- The home page of the application should list the active internship positions whose deadlines have not been passed in a tabular form as shown below. These positions should be sorted based on the deadline where the latest deadline will be shown at the top.

| Software Company | Position Name | Description | Expectations | Deadline |
|------------------|---------------|-------------|--------------|----------|
|                  |               |             |              |          |

These positions should be categorised based on the cities - Gazimagusa, Girne, Guzelyurt, Iskele, Lefke, Lefkosa. Therefore, there should be a different table of active internship positions for each city. If a particular city does not have any active internship position, then the application will show "No internship position available at the moment" for that city.

- The home page of the application should have a large search box with a search button which allows filtering the active internship positions based on keywords. The positions whose names, descriptions or expectations include at least one of the keywords will be listed. These positions should again be categorised based on the cities, and "No active internship position found" should be printed for a city that the web application does not find any active position.
- The name of the software companies in the list of active internship positions should be a link which allows going another page that contains the detail of the company. For example, if the username of the software company Software World is sc123, then the link should be as follows:

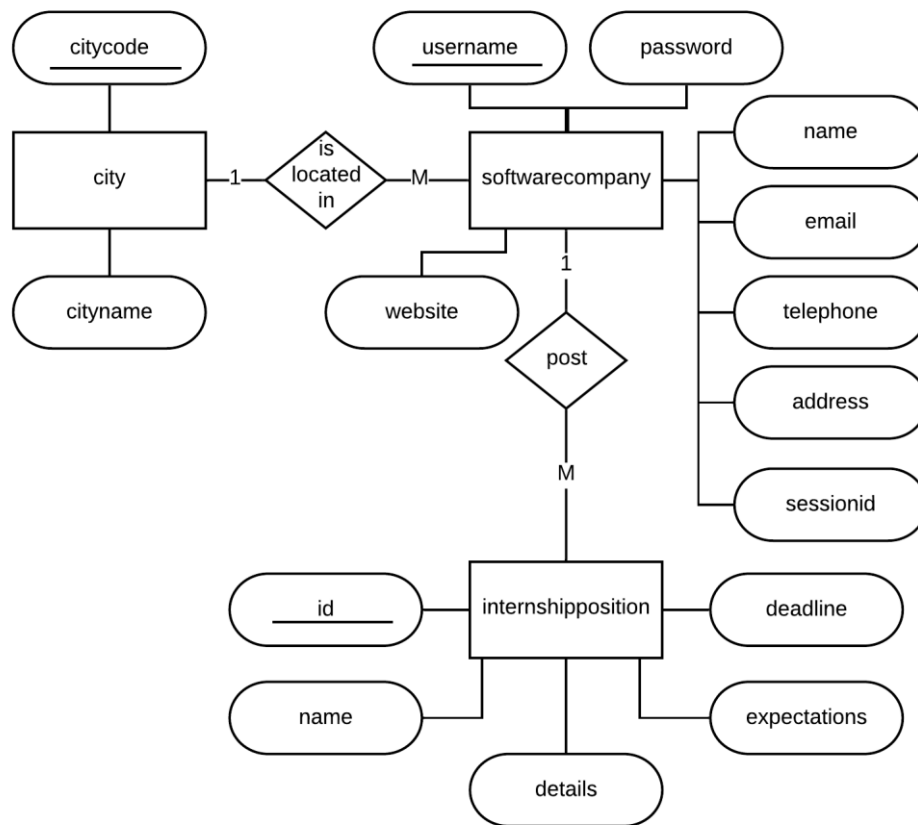
```
<a href="companydetails.py?company=sc123">Software World</a>
```

When this link is clicked, then the application should redirect to another page and show the details in a tabular form as follow:

|                         |  |
|-------------------------|--|
| <b>Company Name</b>     |  |
| <b>Email address</b>    |  |
| <b>Telephone number</b> |  |
| <b>Website</b>          |  |
| <b>City</b>             |  |
| <b>Postal Address</b>   |  |

## Web Application Database

You need to create a SQLite database for this application based on the following entity-relationship diagram. You are expected to provide a separate Python script to create necessary tables and insert necessary records into these tables.



You will also need to add the following details to the city table.

| City Code | City Name  |
|-----------|------------|
| 1         | Gazimagusa |
| 2         | Girne      |
| 3         | Guzelyurt  |
| 4         | Iskele     |
| 5         | Lefke      |
| 6         | Lefkosa    |

You do not need to create a separate table for sessions. You can use the sessionid attribute of the softwarecompany table. When a software company log in to the application, the application should randomly generate a unique session id which is started with a number between 1 and 1000000 and followed by three random letters and store it in the database. When the software company log out from the application, then the session id of the company in the database should be set to -1.

### Rules

- You need to write your program by using Python 3.x.
- You can only use built-in functions and modules.
- You need to have external CSS and JavaScript files.
- You need to use cookies for session management.
- You are not allowed to use any design template and framework.

- You need to put all your files into a folder called **northcyprusswinterns** and submit the compressed version of the folder.
- Only one team member should submit the assignment.
- The code quality, modularity, efficiency, and appropriate comments will be part of the grading.

### Grading Policy

The assignment will be graded as follows:

| Grading Item   | Mark (out of 100) |
|--|-------------------|
| Database Creation File                                     | 10                |
| Software Companies: Registration                           | 10                |
| Software Companies: Login, Log out & Session Management    | 20                |
| Software Companies: Add a new internship position          | 10                |
| Software Companies: List the previously posted positions   | 10                |
| List the active internship positions for each city         | 10                |
| Filter the active internship positions based on keywords   | 15                |
| Go to another page for the details of the selected company | 15                |