

**TASK 1 – CRM**

1. Explain what CRM (Customer Relationship Management ) is and name three CRM solutions.
2. Design (just classes and fields) the main objects for CRM software and describe the relations between the objects. (Accounts, Contacts, Opportunities)
3. Design (Classes, Pseudo code and notes) REST API for CRUD operations on your CRM software. (For 3 objects)

In your answer relate to:

- A. Naming and Status Code
- B. Side Effects (Deleting record A → Deleting record B?)
- C. Duplications
- D. Testing
- E. Authentication

**TASK 2 – HR system integration**

'MyRecruiter' is an HR recruitment software which Quali using for her hiring processes.

Please refer to the attached file.

The attached excel file contains a list of candidates and their steps in applying for positions at Quali – your task is to convert this file and make it ready to import to 'MyRecruiter'

In order to import candidates to 'MyRecruiter' from an Excel file, the file has to be in a specific format and contain specific data.

Please write a code in Python or any other programming language to complete the following requirements:

1. The file format/extension has to be CSV.
2. All the headers must be in English. Please change the headers according to the following list:
  - a. טלפון נייד -> Mobile
  - b. דוא"ל -> Email
  - c. מצב שיוך למשרה -> Status
  - d. תאריך עדכון -> Last Update
  - e. שם המשרה -> Position
  - f. שם מועמד -> Full Name
  - g. קוד משרה -> Job Code

3. Each candidate should appear only once.

Please delete all duplicated candidate, you should keep the most updated record.

4. The excel file must contain First name, Last Name columns instead of Full name column in order to import the candidates to 'MyRecruiter' ∴

- a. Please add to the file these two headers.
- b. Please update First Name and Last Name columns according to "Full Name" column (you can keep the original language)
4. Please convert the Status column according to the following list:
  - a. הגיש מועמדות למשרה - In Progress
  - b. קורות חיים נשלחו - In Progress
  - c. מועמד נחשף - In Progress
  - d. מועמד זומן לראיון - In Progress
  - e. מועמד רואיין ראיון ראשוני - In Progress
  - f. זומן לראיון שני - In Progress
  - g. מועמד רואיין ראיון מיקצועי ואישי - In Progress
  - h. נשלל על פי קורות חיים - Rejected
  - i. נשלל לאחר ראיון - Rejected
  - j. מועמד סירב להיחשף למשרה - Withdrawn
  - k. מועמד לא מחפש עבודה - Withdrawn
  - l. מועמד סרב - לא מעוניין במשרה זו - Withdrawn
  - m. מועמד התקבל לעבודה - Hired

The code should get an xls Excel file (same as the attached) and return a new file with all the requirements.

### Task 3 – Web integration

Use the public service of <https://openweathermap.org/> to get, using python code, the current temperature in 5 cities: London, Sydney, Tokyo, Madrid and Addis Ababa

Print a sorted list from coldest to warmest city.

You may need to register to get an API key

General instructions:

1. The purpose of these tasks is not only about your technical skills but also about the way you think and solve problems.
2. Do your best, if you fail to accomplish a task or part of it, that's ok, just be able to explain why.
3. You may choose how to present your results, it can be in a presentation, by talking or by showing the results on your computer (or a mix of it)
4. This is a self assignment which means, you read, analyze and resolve it on your own – you shouldn't ask us any questions.
5. You can use the internet for ideas or optional solutions, be sure you know to explain what you did and how to use it and make sure to give credit to the relevant source

**GOOD LUCK!**