C# Assessment task

Table creation and manipulation
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Graduate learning and development programme

Contents

1   Purpose of the Document

This document details the assessment task that will be expected for junior level job candidates to complete and send in order to proceed further into the recruitment process.

2   Prerequisites

- Knowledge of core development concepts and best practices.

- Basic object-oriented development knowledge and experience.

- Basic knowledge of integrated development environment (IDE) - Visual Studio/Visual Studio Code.

- Experience working with a major development language such as C#, Java or similar.

3   Task details

Create the following C# (.net Core) Console Application:

- The application will be taking 4 input parameters – **File name** (path to the file on the file system), **Sender email address**, **Password**, **Receiver email address**

- The type of the accepted input file (filename parameter) is **CSV** and has the following structure (this is example data, you can have your own and we mean to test it with more/different data):

First Name	Last Name	Country	City	Score
Dimitar	Davidkov	Bulgaria	Sofia	2451
Stela	Valcheva	Bulgaria	Plovdiv	1855
Adriana	Tsankova	Great Britain	London	2259

This in csv format looks like this:

First Name;Last Name;Country;City;Score
Dimitar;Davidkov;Bulgaria;Sofia;2451
Stela;Valcheva;Bulgaria;Plovdiv;1855
Adriana;Tsankova;Great Britain;London;2259

↘ The application should create new **CSV** file named "ReportByCountry.csv" containing only the unique rows for the column Country (in other words, be grouped by the column Country) and additionally include 7 more columns with aggregate data:

- Average score

- Median score

- Max score

- Max score person – the First name + Last name of the Max score occurrence

- Min score

- Min score person – the First name + Last name of the Min score occurrence

- Record count – The number of records from the original file that are aggregated into the row.

↘ The values of the file should be sorted by the **Average score** column in a descending order.

↘ The newly generated csv file should be sent to the email (4th input parameter). This will happen by using the 2nd and 3rd input parameters (Sender mail and Password) to establish connection using SMTP and send the file as attachment to the email. Hint: using Gmail smtp could be difficult because they have additional security. Try other service like abv.bg, for example.

↘ The completed application source code should be sent as exported project or uploaded to accessible version control platform (GitHub, for example) for review.

Bonus task:

↘ Make the application UI multilingual (English & German) with the ability to change the language.

Considerations:

↘ Application should provide user-friendly experience.

↘ Implement error handling (for example, a simple message "File is not found" instead of unhandled error and printed call stack").

↘ Performance of the application will be considered.

↘ Time taken for completion will be considered.

- **Change History**

Date	Name	Version	Change reference
27/04/2020	Dimitar Davidkov	0.1	Create
10/06/2020	Dimitar Davidkov	1.0	Update
25/06/2021	Stela Valcheva	1.1	Update

- **Distribution**

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