Junior Quantitative Researcher - Interview Exercise

Background

We made a certain change in our underwriting application that should simplify the process of filling in and submitting the underwriting test results form by the ally. This simplification should result in a shortening of the time it takes from the moment an applicant completes the underwriting tests and until the ally submits the form reporting on the test results.

This change was applied on March 15, 2259 and we would like to test whether the change has achieved its purpose.

Data

The data you will be using to answer the questions in this exercise is attached to the email message you got:

1. Applicants table - personal details of the applicants who scheduled an underwriting session
2. Sessions table - administrative details about the session and its status
3. Events table - events related to the underwriting session
4. Data dictionary - list of fields in each table and their description

Note: The data provided here is fake, and thus includes future dates.

Goal

We would like to get an answer to the following question:

Has the change in the underwriting flow on the ally side achieved the purpose of shortening the time to fill in the test results form?

Instructions

1. Write your approach and analysis steps in a clear and concise way.
2. Run the required analysis in python and draw a conclusion related to the question above based on your results. Save your code and copy it to a .doc or .docx file - you will be asked to upload this file.
3. Once completed (see note below), please go into this link (https://www.research.net/r/assured_jqr) to submit your answers.
   You will be asked to:
   a. Explain your approach in a few sentences
   b. Submit your code in a .doc or .docx file
   c. Answer a few multiple choice questions related to the analysis steps, the results and your conclusion based on it.
4. All answers should be written and submitted in English
5. In case you would like to raise any additional issues or questions about the data or the exercise - you will have the opportunity to do that at the end of the questionnaire linked above.

Important Note: The form cannot be resubmitted, and you will not be able to go back and change your answers after you complete each page. We recommend you fully prepare your approach, analysis, results and conclusions before going into the link.