

Supplementary Material for User-Centric Property Graph Repairs

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1 SURVEY FOR THE USER STUDY

To investigate how the findings from the synthetic experiments translate to a real use case, we tested our approach with real users. For this qualitative experiment, we focus on the Star Wars¹ dataset, which is sufficiently small and understandable by real users. We created a small web application using Flask² that shows the users the violations and asks them to choose an appropriate repair. We recruited 20 users involving people from our laboratory (including Master, PhD students, and postdocs) and from our connections, aiming for a mix of people with and without a database background. Before the experiment, they were briefly instructed on what their task was. We collected their expertise on databases, graphs, and Star Wars (since it's the domain of the dataset we used) using a 10-level Likert scale. The average knowledge about databases is 5.65, on constraints is 4.35, on graphs is 4.65, and on Star Wars is 5. The questions with their relative answers were:

- How would you rate your knowledge about Databases?

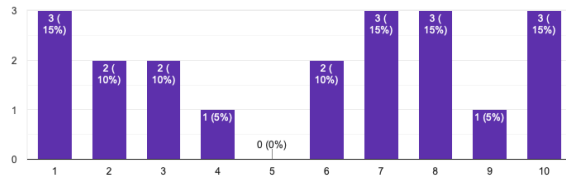


Figure 1: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your knowledge about Database constraints?

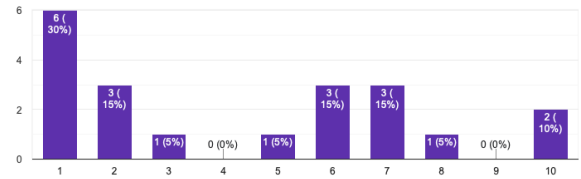


Figure 2: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your knowledge about Graphs?

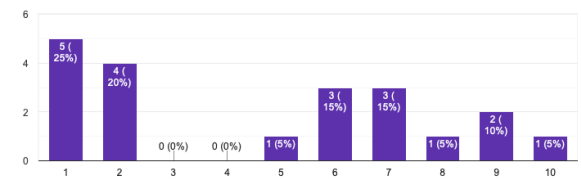


Figure 3: Histogram for the 10-level Likert scale: 10 means expert.

- How would you rate your the Star Wars universe?

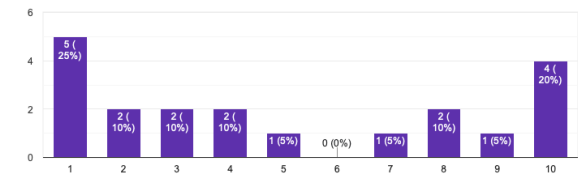


Figure 4: Histogram for the 10-level Likert scale: 10 means expert.

- Which of the following Star Wars movies have you seen?

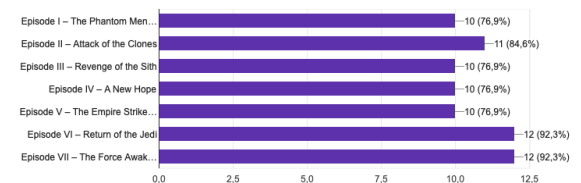


Figure 5: Barplot for the movies count.

¹<https://github.com/neo4j-graph-examples/star-wars>

²<https://flask.palletsprojects.com/en/3.0.x/>

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