

1. Title
  - a. Billionaires of the world
  - b. Skorodumov Andrey Igorevich
  - c. 213-1
  - d. 13.06.2022
  - e. Zhulikov Georgii Alexandrovich
2. Problem statement
  - a. I learned how to change data sets to work with them.
  - b. I understood how to make a GUI application using some development patterns.
  - c. I tried to make each task but some of them looked very hard e.g. counting total value from a column or making a “watchlist”
3. Individual Problem Specification
  - a. Forbes billionaires 2022 Dataset contains information about top 2600 billionaires ranked by their net worth. Link to the dataset: <https://www.kaggle.com/datasets/jjdaguirre/forbesbillionaires-2022>  
Fields are the following: Rank, Name, Net worth, Age, Source of income, Industry Data model Rank is an integer (Example: 1) Name is a string (Example: Elon Musk) Net worth is a string (Example: \$2.5 B) Age is an integer (Example: 45) Country is a string (Example: China) Source of income is a string containing a name of a company/names of companies/industry (Example: Tesla, SpaceX) Industry is a string representing a sector/industry/market segment each billionaires have made their fortune (Example: Finance & Retail) Possible values for Industry field: Finance & Investments, Technology, Manufacturing, Fashion & Retail, Healthcare, Food & Beverage, Real Estate, Diversified, Media & Entertainment, Energy, Automotive, Metals & Mining, Service, Construction & Engineering, Logistics, Telecom, Sports, Gambling & Casinos Master in the master-detail field are Name and Rank Features  
Basic features:
    - 1) Deleting entries (1.1)
    - 2) A UI element showing the total net worth of billionaires
    - 3) Searching by Name field (1.2)
    - 4) Saving a list to a file, loading it from a file (a special UI element for that)
    - 5) A second table (with a separated window for it) called «Watchlist» (billionaires whose current activity user would like to follow). There must be an option to add and delete entries there. (1.3)Additional features:
    - 1) Grouping billionaires by the Industry field (2.1)
    - 2) Grouping billionaires by the Country field (2.1)
    - 3) Sorting billionaires by a specific numerical field (Age, Rank, Net worth) in both ascending and descending order (2.2)
4. Interaction with data is done through model-view, filtering through proxy model, adding a new line through modal dialog. Also the logo is drawn using qt libraries. Besides, for outputting the info about age, name, net worth, i used proxy models because if the user wants to sort something, this info should be

changed too. What is more, I customized each window title. And added a nice net worth slider.

5. The data editor turned out to be done successfully, the filter was added. Didn't manage to make the last task from basic features(5), but I made quite a lot of additional ones which seemed to me more important. Such as:
  - a) Presentation of information about the selected billionaire
  - b) Search system by ID
6. To conclude, I tried to do my best, but badly managed my time and did the whole big hw in 15-20 hours and it was really challenging. I understood how important it is to make a nice time table for such a big hw. And I hope that in c++ in the future I will find more plusses, not minuses.