Tarefa

- Objetivo:
  - Avaliar dataset fornecido.
  - Aplicar conceitos de POO.
  - Analisar a eficiência computacional.
- Requisitos necessários:
  - Desenvolver utilizando Orientação a Objetos: definir classes e métodos.
  - Avaliar a eficiência do código desenvolvido.
- Baixar dataset em:

  https://www.kaggle.com/datasets/arashnic/book-recommendation-dataset.

Content

The Book-Crossing dataset comprises 3 files.

- Users
  Contains the users. Note that user IDs (`User-ID`) have been anonymized and map to integers. Demographic data is provided (`Location` , `Age`) if available. Otherwise, these fields contain NULL-values.

- Books
  Books are identified by their respective ISBN. Invalid ISBNs have already been removed from the dataset. Moreover, some content-based information is given (`Book-Title` , `Book-Author` , `Year-Of-Publication` , `Publisher`), obtained from Amazon Web Services. Note that in case of several authors, only the first is provided. URLs linking to cover images are also given, appearing in three different flavours (`Image-URL-S` , `Image-URL-M` , `Image-URL-L`), i.e., small, medium, large. These URLs point to the Amazon web site.

- Ratings
  Contains the book rating information. Ratings (`Book-Rating`) are either explicit, expressed on a scale from 1-10 (higher values denoting higher appreciation), or implicit, expressed by 0.

- Quantidade de linhas:
  - Users: 278.858
  - Ratings: 1.149.780
  - Books: 271.379 livros

- Dados processados e pré-formatados

- Gerar relatórios que cruzem informações entre os três arquivos descritos.
- Sugestões de classes:
  - Classes para cada tipo de arquivo: books, ratings, users.
  - Classes para fins específicos. Por exemplo:
    - ***Information class*** com métodos gets para features dtypes, names, data shape
    - ***Data class*** com métodos para concatenar dados em um novo data frame, normalizar dados, etc.