OOP Lab Examination

Teacher: Ioan Solovastru

Implement a Java application which simulates a library. There will be a **Client, Library, Book, Comics, Magazine** (these are the base classes, you can add your own).

Clients:

- id, name, email, address, list of books along with their availability
- Can borrow at most 5 books, otherwise throw and error
- Can return a book => it will become available in the library
- Every client has and an id compose of first letter from the library's name, first letter of the client's name, and two random generated numbers.

Books:

- title, author, number of pages, category, borrow time
- The borrow time of a book is random generated (value from 1 to 5 days)
- Categories will be: History, Personal Development, Computer Science, Economics

Comics:

- Title, author, number of pages, same category as books, borrow time, color, type
- Color can be non-colored comics and colored comics
- Type can be for children or for teenagers

Magazines:

- Title, author, number of pages, same category as books, borrow time, first page celebrity
- First page celebrity means the name of the celebrity which is on the first page

Library:

- name, address, list of available articles
- Can add new books
- Can remove books
- Store a history of which client borrowed a particular book
    - E.g Client A has borrowed book B

Read from the file *books.txt* and parse the data into your library.

Display the client's name, the most borrowed category, the most borrowed type (books, comics, magazines), and the total available time.

Add at least 3 comics, 3 magazines, 1 client and 1 library.

Grades start from **1p**

OOP principles **4p**

OOP styling **3p**

Read from a file **0.5p**

Error handle **0.5p**

Readable code **1p**