An-Najah National University
Faculty of Engineering and IT

جامعة النجاح الوطنية
كلية الهندسة وتكنولوجيا المعلومات

Computer Engineering Department
Distributed and Operating Systems
Design Document

Shima Osamah	11716299
Shatha Abu Hanesh	11717771

- Front server:

Three main services are implemented:

1. Search:
   - We implemented search ether by (https://front_IP/search/<category_name>) which will return all books id, and titles that are within this category.
   - OR by just (https://front_IP/search) which will return all books id, and titles.
   - Search then will do a GET request to Catalog server about that category or all book. (requests.get(http://catalog_ip/query/search/<category_name>)) or without (<category name>)
   - The output will be returned in JSON format.

2. Info:
   - We implemented info ether by (https://front_IP/info/<book_id>) which will return the book title, price, quantity.
   - OR, by just (https://front_IP/info) which will return all books title, price, quantity.
   - Info then will call GET request to Catalog server with book id or without, requests.get (http://Catalog _IP/query/info/<book_id>).
   - The output will be returned in JSON format.

3. Purchase:
   - Purchase API could be used like this (https://front_IP/purchase/<book_id>), and book id is mandatory or an error massage will be return.
   - Purchase then would do PUT request to Order server to buy that book. requests.put(http://Order_IP/purchase/<book_id>).
   - A massage (buy book <book_name>) would be returned if the book is existing and its quantity is not zero. Or an error massage will appear.

- Order server:
   - It has one service which is purchase, it can be called like this, (http://Order_IP/purchase/<book_id>).
   - Then it will query that book by its id by call GET request to Catalog server with book id (http://Catalog _IP/query/info/<book_id>).
     if the book is exists, a PUT request would be send to update the quantity of that book, (http://Catalog _IP/update/<book_id>) with a massage that's shows that. If it's not or is all soled, then error massage will return.

- Catalog server:

Three main services are implemented:

1. Query:
   - Query could be for category (http://Catalog_IP/query/search/<category_name>), or just (http://Catalog _IP/query/search). JSON with all books id and title would be returned.
   - Query could be for book info (http://Catalog_IP/query/info/<book_id>), or just (http://Catalog _IP/query/info). JSON with all books title, price, and quantity would be returned.

2. Update:
   - Update service will chick if the book id is available and it's not all soled, where error massage would appear, and then it will update the book quantity number by decrement it by one, and success massage will be returned.