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Book Worm- Spring Boot Based Tracker

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Abstract- **The Book Worm is an online site for individuals to read, audit, share, rate books, and interact among readers. It contains a large number of book audits, suggestions, and evaluations that might help curators and readers to choose pertinent books. It is genuine hybrid, book based social navigation site. Getting digital books from various merchants frequently leads to hassle of visiting multiple platforms, which are cumbersome for clients of library. To provide readers with a cognizant and consistent reading experience, 'The Book Worm' is a choice. The input of casual readers can be taken into consideration and can demonstrate more efficient effects of books, like their instructive or social worth. It is by all means all in one place for the countless books and their reviews by numerous clients from all communities. The principle point behind "The Book Worm" is to give a virtual library that is accessible to everyone with internet connection and helps eliminating all limits with regards to arrangement of reading content physically.**

Keywords- **Spring boot, Apache Cassandra, Spring MVC, Thyme-leaf.**

I. INTRODUCTION

"The Book Worm" is a book tracker web application which has a colossal information base of practically all the books on the planet. It helps in tracking status of books being read by a reader and also provides history of books already read by a reader. The application is where one can make "shelves" to arrange what the user has read or wish to read. Users can remark on one another's reviews and can track down next most loved books. What's more on this excursion with user's companions one can branch out, accumulate data, and grow one's psyche. This social site is by all accounts a sensible hotspot for instructive or social worth since it incorporates an enormous amount of reviews and appraisals of certain books by numerous readers both within and apart from the academic community. "The Book Worm" is designed to manage huge amounts of informations across several data centers and the cloud providing high versatility, high adaptation to non-critical failure, superior execution and high accessibility. It utilizes Thyme-leaf to deliver HTML pages even more productively. This application gives an astonishing client experience where one can read books as well as monitor the advancement of the book, he is reading at present or has effectively read. It makes simple for the readers to know the content of the book left to read.

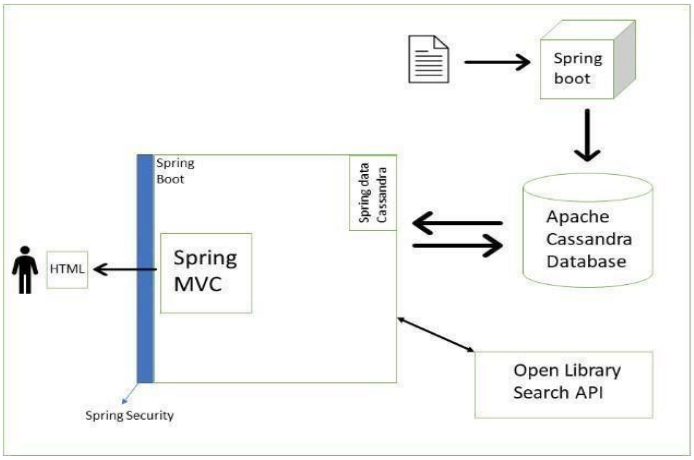

Fig. 1 Spring Framework Architecture

For example, we need to build an application that is exceptionally accessible, can scale data more efficiently and that can deal with millions and millions of data records with no problem using spring framework and Cassandra then, "The Book Worm" is the solution. The project 'The Book Worm' gives way for formation of book tracker application that has previously mentioned attributes and can likewise be known as a virtual library for the people who love to read. The aim behind this project is to assemble an application that can store an inventory of each and every book at any point in the world. It will permit individuals to browse through the catalogue, mark a specific book as read, gives readers the option to rate the book that they have read. They can follow the progress of books that they are as of now reading or have as of recently read. The benefit of utilizing this application is that individuals don't need to stress over actual presence of any book. Since, it is beyond the realm of possibilities to keep tremendous assortment of books truly in one place and even it is done, it will not be accessible globally to the users that reside far away from that particular place. So, the better choice is to take advantage of internet to address this issue and provide all the books that anyone wants to read from any corner of the globe.

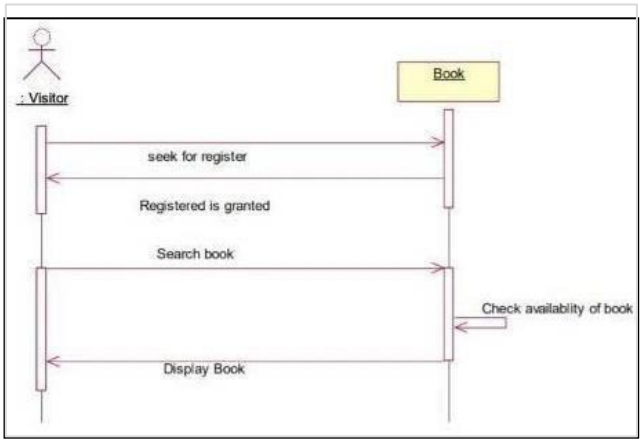

Fig. 2.1 Sequence diagram for user

As we can find in the above Fig. 2.1, If the user is new to this stage, then, at that point, he needs to request the register to be conceded to himself first and afterward access the platform. This register giving interaction is executed by checking the username and password blend for the specific user account. The auth login component of this application gives additional layer of safety to information to be held private to the actual user.

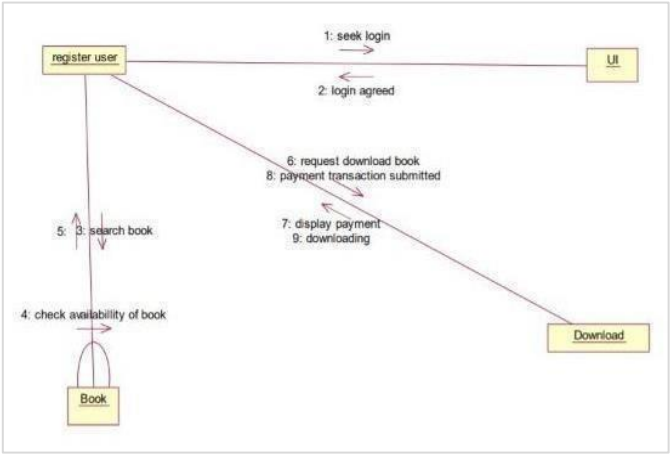

Fig. 2.2 Collaboration diagram for registered user

Whenever the register is permitted, the user gets absolute permission to his account where he can look through his preferred book and get the admittance to it contingent on its accessibility. In the event that the book is accessible, the application guides the user to payment page where he can download the book after effectively making a payment for itself and when the transaction is verified then that book becomes available offline.

II. LITERATURE REVIEW

There have been several studies conducted since 2010 or even before. Pianzola et al. (2021) proposed a technique, in which members with various inspirations (educational or recreation), being aware with the model (new comers and active social networking users), and instructions participation respond to a highly organised digital social reading (DSR) exercise in terms of how intense the social interaction and engagement are. The model that was applied included Twitter which involved participants using a hashtag (#MattiTw) for data collection using python script.

Wang et al. (2020) proposed a method that includes a customizable user recommendation framework that provides platform for content curation that models preferences for both users and the content they engage with at the same time. In this way, preferences based on users for specific item types (e.g., fictional novels) can be modelled with user specialties (e.g., reviewing novels with fictional characters). The model used was a personalized user recommendation Framework.

Earlier, Ge et al. (2016) used a methodology that stated that some content is identifiable easily (say, by being "favourited" many times), there are chances of potential content for whom the evidence provided is not good enough. The model applied was Careful modelling of factors which are contextual like the topical, geo-spatial, and social preferences of users.

Zhao et al. (2015) introduced a technique based on user topic interest profiles improvisation by behavior factorization. Numerous recommenders plan to give pertinent suggestions to clients by building individual point interest profiles and afterward utilizing these profiles to track down intriguing substance for the client.

Liu et al. (2014) proposed a method, in which existing recommender framework generally center around suggesting individual things that clients might be keen on. Client produced thing records then again have turned into a well known include in numerous applications. These clients created thing records supplement the principle usefulness of the relating application and instinctively have turned into an elective way for clients to peruse and find fascinating things to be consumed. The model applied is Bayesian ranking model, called LIRE.

Zhou et al. (2010) presented a user recommender system in social labeling framework. A User Recommendation structure for client interest displaying also, interest-based client suggestion, meaning to support data dividing between clients.

III. METHODOLOGY

Usually, the library provides a limited number of books. It gives hard-covered books intended to explore, instructive purposes, as well as chronicled perusing. The segment for recreation perusing is restricted to a particular sort of books not continuously interesting to everybody. Getting to eBooks from various sellers regularly requires exchanging between numerous stages, which can be awkward for library clients. The current models are missing on the ground of heartiness.

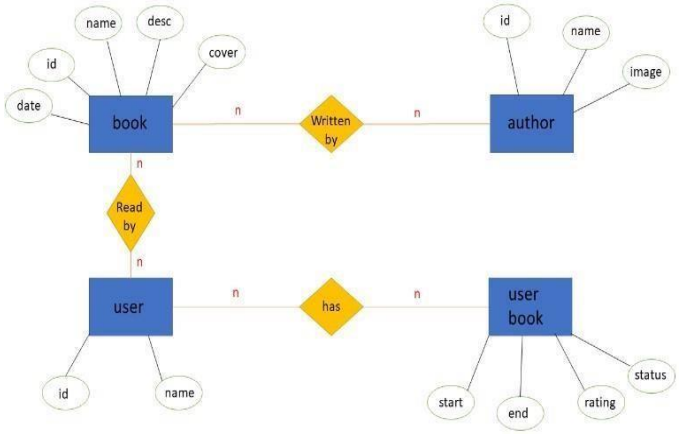

Fig. 3 Entity Relationship diagram for proposed method

"The Book Worm" is based on Spring Boot framework which is a famous, open-source, endeavor level system for making independent, creation grade applications that sudden spike in demand for the Java virtual machine (JVM).

Java Spring Boot is an apparatus that makes fostering a web application and microservices with Spring Framework quicker and more straightforward through three important qualities:

- An obstinate way to deal with design.
- The capacity to make independent applications.
- Autoconfiguration.

It utilizes Apache Cassandra which is a dispersed data set administration framework that is worked to deal with a lot of information across different data centers and the cloud. Key highlights incorporate:

- Exceptionally versatile.
- Offers high accessibility.
- Has no weak link.

IV. CONCLUSIONS

As we are as of now mindful of various digital libraries where a huge number of book's information are accessible these days, "The Book Worm" stands apart giving each of the books on the world at any point distributed and has the most productive data management system, for example, Apache Cassandra that gives highly versatile, high accessibility and has no weak link. The most unique thing concerning this application is that it depends on Java spring boot framework (Spring Boot) which is an instrument that makes creating web applications and microservices when using Spring Framework quicker and more straightforward through following three center abilities:

- Autoconfiguration.
- A stubborn way to deal with setup.
- The capacity to make independent applications.

The application utilizes 'Thymeleaf' that is an open-source Java library that is authorized under the Apache License 2.0. It is an HTML5/XHTML/XML layout library that can apply a bunch of changes to format records to show information and additionally text created by our application. It is a server-side Java format library for both web (servlet-based) and non-web (offline) conditions.

V. FUTURE SCOPE

Digital books serve the requirements of individuals reading text data in advanced configurations. Various sensational changes and advancements have impacted reading and data spread over the ages, with the latest being the Web and compact data medium. Patterns in innovation recommend further upgrades to come that will empower surprisingly better digital book plans with enormous volumes of content material made effectively open and accessible. Current gadget plans and web-based business models recommend headings for the fate of reading.

A. The assortment of services

A digital library is significantly more than simply the assortment of books in its archives. The Book Worm gives a collection of services to its clients overall (the two people and machines, and makers, chiefs, and shoppers of data). As such we start our definition with the possibility of the arrangement of services that the digital library addresses. There are a tremendous and vacillated set of such services, including service that help in the management of assortment of books, service to give reproduced and dependable capacity, service to support inquiry plan and execution, service to help name objective and region, etc.

B. The assortment of information content

The reason for a digital library, however, should be the information objects that provide the content. A basic trait of the digital library is that the data objects are found in assortments with related management and support functions.

C. Electronic /digital accessibility

Although the books may not be electronic, and although the actual items may not be accessible straight over the organization, the reading content should be addressed electronically in some way through, e.g., metadata or lists. Any other way, we would not believe the reading content to be essential for the digital library.

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