DIGITAL BOOKS

Table of Contents

1. Problem Statement

Build **DigitalBooks** app which takes traditional books a step further, combining text with visual and audio elements to make authors' publications truly multimodal. Authors can write down their thoughts and assemble a collection of original or curated content ranging from photos, drawings, and images to audio and video clips -- in some cases, even animated text.

And while **Digital Book** app can magically use images of autobiographical presentations or fantastical tales which are certainly options. It is also important to think beyond personal narratives to how authors might share the "stories/experiences" of their learning on any topic. And beyond author presentations and publications, plenty of students, teachers, doctors, engineers can jump on board, to create dynamic books and presentations that serve as instructional tools.

Use Flutter to develop mobile app

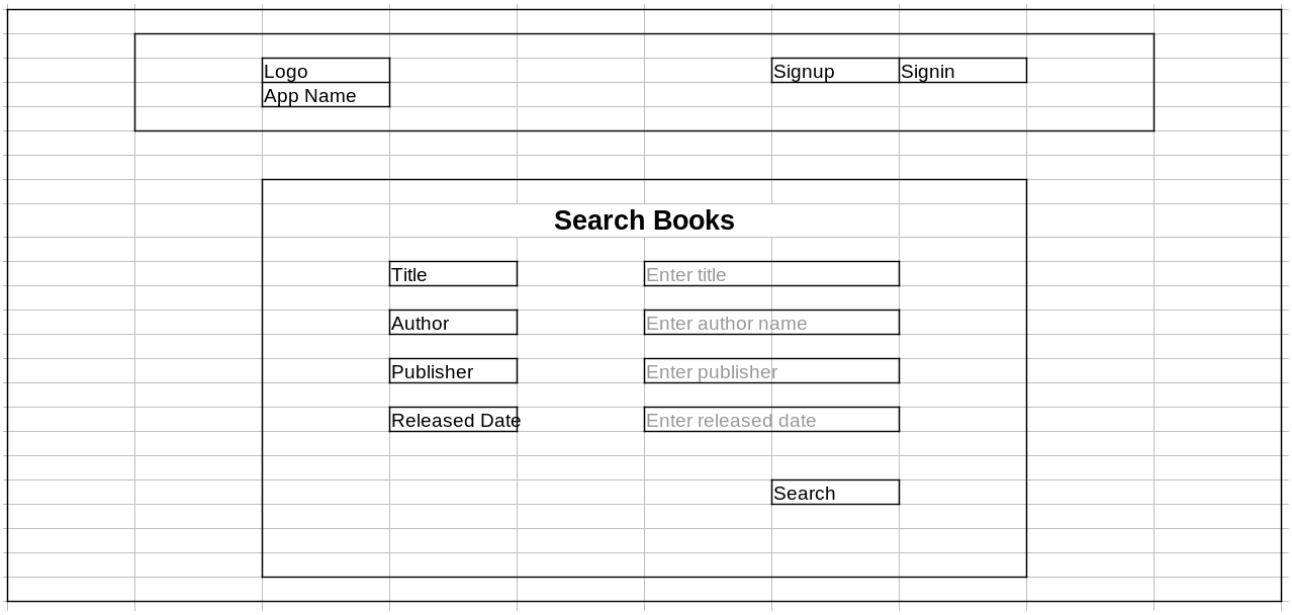
Build digital book app. Below are the different Microservices, which need to be developed and deployed.

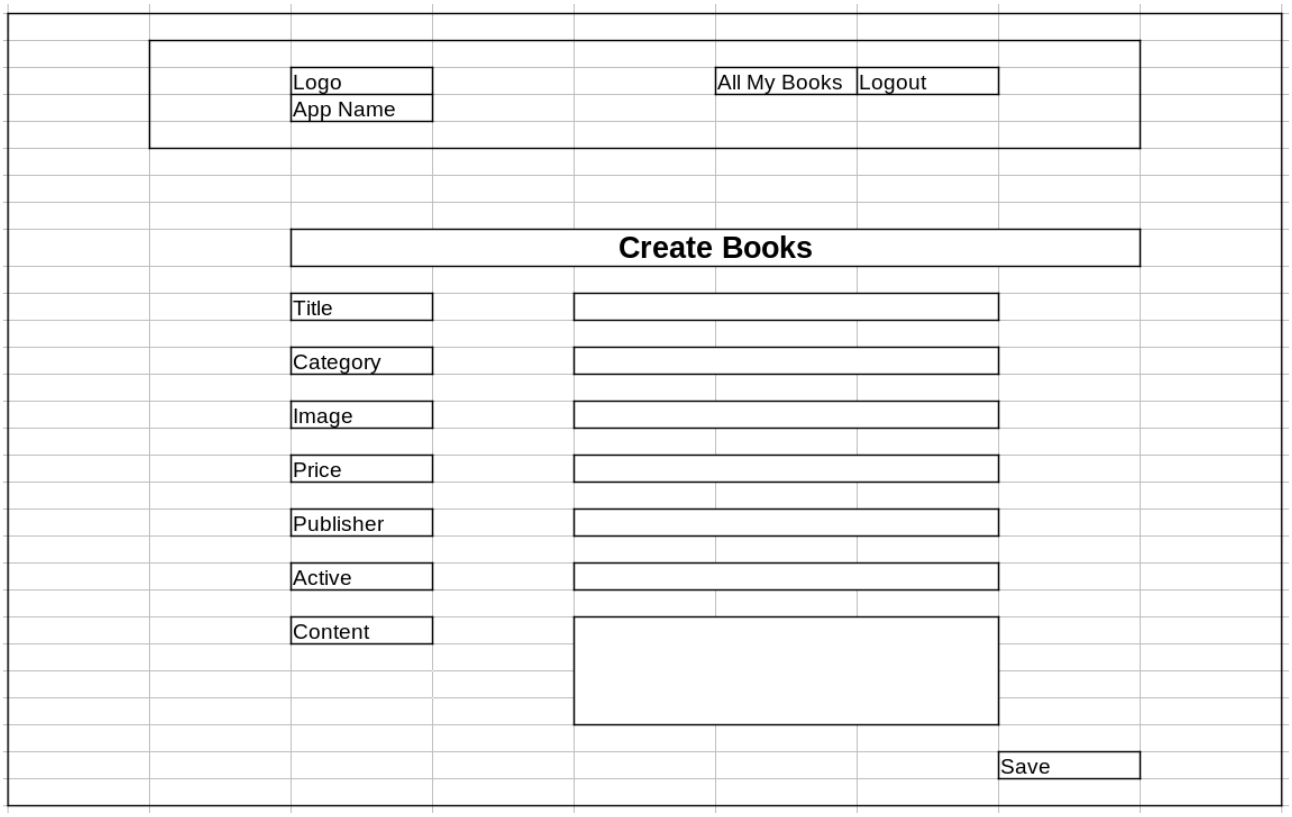
1. User Microservice
   Managed roles
   i. Guest user
   ii. Reader
   iii. Author
2. Book Microservice
   Crud application
   i. Guest user can search book, create account and get login
   ii. Author can search/add/edit/block book
   iii. Reader can search/subscribe/unsubscribe book

The scope includes developing the application using tool chain mentioned below.

2. Wireframes

UI needs improvisation and modification as per given use case.





3. Business Requirements

As an application developer, develop microservices with below guidelines:

User Story #	User Story Name	User Story
US_01	Guest User Features	1. As a guest user I want to search for books based on **title, category, author, price**, so I can see search result containing book logo, title, author, publisher, price, published date, category. 2. As a guest user, I want to create an account. I can create account as either **reader** or **author** 3. As a guest user, I want to get login to my account.
US_02	Reader Features	1. As a reader, I want to search for books based on **title, category, author, price**, so I can see search result containing book logo, title, author, publisher, price, published date, category. 2. As a reader, (from the above search result) I want to select a book (which is not blocked) and subscribe to it. I want to get a unique **subscription_id** in response after subscription is done. 3. As a reader, I can read only subscribed books. 4. As a reader, I cannot read blocked book or book which is not subscribed. 5. As a reader, I want to a. view history of all previous subscriptions b. view invoice using subscription_id c. cancel the subscription within 24 hrs.
US_02	Author Features	1. As an author, I want to create/edit book so that reader can subscribe to it. 2. As an author, I want to create book with below properties a. **logo**: image b. **title**: Avenger c. **category**: comic d. **price**: 24 e. **author**: current user name f. **publisher**: Marvel publisher g. **published date**: 22/04/2022 h. **chapters/content** i. **active:** true 3. As an author, I want to block and unblock a book. 4. When book is blocked a. It will not be shown in Search results for the reader. b. Readers (who have already subscribed to this book) should get notification about the unavailability of book.

4. Proposed Rest Endpoints

If you think rest endpoints need improvisation and modification as per given use case, you can make necessary changes.

GET	/api/v1/digitalbooks/search? category&title&author&price&publisher	Guest, Reader and Author can search books
POST	/api/v1/digitalbooks/sign-up	Guest can create account as either reader or author
POST	/api/v1/digitalbooks/sign-in	Guest can get login
POST	/api/v1/digitalbooks/{book-id}/subscribe payload: {bookId, reader {email / pk}}	Reader can subscribe to a book
GET	/api/v1/digitalbooks/readers/{emailId}/books	Reader can fetch all subscribed books
GET	/api/v1/digitalbooks/readers/{emailId}/books/{subscription-id}	Reader can fetch a subscribe book
GET	/api/v1/digitalbooks/readers/{emailId}/books/{subscription-id}/read	Reader can read book content
POST	/api/v1/digitalbooks/readers/{emailId}/books/{subscription-id}/cancel-subscription	Reader can cancel the subscription within 24 hrs of subscription
POST	/api/v1/digitalbooks/author/{author-id}/books Payload: {logo, title, category, price, author, publisher, published date, chapters/content, active}	Author creates a book
PUT	/api/v1/digitalbooks/author/{author-id}/books/{book-id} Payload: {logo, title, category, price, author, publisher, published date, chapters/content, active}	Author can edit a book
POST	/api/v1/digitalbooks/author/{author-id}/books/{book-id}?block=yes	Author can block a book
POST	/api/v1/digitalbooks/author/{author-id}/books/{book-id}?block=no	Author can unblock a book

5. Key Rubrics (Expected Deliverables)

A. As an application developer:

a. Develop the application as a microservice architecture.
b. Use Bootstrap for front-end design of application.
c. Use appsettings.json to maintain all .NET Core config.
d. Implemented the project structure - Controller, Interface, Service, DAO, Testing, Validation, Security etc.
e. Use Azure Blob storage service to store images.
f. Use HTTP communication for microservice communication.
g. Implementation as follows:
    I. Single Data Store for all microservice
    II. Document REST endpoints with OpenAPI/ Swagger
    III. Expose all rest Endpoints using a common API Gateway

B. Debugging & Troubleshooting

h. Generate bug report & error logs - Report must be linked with final deliverables which should also suggest the resolution for the encountered bugs and errors.

6. Platform

✓ Use Azure VM Service to deploy application on cloud.
✓ Use Azure SQL Database service as a database for the Application.
✓ Use Azure Functions and DB to build a backend process for handling requests for Digital books App.
✓ Use Azure Blob storage service to store images.