**Project description (form)**

1. **PRESENTATION OF THE PROJECT IDEA**

| **Title of the idea:** | Book management and recommendation application |
| --- | --- |
| **Project leader (Name and surname):** | **Bruno Silva** |
| **Describe the project idea:** In a few paragraphs. | The main purpose of the application is for it to be a reading companion for book lovers. Its main features will be getting book recommendations based on personal taste as well as getting useful info about books, thus making the book picking process easier as well as more personalized.  This application will be more targeted towards the young adults and adults, somewhere in the age range of 18-50. Kids probably won’t read enough to justify developing features dedicated for them.  This application intends to connect a otherwise traditional and offline hobby to a new age integrated with today’s technologies. We are planning on using a API like GoogleBooks or GoodReads API (deprecated) to gather data about books. We will also use ML to identify books by their cover’s text using the camera. The app will also be able to associate an ISBN to the book in question through the integrated barcode reader.  Additionally, the app will allow the user to keep track of their reading progress and update it as they read, which is a classical annoyance of reading: when the page marker goes missing.  Every book the user decides to search will have a review score and statistics, as well as similar book recommendations, to help the user decide what to read next and to maintain their engagement in reading. |
| **Key functionalities:** List the key functionalities  (you can list more than six functionalities) | | Seq. number | **Title of the functionality** | | --- | --- | |  | Retrieve book data from database through API | |  | Use machine learning to identify books by text recognition (firebase) | |  | Barcode reader to identify books | |  | Authentication system for users | |  | Book recommendation based on interest/genres | |  | Book progress and update tracker | | 7. | Manual search by title/author/isbn | | 8. | Personal book lists according to reading status | | 9. | Book rating based on stars | | 10. | Multi language support | | 11. | Favourite button | |
| **A detailed description and additional decomposition of each of the functionalities** | 1 - Use GoogleBooks API to retrieve a JSON about the book and show the user the details of a given book, like number of pages, synopsis, overall ratings, etc  2- We plan on using google’s cloud based machine learning services, firebase, to detect text of the cover and cross reference it with potential book matches.  3- Firebase also allows us to, similarly to the previous point, detect barcodes, which in case of books usually encrypt the ISBN, the unique 13 digit identifier number of a certain book.  4 - The user authentication system will involve verifying user credentials against a secure database of user information and providing access only to authorized users. Ideally there could be a “Sign in with Google” option, but the main purpose of this functionality is to allow users to only have access on their own personal accounts.  5 - The book recommendation system will display more books for the user to potentially read on the homepage and on the individual book pages. The books will be chosen based on the individual user’s book history as well as potentially using a more complex machine learning algorithm for finding users with similar tastes and recommending what they also enjoyed. On the book page it’s more important to recommend the books to that specific one so individual tastes won’t matter and the implementation will be easier.  6 - The user should be able to document current reading progress in the app, making it easier to not get lost on the page number in case the traditional physical page marker goes missing.  7- The user should also be able to manually search a book by title or ISBN or author in a classic text search bar.  8- The user should be able to create booklists, like the “want to read”, “read”, “currently reading”, and any custom list the user desires to create.  9 - The user in the end should be able to give a personal rating and review (offline) to make it easier to recommend old books to friends and refresh his memory on past read books  10 - Android Studio store’s every UI’s string in a XML. There’s functionally to translate the content part of this XML to any desirable language, allowing our app to feature multi-language support. This would be a static implementation, which is ideal in our scenario as the strings are always the same.  11 - The user should be able to “heart” his favorite books. It’s a similar feature to creating book lists but allows to add books to favorites with much less effort, similarly to Spotify’s heart feature. |

1. **TEAM**

| Name and surname: | Bruno Silva |
| --- | --- |
| IDUM: |  |
| Responsibility taken for the following functionalities (just the sequence number): | 1,2,3 |
|  |  |
| Name and surname: | Rodrigo Barradas |
| IDUM: |  |
| Responsibility taken for the following functionalities (just the sequence number): |  |
|  |  |
| Name and surname: | Alexandros Mitsis |
| IDUM: |  |
| Responsibility taken for the following functionalities (just the sequence number): | 4, 5, 8 |