

# Closures and Scopes

---

## Task 1.

- Create a module for working with books
  - The module must provide the following functionalities:
    - Add a new book to category
      - Each book has unique title, author and ISBN
      - It must return the newly created book with assigned ID
      - If the category is missing, it must be automatically created
    - List all books
      - Return an array of books
      - Books are sorted by ID
      - This can be done by author, by category or all
        - They are provided by an options object {category: ...} or {author: ...}
    - List all categories
      - Return an array of categories
      - Categories are sorted by ID
  - Each book/catagory has a unique identifier (ID) that is a number greater than 1
    - When adding a book/category, the ID is generated automatically
  - Add validation everywhere, where possible
    - Book title and category name must be between 2 and 100 characters, including letters, digits and special characters ('!', ',', '.', etc)
    - Author is any non-empty string
    - Unique params are Book title and Book ISBN
    - Book ISBN is an unique code that contains either 10 or 13 digits
    - If something is not valid - throw Error