# **Borrow\_book Function**

    Algorithm

    1. Start

    2. REMARK: Function initialization; def borrow\_book()

    3. set book = find\_book()

    4. if book not found, display "Book not found

    5. if book not available, display "Book already borrowed"

    6. set book['available'] = False

    7. borrower = borrower name and email

    8. due\_date = current date + the loan period

    9. REMARK: Add the book to the borrowed\_books array.

    10. Stop

Pseudocode

    BEGIN

        COMMENT: Initialization of function borrow\_book

        book = find\_book() COMMENT: setup the book variable

        IF not book: DISPLAY: "Book not found"

        RETURN False

        IF not book['available']: DISPLAY: "Book is already borrowed.

        RETURN False

        book availability = False

        borrower = borrower\_name and email

        due\_date = current\_date + loan\_period

        COMMENT: Add the book to the borrowed\_books array

        DISPLAY: "Book borrowed successfully

        RETURN True

    END

# **Return Book Function**

    Algorithm

    1. Start

    2. REMARK: Initialization fo the return\_book() function

    3. set book = find\_book()

    4. if book not found, display "Book not found

    5. if book not available, display "Book already borrowed"

    6. set book availability = True

    7. REMARK: remove the borrower

    8. REMARK: remove the due\_date

    9. FOR: Loop through the borrowed\_books array

    10. if the user isbn == isbn in borrowed\_books

    11. REMARK: remove the book from borrowed\_books

    12. REMARK: break out of the loop

    13. Stop

    Pseudocode

    BEGIN

        COMMENT: Initialization fo the return\_book() function

        book = find\_book()

        If book not found: DISPLAY "Book not found

        If book not available: DISPLAY "Book already borrowed"

        book availability = True COMMENT: Change book status

        COMMENT: remove the borrower

        COMMENT: remove the due\_date

        FOR: Loop through the borrowed\_books array

        If the user isbn == isbn:

        COMMENT: remove the book from borrowed\_books

        COMMENT: break out of the loop

        DISPLAY: "Book 'book['title']' return by book['borrower']

    END