

Python Programming

Project Number 2

Deadline: February 15, 2024

Library Management System

Library Class

1. Create a class named Library.
2. Implement the `__init__` method to initialize the library with a list of books.
3. Implement `displayAvailableBooks` method to display all available books.
4. Implement `borrowBook` method to allow students to borrow a book.
5. Implement `returnBook` method to handle the return of a book.

Student Class

1. Create a class named Student.
2. Implement `requestBook` method to take input from the student for borrowing a book.
3. Implement `returnBook` method to take input from the student for returning a book.

Main Section

1. In the main section (if `__name__ == "__main__":`), create an instance of the Library class with an initial list of books.
2. Create an instance of the Student class.
3. Implement a loop to repeatedly display a menu with the following options:
 - List all the books
 - Request a book
 - Return a book
 - Exit the Library

Bonus Task:

Choose either Library Management System or Number Guessing Game. If you successfully complete both tasks, you will receive bonus marks.

===== Welcome to Central Library =====

Please choose an option:

1. List all the books
2. Request a book
3. Return a book
4. Exit the Library

Enter a choice: 1

Books present in this library are:

- * Algorithms
- * Django
- * Clrs
- * Python Notes

Enter a choice: 2

Enter the name of the book you want to borrow: Django

You have been issued Django. Please keep it safe and return

Enter a choice: 1

Books present in this library are:

- * Algorithms
- * Clrs
- * Python Notes

Enter a choice: 3

Enter the name of the book you want to return: Django

Thanks for returning this book! Hope you enjoyed reading it

Enter a choice: 4

Thanks for choosing Central Library. Have a great day ahead

Number Guessing Game

1. Implement a Number Guessing Game using the provided code.
2. Allow the user to guess a random number between 1 and 100.
3. Display hints for each incorrect guess.
4. Track the number of guesses and print it at the end.
5. Update and display a high score saved in "hiscore.txt".

```
Enter your guess: 5
You guessed it wrong! Enter a larger number
Enter your guess: 14
You guessed it wrong! Enter a larger number
Enter your guess: 19
You guessed it wrong! Enter a smaller number
Enter your guess: 18
You guessed it wrong! Enter a smaller number
Enter your guess: 17
You guessed it right!
You guessed the number in 18 guesses
```

Important Note:

- Clearly comment your code for better understanding.
- Ensure the code is readable, organized, and follows proper naming conventions.
- If you choose to do both tasks, submit two separate files, one for each task.
- Test your code thoroughly to check if it performs as expected.

Feel free to ask if you have any questions or need further clarification!

End