This function, **addBookToFile**, is responsible for adding a book to a file named "books.txt". Let's break down how it works:

1. **FILE \*file = fopen("books.txt", "a");**: This line opens the file "books.txt" in append mode (**"a"**). If the file doesn't exist, it creates one; if it does exist, it appends new data to the end of the file. The **fopen** function returns a pointer to a **FILE** structure, which represents the opened file.
2. **if (file == NULL) { printf("Error opening file!\n"); exit(1); }**: This **if** statement checks if the file opening operation was successful. If **fopen** returns **NULL**, it means the file couldn't be opened for some reason (for example, if it doesn't exist or the program doesn't have permission to access it). In this case, it prints an error message and exits the program using **exit(1)**.
3. **fprintf(file, "%s|%s|%.2f\n", b.title, b.author, b.price);**: Assuming the file was opened successfully, this line writes data to the file using the **fprintf** function. It formats and writes the title, author, and price of the book to the file in a specific format (with '|' characters as separators between the fields). The **b** parameter passed to the function contains the data of the book to be written.
4. **fclose(file);**: Finally, this line closes the file using the **fclose** function. This is important to release system resources associated with the file and ensure that any buffered data is written to the file.

So, in summary, this function opens a file named "books.txt" for appending, writes the data of a book to the file in a specific format, and then closes the file. If any error occurs during the file opening process, it prints an error message and exits the program.

This code defines two functions and a **main** function. Let's break down what each part of the code does:

1. **displayBooksFromFile function:**
   * This function opens the "books.txt" file in read mode (**"r"**).
   * If the file cannot be opened, it prints an error message and exits the program.
   * It declares a **struct Book** variable **b** to store the book data read from the file.
   * Inside a **while** loop, it reads each line from the file using the **fscanf** function, expecting the format specified (**"%[^|]|%[^|]|%f\n"**), which represents the title, author, and price of a book separated by '|' characters.
   * Within the loop, it prints the title, author, and price of each book to the console.
   * After reading all the books from the file, it closes the file using **fclose**.
2. **main function:**
   * It initializes an array **books** containing data of three sample books.
   * It calculates the number of books in the array using the **sizeof** operator.
   * It iterates over each book in the **books** array and adds it to the "books.txt" file using the **addBookToFile** function.
   * Finally, it calls the **displayBooksFromFile** function to display all the books stored in the "books.txt" file.

Overall, this code demonstrates how to read data from a file containing information about books and display it on the console. It also showcases how to write data to the file. The **displayBooksFromFile** function ensures that the file is opened, read, and closed correctly, handling errors if the file cannot be opened.

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