//program to calculate fine for overdue library books

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#include <stdio.h>

int main() {

int bookID;

int dueDate, returnDate, daysOverdue;

float fineRate, fineAmount;

// Ask for user input

printf("Enter the Book ID: ");

scanf("%d", &bookID); // Capture the book ID

printf("Enter the due date (as a day number): ");

scanf("%d", &dueDate); // Capture the due date

printf("Enter the return date (as a day number): ");

scanf("%d", &returnDate); // Capture the return date

// Calculate days overdue

daysOverdue = returnDate - dueDate;

// Determine fine rate based on days overdue

if (daysOverdue <= 0) {

fineRate = 0.0; // No fine

} else if (daysOverdue <= 7) {

fineRate = 20.0; // Ksh 20 per day

} else if (daysOverdue <= 14) {

fineRate = 50.0; // Ksh 50 per day

} else {

fineRate = 100.0; // Ksh 100 per day

}

// Calculate the total fine amount

fineAmount = fineRate \* daysOverdue;

// Display the results

printf("\n--- Library Fine Details ---\n");

printf("Book ID: %d\n", bookID);

printf("Due Date: %d\n", dueDate);

printf("Return Date: %d\n", returnDate);

printf("Days Overdue: %d\n", daysOverdue);

printf("Fine Rate: Ksh %.2f per day\n", fineRate);

printf("Total Fine Amount: Ksh %.2f\n", fineAmount);

return 0;

}