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/*
FILE COPYING PROGRAM - STEP BY STEP OVERVIEW
=====
This program copies the contents of one file to another file.

STEPS:
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1. Accept two file names as command-line arguments (source and destination)
2. Validate that exactly 2 file names are provided
3. Open the source file in read mode ("r")
4. Check if source file opened successfully
5. Open the destination file in write mode ("w")
6. Check if destination file opened successfully
7. Read the source file character by character
8. Write each character to the destination file
9. Stop reading when End-Of-File (EOF) is reached
10. Close both files to free resources
11. Display success message to the user

HOW TO RUN:
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Command: program_name.exe source_file.txt destination_file.txt
Example: FileHandling_2.exe input.txt output.txt

*/
#include <stdio.h>
#include <stdlib.h>

// argc = argument count, argv = argument vector (array of strings)
int main(int argc, char *argv[]) {
    FILE *source_file, *dest_file;
    char ch;

    // Check if the correct number of arguments is provided
(program_name, source, destination)
    if (argc != 3) {
        printf("Usage: %s <source_file> <destination_file>\n",
argv[0]);
        exit(1);
    }
}

```

```
// Open source file in read mode ("r")
source_file = fopen(argv[1], "r");
if (source_file == NULL) {
    printf("Error: Cannot open source file %s.\n", argv[1]);
    exit(1);
}

// Open destination file in write mode ("w"). Creates it if it
doesn't exist.
dest_file = fopen(argv[2], "w");
if (dest_file == NULL) {
    printf("Error: Cannot create destination file %s.\n", argv[2]);
    fclose(source_file);
    exit(1);
}

// Read character by character from source and write to destination
while ((ch = fgetc(source_file)) != EOF) {
    fputc(ch, dest_file);
}

printf("File contents successfully copied from %s to %s.\n",
argv[1], argv[2]);

fclose(source_file);
fclose(dest_file);
return 0;
}
```