

Java Program Documentation

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1. SortCharacter Program

The `SortCharacter` program reads a line of input from the user, groups the characters into vowels and consonants, and prints the sorted characters.

Usage Instructions

1. Run the program.
2. Enter a line of words.
3. The program will print sorted vowels and consonant characters.

Code Explanation

- **Imports and Initialization:** Imports the `java.util` package and declares the `SortCharacter` class.
- **Input Reading:** Users a `Scanner` to read input from the user.
- **Character Grouping:** Separates characters into vowels and consonants using two maps (`Map`).
- **Result String Building:** Uses the `buildSortString` method to build strings from the sorted maps.
- **Vowel Check:** The `isVowel` method determines if a character is a vowel.

2. Psbb Program

The `Psbb` program calculates the minimum number of buses needed to transport families based on family size, with a maximum capacity of 4 people per bus.

Usage Instructions

1. Run the program.
2. Enter the number of families.
3. Enter the size of each family separated by spaces.
4. The program will print the minimum number of buses required.

Code Explanation

- **Imports and Initialization:** Imports the `java.util` package and declares the `Psbb` class.
- **Input Reading:** Uses a `Scanner` to read the number of families and the size of each family.
- **Input Validation:** Ensures the number of family sizes entered matches the number of families.
- **Parsing and Sorting:** Converts family sizes from strings to integers and sorts them.
- **Bus Calculation:** Uses two indices to efficiently pair families and count the required number of buses.