Project File Description: apartmentCalculator.ts

Language Used:

- TypeScript (a typed superset of JavaScript, commonly used in modern web development)

Functionality:

This file contains logic to calculate and generate apartment distribution within a building, based on the following inputs:

- Total area of the building

- Fixed areas (elevator, stairs, corridors)

- Desired percentage allocation for each apartment type (1-bedroom, 2-bedroom, 3-bedroom)

- Approximate size of each apartment type

The script calculates the number of possible apartments for each type and prints the results.

Main Components:

1. Interfaces:

   - ApartmentType: contains name, size (m²), percentage

   - BuildingSpecs: contains totalArea and fixedAreas (elevator, stairs, corridors)

2. Function:

   - calculateApartmentDistribution(buildingSpecs, apartmentTypes)

     * Calculates fixed area and subtracts from total

     * Distributes the remaining area based on percentage

     * Calculates number of apartments

     * Prints the results

3. Example Execution (added to the file):

   - Uses 1000 m² building with defined fixed areas

   - Allocates 30% to 1-bedroom, 40% to 2-bedroom, 30% to 3-bedroom

   - Calculates number of apartments based on defined sizes

To Run the File:

1. Install TypeScript and ts-node:

   npm install -g typescript ts-node

2. Run using:

   ts-node src/apartmentCalculator.ts