

Test Assignment

Problem Description

Each night the following bands play. Also, Rita Linter who plays a seven-stringed Ukulele made by Brick with a string-size of 1.2 mm is eager to join any band that would allow her since her previous band was dissolved. Rumor has it more bands might join in the future.

Band: "Tweek and Skaters"

Musician -name: "Hazy Baar"; Instrument: Guitar -number of strings: 5. -manufacturer: "Bender"; -string size: 0.4mm.	Musician -name: "Beatwin"; Instrument: Piano -number of keys: 51. -manufacturer: "McFaren"; -is acoustic.	Musician -name: "The Void"; Instrument: Synthesizer -number of keys: 47. -has LED. -manufacturer: "Lorg";
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Band: "Frayrats"

Musician -name: "Stringsteen"; Instrument: Banjo -number of string: 4. -manufacturer: "Gibson"; -string size: 8mm.	Musician -name: "Xindea"; Instrument: Drums -has hi-hat. -manufacturer: "Toyota";	Musician -name: "Captor"; Instrument: Synthesizer -number of keys: 72. -has no LED. -manufacturer: "Suzuki";
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Each band can have any number of members as long as there are not more than one of each instrument present. Every day each band randomly loses a band-member, if there are any, and recruits a musician not already in a band.

Task Description

Write a console application, which provides the following options in its first version.

1. List the name of all bands with their members and the properties of their instruments.
2. Play one night. When this option is chosen, each band loses a random member and musicians without a band try to join a random band. Print all changes to the console. For example "The Void left Tweek and Skaters. Musician Xindea left Frayrats. Musician Xindea joined Tweek and Skaters."
3. Exit

Write a short design document describing the most important aspects of your design. Use the Java programming language to implement the application. Object-oriented design as well as high quality code will be deciding factors. Using relevant coding conventions will give you additional points.

If you think some part of the exercise is unclear, do not worry. Decide for yourself what would be a logical or fun thing to do, and explain in your design document why you did what you did. When done, deliver the whole package as a zip-file via email and ensure it contains everything needed for us to create the running program to verify it.