Chapter 3  
MATLAB EXERCISE

Chords in MATLAB

Write one of the two following programs in MATLAB. You can divide your implementation into separate programs or functions if you like, one for scales and one for chords.

Version A
Your program should have the following functionality:

- The user can indicate a key in which chords are to be played, including whether the key is major or minor.
- The user then selects the type of chord from
  - major triad
  - minor triad
  - augmented triad
  - diminished triad
  - minor seventh
  - dominant seventh
  - major seventh
- The above activities should be in a loop that continues until the user chooses “quit.”

Version B
Your program should have the following functionality:

- The program randomly determines a key, including whether the key is major or minor.
- The program then randomly generates chords of one of the following types:
  - major triad
  - minor triad
  - augmented triad
  - diminished triad
  - minor seventh
  - dominant seventh
  - major seventh
- The user is given the opportunity to guess the key and chord that is being played, and the program tells the user if the answer is correct. If the answer is not correct, the correct answer is given.
- The above activities should be in a loop that continues until the user chooses “quit.”

In both version A and version B, your program should make chords by writing sound samples directly to the sound device.