Domain Models

Piano Domain Model

Piano

Key[] keys
Integer octave

playNote(key) : boolean
stopNote(key) : boolean
upOctave() : void
downOctave() : void

1

contains

1..*

Key

Boolean playing
Integer key

play() : void

User Data Domain Model

User

SavedData userdata
token : GoogleSigninToken

getUserData() : SavedData
deleteUser() : boolean
getSavedChords() : Chord[]

1 has▶ 1

SavedData

Chord [] chords
ChordProgression [] chordprogs

addData(Chord) : boolean
addData(ChordProgression) : boolean
removeData(Chord) : boolean
removeData(ChordProgression) : boolean

1   1

contains   contains
   ▼   0..* ▼

0..*

ChordProgression

Chord [] chords
Integer numChords

getName() : string
getChords() : List of Chords

consists of ▶

0..*   2..*

Chord

Integer[] Intervals
Character tonic
Integer octave

getIntervals() : Integer[]
getTonic() : character
getOctave() : integer
getName() : string

Synthesizer Domain Model

Piano

Synthesizer

getSynthesizer() : Synthesizer

1

for

1

Synthesizer

Sample [] samples
Waveform [] waveforms

incrementReverb(int) : boolean
decrementReverb(int) : boolean
useSample(int) : boolean
addSample(Sample) : int
removeSample(Sample) : int

1

has

0..*

1

has

1..*

Sample

Integer Length
File audioRecording

shiftSample(int offset) : Sample

Waveform

Shape shape
Integer amplitude
Integer frequency
Integer period