//Elijah Spencer

import java.util.Iterator;

//Album Iterator Class

public class AlbumIterator implements Iterator<Song> {

private Song[] song;

private int position = 0;

public AlbumIterator (Song[] songs) {

this.song = songs;

}

@Override

public boolean hasNext() {

// TODO Auto-generated method stub

if(song[position] == null || position >= song.length )

return false;

return true;

}

@Override

public Song next() {

// TODO Auto-generated method stub

Song sg = song[position];

++position;

return sg;

}

}

//Song Class

public class Song {

private String name;

private String artist;

private double length;

private String genre;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String getArtist() {

return artist;

}

public void setArtist(String artist) {

this.artist = artist;

}

public double getLength() {

return length;

}

public void setLength(double length) {

this.length = length;

}

public String getGenre() {

return genre;

}

public void setGenre(String genre) {

this.genre = genre;

}

public Song(String name, String artist, double length, String genre) {

this.name = name;

this.artist = artist;

this.length = length;

this.genre = genre;

}

public void print() {

System.out.println(this.name + " Artist: "+this.artist +" Genre: " + this.genre +" Length: "+this.length);

}

}

import java.util.Iterator;

public class SongDriver {

public static void main(String[] args) {

Album myHits = new Album("Surfer Girl");

myHits.addSong("Surfer Girl", "The Beach Boys", 2.26, "pop");

myHits.addSong("Catch a Wave", "The Beach Boys", 2.07, "pop");

myHits.addSong("The Surfer Moon", "The Beach Boys", 2.11, "pop");

myHits.addSong("South Bay Surfer", "The Beach Boys", 1.45, "pop");

myHits.addSong("The Rocking Surfer", "The Beach Boys", 2, "pop");

myHits.addSong("Little Deuce Coupe", "The Beach Boys", 1.38, "pop");

myHits.addSong("In My Rooom", "The Beach Boys", 2.11, "pop");

myHits.addSong("Hawaii", "The Beach Boys", 1.59, "pop");

myHits.addSong("Surfers Rule", "The Beach Boys", 1.54, "pop");

myHits.addSong("Our Car Club", "The Beach Boys", 2.22, "pop");

myHits.addSong("Your Summer Dream", "The Beach Boys", 2.27, "pop");

myHits.addSong("Boogie Woodie", "The Beach Boys", 1.56, "pop");

AlbumIterator songIterator = myHits.createIterator();

System.out.println("Song List:");

while(songIterator.hasNext()) {

Song song = songIterator.next();

song.print();

}

}

}

//Album Class

public class Album {

private Song[] songs;

private int count;

private String name;

public static final int MAX\_SONGS = 20;

public Song[] getSongs() {

return songs;

}

public void setSongs(Song[] songs) {

this.songs = songs;

}

public int getCount() {

return count;

}

public void setCount(int count) {

this.count = count;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public Album(String name) {

this.name = name;

}

public void addSong(String name, String artist, double length, String genre) {

if(songs == null) {

songs = new Song[MAX\_SONGS];

songs[0] = new Song(name,artist,length,genre);

++count;

}

songs[count] = new Song(name,artist,length,genre);

++count;

}

public AlbumIterator createIterator() {

return new AlbumIterator(songs);

}

//Iterator interface

public interface Iterator {

public boolean hasNext();

public Object next();

}