



Lab 4

Album Information

Object-oriented Programming

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Get Album Information from User and Display It

- Get album information from user and store it in an Album object
- See the UML diagram for the data fields of the Album class
- Albums have:
 - Album name
 - Artist name
 - Array of song names
 - Arrays of song durations
- Output the album information using toString method:
`System.out.println(myAlbum);` // here myAlbum is an Album object

UML Diagram

Album

-name: String
-artist: String
-songNames: String[]
-songDurations: int[]
-currentSongCount: int
-MAX_SONG_COUNT: int

+Album()
+setAlbumName(name: String): void
+setArtistName(artist: String): void
+addSong(name: String, duration: int): void
+toString(): String

Album name
Artist name
Song names
Song durations in seconds
Number of current songs in the album
Maximum number of songs an album can have

Default constructor. Initializes arrays
Sets album name
Sets artist name
Adds song information to corresponding arrays
Generates album information string, as shown in sample output

Sample Main Code

```
public class App {  
    public static void main(String[] args) {  
  
        Album myAlbum = new Album(); // create an album  
        Scanner input = new Scanner(System.in);  
  
        // Get album name and artist info  
        // Get all song information. There are 3 songs for an album.  
  
        // Display album information. Use toString method.  
        System.out.println(myAlbum);  
    }  
}
```



Sample Output

Enter album name: Aqua

Enter artist name: Asia

Get album song information: song name and duration in seconds
(assume that there are 3 songs)

Enter song 1 name: A

Enter song 1 duration (in seconds): 101

Enter song 2 name: B

Enter song 2 duration (in seconds): 202

Enter song 3 name: C

Enter song 3 duration (in seconds): 404

Album Information:

Album: Aqua, Artist: Asia, Songs: [A:101 B:202 C:404]

