1. Briefly describe a possible collection of classes which can be used to represent a music collection (for example, inside a music player), focusing on how they would be related by composition. You should include classes for songs, artists, albums and playlists.

Hint: write down the four class names, draw a line between each pair of classes which you think should have a relationship, and decide what kind of relationship would be the most appropriate.

For simplicity you can assume that any song or album has a single “artist” value (which could represent more than one person), but you should include compilation albums (which contain songs by a selection of different artists). The “artist” of a compilation album can be a special value like “Various Artists”. You can also assume that each song is associated with a single album, but that multiple copies of the same song (which are included in different albums) can exist.

Class Songs {

Private:

Id;

Name;

Artist\_id;

Album\_id;

Song\_length;

Song\_length;

Format;

Type;

Public:

Show\_ all\_songs();

Search\_song\_artist();

Search\_song\_album();

Search\_song\_name();

}

Class PlayList {

Private:

Id;

Name;

Song\_list;

Public:

Show\_all\_playlist();

Search\_playlist\_name();

}

Class Albums {

Private:

Id;

Name;

Artists\_id;

song\_id;

no\_of\_songs;

public:

show\_all\_album();

search\_album\_name();

}

Class Artists {

Private:

Id;

Name;

Type;

Age;

Bio\_details;

Public:

Search\_artists\_name();

Show\_all\_artists();

}