

INFAMOUS MUSIC

Adolfo Jiménez Prieto

Victor de Vierna Valcarce

Gonzalo Molpeceres Barrientos

1- CONTEXT OF THE PROBLEM

The arise of Infamous come along with the increasing need for music lovers and others audiophile to have access to a great amount of information about their favourites musicians and groups in order to stay tuned.

We focused our efforts in making a full-featured platform

We make a database with the purpose of create a full-featured platform to buy, download and listen to the best electronic music.

We classify the music files with their corresponsive metadata which contains:

- Artist
- Remixer (In case it happens)
- Release date
- Album
- Genre
- Record Label
- Tone
- BPM (Beats per minute)

The database also contains information about the users. They are capable of buy tracks, create track lists, give them feedback and if your favourite artist upload a track, we will notify you.

The employees are the responsible of the maintenance of the platform. They upload everyday new releases and recommend users what to buy according to their preferences.

2 – DATA REQUIREMENTS

Our database has 16 entities (4 weeks)

PART 1: Musical entities

1. **Tracks:** The essence of Infamous. The database is based in the relationship with the tracks. As attributes we can distinguish the reference number of the track (primary key), genre, BPM (beats per minute), release date, tone, price, etc.
2. **Artist:** They are fundamental and we are key-focused in highlight them along with the genres they are related to. The primary identifier is the artistic name along with other attributes like age, gender, and years of experience.
3. **Album:** Artists usually release tracks along with an album, these albums are identified thanks to the number of reference (primary key), genre, number of tracks and release date.
4. **Record Label:** They are the engine of the music industry; they support artists and help them to release albums along with the distributor. They are identified by the company id (CIF)
5. **Distributors:** Are the company in charge of the distribution of albums and stay in contact with us to add their music to our platform. They can be identified by their name.

PART 2: Staff

1. **Employees:** Employees are people who were hired by us to do a specific job. After several interview processes we select the most applicant person to do the job. In our company we have three categories of employees: Developers, admins and managers. As primary identifier

we use their Security Social Number. As attributes: ID, full name, hiring date and address.

2. **Developers:** They maintain the webpage and keep it updated with the last network technologies. They are a category of employees, so they have the same attributes as Employees.
3. **Admins:** They are who keep the webpage updated with the last tracks and albums. Also provide a great support to the users who has any problem related with our services. They are a category of employees, so they have the same attributes as Employees.
4. **Managers:** Managers are the people who rules over admins and developers and take important decisions to daily improve our company. They are a category of employees, so they have the same attributes as Employees.
5. **Payroll:** The salary we pay to our employees. The salaries are paid at the end of the month. We have an antiquity policy: The new employees earn less than employees that have been working during years. Managers distribute the incomes: they decide salary of admins and developers and get the rest of the benefits for their own salary and save a percentage for invest in new technologies. It is a weak entity.

PART 3: Infrastructure

6. **Purchase tracks:** It is the cart. It has a unique ID which identifies the track that a person has bought. Besides ID we use as attributes: number of tracks, total price, discounts.
7. **Users:** People can sign up to Inferno to create a profile and buy music. They can create playlist with their favourite tracks and mixes. As we don't allow to repeat usernames we use it as a primary identifier because there aren't same usernames. Also we use as attributes: Register date, email, password (encrypted), audio preferences (select the audio format you prefer as a default for your purchases: mp3, wav, aiff), history of the purchases and their birthday (to send them a track completely free).

8. **Playlist:** Everyone likes to have all his music organized so users can make their own playlist (either public or private). In the way it relies on track, it is a weak entity.
9. **Coupons:** As we love our clients, we want to thank them their reliance. Each month we upload to our social networks several codes to discount a huge percentage on certain tracks. As primary identifier we use the code's name. Also we use the code itself (number), percentage of discount as attributes.
10. **Payment:** The payment leaves a written record of the purchased realized by each users. Also treasury department needs a payments justification. It includes taxes. As primary identifier we use the payment ID. As attribute we use the date of transaction. Like it depends of others entities it is a weak entity.
11. **Billing information:** Information about payment methods that users have available. It is a weak entity.

3 – FUNCTIONAL REQUIREMENTS

The database is designed to implement to our online music store a huge amount of data that we need to provide the users a correct service and stay tuned with users expectancies.

- 1- Analytics of the bought tracks. Thanks to this analytics we can make charts of the most sale tracks depending the genre.
- 2- Knowing the username we can recommend to our clients a special playlist based on his previous purchases.
- 3- The employees aren't the same always, so the database could be modified if necessary and add/remove employees.
- 4- Only the managers has total access to the database. That is to say employees won't be able to view information about other employees.
- 5- With the use of charts and analytics managers can figure out how to maximize benefits.

- 6- We have a great support. If any client have any doubt about the page, payment method or whatever our employees can resolve their doubts. We monthly make surveys to know the opinion of our clients about our services.
- 7- Each track has to have all attributes defined. Per example: Artist name, track name, BPMs, tone, price, etc...
- 8- There are record labels that sign with us a contract of exclusively. That is to say a change of price in the tracks to advantage that exclusively. An exclusive track cost 2.50€ unlike normal tracks that cost 1.50€ in average.
- 9- To make our online shop global we implement an automatic currency conversion that allows people to pay according with the current state of the currency.