NORMALIZATION OF RELATIONS

1NF

After parsing the table, we can say that the table is in 1NF. Because each table represents a single value and does not contain multiple fields. We have a Costumers table, it contains information about the client, costumer ID code, cFirst name, cLast name, c\_email, City of residence, client's birthday.

The second table we have is the Author, he has an Identifier Code, First Name, Last Name, Mail. The third Publisher is to store the ID code and the year since which year the publisher and author of the ID has been working, as well as a beech table.

The fourth table we have Books and it has information about the book, its price, title, quantity, year of issue and book ID code and author code to find out the author.

The fifth table is Category and it has a category by genre and by age and its identifier code and to recognize the book there is an identifier code.

The sixth table is Staffs and it contains all the information about the staff.

The seventh table is Feedbacks, it has a comment ,costumer id, book id. The seventh table is orders and it contains all the information about orders, as well as the staffs code and the costumer code.

2NF

Also, our database is in 2NF. Because it follows all the rules of the first form as well, each field is functionally dependent on a primary key that identifies the original table object.

Costomers\_id🡪cfirst\_name, clast\_name, c\_email, address,cbirth\_date

Author\_id🡪afirst\_name,alast\_name,a\_email

publisher\_id🡪book id

book\_id🡪 author\_id

book\_id🡪book\_name,price,count,isbn,bpub\_year

book\_id🡪 author id

publisher\_id🡪book id

categories\_id🡪book\_id

categories\_id🡪genre,readership

staff\_id🡪 sfrist\_name,s\_email,s\_last\_name,status ,sbirth\_date

order\_id🡪book\_id

order\_id🡪 staff\_id

order\_id🡪costumer\_id

order\_id🡪order\_status,orders\_time

feedback\_id🡪costumer\_id,book\_id

feedback\_id🡪fcomment,rating

3NF

After we check the table for 3NF, since our table is in second normal form, we check for transitive dependency, the table should not transitively depend on the primary key.

On the publisher table there is a book ID to find out information about the book and all book objects do not depend on the publisher table.

The second in the Books table is the author's code and all the author's information is available through his code and does not cause dependence on the Books table.

The third table is the Category and the code of the book in it to find out information about the book. And here, too, dependence does not arise, since we have separated the category from the book.

The fourth table is orders and it contains the code of the costumer, staff, book. With the help of the client code, we can find out information about the client, and with the help of an employee, we get information about the employee who is responsible for the order, and thirdly, with the help of the book code, we get data about the ordered book. There is no transitive dependency here. The last one is the Comments table and it contains the code of the client who left the comments and the code of the book in which the comment are written.