# Tutorial: Aggregate and Nested Queries

This tutorial uses the schema and data of the database created in Tutorial 2.

1. Aggregate Queries.

   (a) How many loans involve an owner and a borrower from the same department?

   (b) For each faculty, print the number of loans that involve an owner and a borrower from this faculty?

   (c) What are the average and the standard deviation of the duration of a loan in days?

2. Nested Queries

   (a) Print the titles of the different books that have never been borrowed. Use a nested query.

   (b) Print the name of the different students who own a copy of a book that they have never lent to anybody.

   (c) For each department, print the names of the students who lent the most.

   (d) Print the emails and the names of the different students who borrowed all the books authored by Adam Smith.

## References

[1] W3schools online web tutorials. `www.w3schools.com`. Visited on 26 July 2021.

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[3] H. Garcia-Molina, J.D. Ullman, and J. Widom. *Database Systems: The Complete Book*. Pearson international edition. Pearson Prentice Hall, 2009.

[4] R. Ramakrishnan and J. Gehrke. *Database Management Systems*. McGraw-Hill, 2002.