

**Master of Science HES-SO in Engineering**  
Orientation: [Orientation]

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**[ThesisTitle]**

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*[ThesisSubject]*

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## Declaration of honor

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## Validation

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Advisor

Prof. X

Dean, HES-SO//[Diploma]



# Abstract

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**Key words:** keyword1, keyword2, keyword3



# Résumé

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**Mots clés:** motclé1, motclé2, motclé3

Sometimes a scream is better than a thesis.  
— Manfred Eigen

To my parents...



# Acknowledgments

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# Preface

A preface is not mandatory. It would typically be written by some other person (eg your thesis director).

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*Fribourg, 21 March 2022*

T. D.

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# List of Listings

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# 1 | Introduction

## 1.1 Context

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## 1.2 Objectives

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## 1.3 Structure of this report

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## 2 | Analysis

This chapter shows example of picture and also serves to populate the different lists: list of figures, list of tables, bibliography, and glossary.

### 2.1 Tables

This section contains an examples of table: Table 2.1 and

| name  | weight | food   |
|-------|--------|--------|
| mouse | 10 g   | cheese |
| cat   | 1 kg   | mice   |
| dog   | 10 kg  | cats   |

*Table 2.1: A floating table.*

### 2.2 Milestones

The project consists of several milestones along the way to lay the foundation for its progress.

| Name  | Weight | Food   |
|-------|--------|--------|
| mouse | 10g    | cheese |
| cat   | 1kg    | mice   |
| dog   | 10kg   | cats   |

*Table 2.2: A pretty table*

#### 2.2.1 Figures

This section contains examples of figures: Figure 2.1, Figure 2.2a, Figure 2.2b, Figure 2.2c, Figure 2.2d

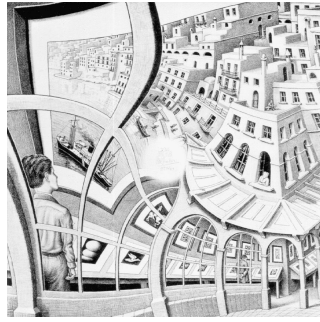


Figure 2.1: A floating figure: the lithograph *Galleria di stampe*, of M. Escher

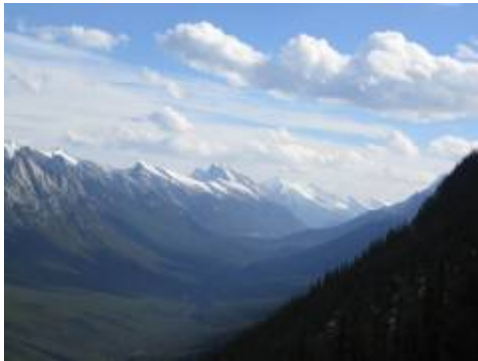
Source: <http://www.mcescher.com/>



(a) A gull



(b) A tiger



(c) A mouse



(d) A mouse

Figure 2.2: Example subcaption

### 2.2.2 Boxes

IMPORTANT There is the possibility to insert custom boxes like information or warning wise.



This is an important information.



Attention! This is a warning!

### 2.2.3 Citation or text references

#### *Citation*

*"Lorem ipsum dolor sit amet, consectetur adipiscing elit."*

John Doe and Jane Doe

#### **Subsection Title**

This is a subsection.

### 2.2.4 Code

Listing 2.1 shows an example of Java code rendered with minted.

```
/**
 * The HelloWorldApp class implements an application that
 * simply prints "Hello World!" to standard output.
 */
class HelloWorldApp {
    public static void main(String[] args) {
        System.out.println("Hello World!"); // Display the string.
    }
}
```

*Listing 2.1: Example of listing using the minted package*

### 2.2.5 Other features

Term (glossaries): NoSQL

Acronym (glossaries): Structured Query Language (SQL)

Citation (biblatex): [1]

Cat: <https://en.wikipedia.org/wiki/Cat>

## 2.3 Conclusion

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



## 3 | Design

### 3.1 Short lists

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1. First item in a list
2. Second item in a list
3. Third item in a list
4. Fourth item in a list
5. Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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- First item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list

- Fifth item in a list

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**First** item in a list

**Second** item in a list

**Third** item in a list

**Fourth** item in a list

**Fifth** item in a list

### 3.2 Long lists

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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**First item in a list** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.



**Second item in a list** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

**Third item in a list** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

**Fourth item in a list** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

**Fifth item in a list** Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

### 3.3 Multi-level lists

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- First item in a list
  - First item in a list

- \* First item in a list
- \* Second item in a list
- \* Third item in a list
- \* Fourth item in a list
- \* Fifth item in a list
  
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list
  
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

1. First item in a list
  - (a) First item in a list
    - i. First item in a list
    - ii. Second item in a list
    - iii. Third item in a list
    - iv. Fourth item in a list
    - v. Fifth item in a list
  - (b) Second item in a list
  - (c) Third item in a list

- (d) Fourth item in a list
  - (e) Fifth item in a list
2. Second item in a list
  3. Third item in a list
  4. Fourth item in a list
  5. Fifth item in a list

### 3.4 Conclusion

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros, malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit. Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.



## 4 | Implementation

### 4.1 Section 1

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### 4.2 Section 2

### 4.3 Conclusion



## 5 | Validation

### 5.1 Section 1

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### 5.2 Section 2

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Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

### 5.3 Conclusion

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## **6 | Conclusion**

**6.1 Project summary**

**6.2 Comparison with the initial objectives**

**6.3 Encountered difficulties**

**6.4 Future perspectives**



# History

| Version | Date | Modification |
|---------|------|--------------|
| 0.0     | -    | -            |
| 0.1     | -    | -            |

*Table 6.1: Version history*



# A | Appendices

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# References

- [1] Tyler Akidau et al. “MillWheel: Fault-Tolerant Stream Processing at Internet Scale”. In: *Very Large Data Bases*. 2013, pp. 734–746.





# Glossary

**NoSQL** Database not using the relational model and the SQL language. 5

**SQL** Structured Query Language. 5, 27