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# Abstract

My name is Alexander Rich, I am currently a student in Software Engineering II course. I am a master’s student pursuing a degree in Electronics Engineering and took this course to help expand my knowledge of Software Engineering. This document is my RASD submission where you will find all the requested sections of the assignment. Please note this is a single student project. The focus will be on the provision of information by companies and students, the management of the selection process, assuming that students identify interesting companies manually by proactively querying S&C, and the monitoring of the execution of the internships.

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# Introduction

## Purpose

The main goal for most students, and Universities alike, is to gain the necessary domain knowledge and training required to enter the industry they are interested in. Finding the right company can be a very difficult task for both the prospective employee (student) and the employer. Perhaps one of the best ways to gain real industry experience either while pursuing a degree or shortly after is an internship. Internships allow companies to evaluate prospective employees, at a discount, while students get the training they need and an understanding of company culture and whether or not the job is personally fulfilling. Done correctly it can be a win-win situation. Hiring is a costly process; monetarily for a company, and emotionally for the prospective employee. Students&Companies (S&C) is a platform that removes some of this friction. S&C helps match University students looking for an internship and companies that have availability. The matching focuses on the experience, skills and demeanour of the student provided by their CV’s and the projects offered. Projects can include application domain, tasks and responsibilities, relevant technologies utilized, and terms of the project. The terms can include whether or not the internship is paid, if training is provided and duration. Ultimately the platform serves as advertisement for companies with internship opportunities and as a resource for students to find what internships are available to them. The main goals of the platform can be found in section 1.1.1.

### Goals

[G1] Companies advertise available internships

[G2] Students can query available internships

[G3] Both students and companies can be recommended to eachother based on the respective parties needs

[G4] The monitoring of the execution of the internships, including the collection of complaints

## Scope

The scope of this platform followers two main users: Students and Companies

### Figures

Insert a High-definition image and take care about “*Wrap*” and “*Anchor*” to avoid text sliding. You can also insert the image in a one-row table with *no-borders*.

Remember to cite the Figure 1.1 using “*References-Cross reference-Figure*” after having insert the caption “*References-Insert caption-Figure*”. At the end of the manuscript there is a section dedicated to the List of figures (*Reference-Insert Table of Figures-*choose *figure*).

Logo

Description automatically generated

Figure 1.1: Polimi logo.

Figures can also contain multiple sub-figures (better use *no-border* table) with their own caption and label, e.g. Figure 1.2a and Figure 1.2b.

|  |  |
| --- | --- |
| Logo  Description automatically generated  (a) One PoliMi logo. | Logo  Description automatically generated  (b) Another PoliMi logo. |

Figure 1.2: This is a very long caption that you don’t want to be displayed on the List of Figures.

### Tables

In the following examples of tables are reported. Remember to label and to cite them such as in Table 1.1. At the end of the manuscript there is a section dedicated to the List of Tables (*Reference-Insert Table of figures-*choose *table*). Cell colour HEX #8EA5B6.

Table 1.1: Caption to be displayed in List of Tables.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **column1** | **column2** | **column3** |
| **row1** | 1 | 2 | 3 |
| **row2** | α | β | γ |
| **row3** | alpha | beta | gamma |

You can also consider highlighting selected columns or rows to make tables more readable (Table 1.2 and Table 1.3).

Table 1.2: Highlighting the columns.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **column1** | **column2** | **column3** | **column4** | **column5** | **column6** |
| **row1** | 1 | 2 | 3 | 4 | 5 | 6 |
| **row2** | a | b | c | d | e | f |
| **row3** | α | β | γ | δ | φ | ω |
| **row4** | alpha | beta | gamma | delta | phi | omega |

Table 1.3: Highlighting the rows.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **column1** | **column2** | **column3** | **column4** | **column5** | **column6** |
| **row1** | 1 | 2 | 3 | 4 | 5 | 6 |
| **row2** | a | b | c | d | e | f |
| **row3** | α | β | γ | δ | φ | ω |
| **row4** | alpha | beta | gamma | delta | phi | omega |

### Algorithms

Pseudo-algorithms can be reported as in Algorithm 1.

|  |  |
| --- | --- |
| **Algorithm 1** Name of the Algorithm | |
| 1: | Initial instructions |
| 2: | **for** *for – condition* **do** |
| 3: | Some instructions |
| 4: | **if** *if – condition* **then** |
| 5: | Some other instructions |
| 6: | **end if** |
| 7: | **end for** |
| 8: | **while** *while – condition* **do** |
| 9: | Some further instructions |
| 10: | **end while** |
| 11: | Final instructions |

## Definitions, Acronyms, Abbreviations

### Theorems

Theorems must be formatted as:

**Theorem 1.1.** *Write here your theorem.*

*Proof.* If useful you can report here the proof.

### Proposition

Propositions must be formatted as:

**Proposition 1.1**. *Write here your proposition.*

### Lists

How to insert itemized lists:

* first item;
* second item;
* third item.

How to insert numbered lists:

1. first item;
2. second item;
3. third item.

## Revision History

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## Document Structure

Your thesis must contain a suitable Bibliography which lists all the sources used or consulted on developing the work. The list of references is placed at the end of the manuscript after the chapter containing the conclusions.

To insert citation using Word: *References-Insert citation-Add a new source*; here you can choose the type of source: website [1], book [2], journal article [3], patent [4], etc.

Fill all the field with the required information (title, author, year, …) and use the style IEEE to have the number in square brackets.

At the end of the manuscript there is a section dedicated to the Bibliography *(References-Bibliography)*.

# Overall Description

A final chapter containing the main conclusions of your research/study and possible future developments of your work must be inserted in this chapter.

## Product Perspective

## Product Functions

## User Characteristics

## Assumptions, Dependencies and Constraints

# Specific Requirements

## External Interface Requirements

### User Interfaces

### Hardware Interfaces

### Software Interfaces

### Communication Interfaces

## Functional Requirements

## Performance Requirements

## Design Constraints

### Standards Compliance

### Hardware Limitations

### Other Constraints

## Software System Attributes

### Reliability

### Availability

### Security

### Maintainability

### Portability

# Formal Analysis Using Alloy

# Effort Spent

# References

# Bibliography

|  |  |
| --- | --- |
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| [2] | J. Watson, F. Cric, "Molecular structure of nucleic acids: a structure for deoxyrobose nucleic acid," *Nature,* vol. 171, p. 737–738, 1953. |
| [3] | "https://support.microsoft.com/en-us/word," [Online]. |
| [4] | Prometeus, "Fire". Olympus Patent 1, 300.000 BC. |

# Appendix A

If you need to include an appendix to support the research in your thesis, you can place it at the end of the manuscript. An appendix contains supplementary material (figures, tables, data, codes, mathematical proofs, surveys, …) which supplement the main results contained in the previous chapters.

## Headings

To change the numbering of the headings of the index, select the heading then “*Multilevel list*” and apply the style “A”.

# Appendix B

It may be necessary to include another appendix to better organize the presentation of supplementary material.

## Headings

To change the numbering of the headings of the index, select the heading then “*Multilevel list*” and apply the style “B”.

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[Table 1.3: Highlighting the rows. 8](#_Toc93484119)

# List of symbols

|  |  |  |
| --- | --- | --- |
| **Variable** | **Description** | **SI unit** |
| ***u*** | solid displacement | m |
| ***uf*** | fluid displacement | m |

# Acknowledgments

Here you might want to acknowledge someone.