

IN4387 System Validation  
**Design & Verification of Controller for a Package  
Storage System**

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# Chapter 1

## EXAMPLES

### 1.1 A section

You can see a random figure in Figure 1.1.

A list:

- An item
- And another one



Figure 1.1: This is the google logo

An example of a table is given in table 1.1. See the literature list at the end of the report somewhere.

left aligned column	centred column
next row	random content

Table 1.1: This table contains stuff

This is an example of a reference [?].

And here a new example: pseudocode 1!

### 1.2 Another section

You should read all the stuff in section 1.1. This section holds only an example of a reference ;)

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**Algorithm 1** DEPTHFIRSTSEARCH

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**Require:** A graph  $G = (V, E)$  in adjacency list presentation, starting vertex  $v$ , an empty stack  $S$

**Ensure:** All vertices in this connected component labelled

- 1: label  $v$
  - 2: push all neighbours of  $v$  on  $S$
  - 3: **while**  $S$  **not** empty **do**
  - 4:    $w \leftarrow \text{pop } S$
  - 5:   label  $w$
  - 6:   **for**  $u$  in adjacency list  $w$  **do**
  - 7:     **if**  $u$  **not** labelled **then**
  - 8:       push  $u$  onto  $S$
-

## Chapter 2

# Introduction

## Chapter 3

# Global requirements

### Global Requirements

In the section, we describe the global requirements to required initially for the design of the controller:

1. Each elevator, rack and conveyor belt contains at most one packet.
2. Packet is exchanged only when the elevator platform is at the same level as that of a conveyor belt.
3. Packet is exchanged only when elevator platform is at the same level as that of a rack.
4. The two elevators cannot be at the same position.
5. The lower elevator must never pass the upper one.
6. Packets are always delivered in the same order as requested.
7. If a packet is ready to enter and there is a free position at the rack(s), it will be eventually accepted.
8. If a requested packet is in the system, it will be eventually delivered.
9. If a packet is unable to be located, a unique alarm must be generated.
10. The number of packets in the system can at most be equal to the number of racks.

## Chapter 4

# External interactions

## Chapter 5

# Translated requirements



## Chapter 6

# Architecture

## Chapter 7

# Modelling the controller

## Chapter 8

# Verification

## Chapter 9

# Experimental results

## Chapter 10

# Conclusions and recommendations

# Bibliography

## Appendix A

# Source Code Structure