



**FACULTY  
OF MATHEMATICS  
AND PHYSICS**  
Charles University

## **BACHELOR THESIS**

Denis Drobny

# **Extracting Information from Database Modeling Tools**

Department of Distributed and Dependable Systems

Supervisor of the bachelor thesis: RNDr. Pavel Parízek, Ph.D.

Study programme: Computer Science

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Dedication.

Title: Extracting Information from Database Modeling Tools

Author: Denis Drobny

Department: Department of Distributed and Dependable Systems

Supervisor: RNDr. Pavel Parízek, Ph.D., Department of Distributed and Dependable Systems

Abstract: Abstract.

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# Introduction

# 1. Introduction

## 1.1 Goals

## 1.2 Structure

-Introduction to each of the following chapters



## **2. Data Models and Abstraction Layers**

### **2.1 Data Modeling**

### **2.2 Abstraction Layer Types**

-Description of models' properties, hierarchy, types of objects and their attributes

#### **2.2.1 Physical Data Model**

#### **2.2.2 Logical Data Model**

#### **2.2.3 Conceptual Data Model**

### **2.3 Relations Between the Layers**

#### **2.3.1 Maps-to Relation**

### **2.4 Possible Construction of a Model**

#### **2.4.1 Modeling**

-Each layer

#### **2.4.2 Reverse-Engineering**

-Physical layer

#### **2.4.3 Generating**

-Downwards

#### **2.4.4 Importing**

-Each layer

## **3. Modeling Tools**

### **3.1 ER/Studio**

### **3.2 PowerDesigner**

## 4. Data Lineage

### 4.1 Theory

### 4.2 Manta Flow

#### 4.2.1 Supported Database Technologies

## 5. Analysis & Design of the Solution

### 5.1 Requirements

### 5.2 Analysis of the Problem

### 5.3 Architecture of the System

## 6. Implementation

### 6.1 Testing

### 6.2 Technologies

# 7. Developer Documentation

## 7.1 Building

## 7.2 Extensibility

Description of the common structure of the solution - what to do when a programmer wants to write a connector for another modeling tool.

## 8. User Documentation

### 8.1 Tutorials

### 8.2 Cooperation with Manta Flow

# Conclusion



# Conclusion

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## A. Attachments