

Curriculum

Curriculum for 1st and 2nd Semester Software Design, Kea CS Dat17i

1st semester

Topics, second semester Software Construction:

- OOP
 - Classes
 - Objects
 - Attributes
 - Methods
 - Constructors
- Primitive datatypes
- Arrays
- ArrayList
- Variabels
- Selectioner (if/else)
- Loops (for, foreach, while)
- File Processing
- Introduction to Inheritance and Interfaces
- Exeptions

The following literature has been used as basis for the teachings:

Building Java Programs, A Back to Basics Approach,
Third Edition
ISBN 13: 978-0-273-79333-5
Chapter: 1-10

2. semester

Topics, second semester Software Construction:

- Databases
 - DDL
 - DML
 - Normalization
 - JDBCTemplate
- Spring Boot MVC
- Thymeleaf
- Html

- Css
- Collections Framework
- Polymorfi
- Generic Datatypes
- Inheritance
- Interfaces

The following literature has been used as basis for the teachings:

Building Java Programs, A Back to Basics Approach,
Third Edition
ISBN 13: 978-0-273-79333-5
Chapter: 3, 6, 11, 15, 16, appendix D & E

- **Package** <https://docs.oracle.com/javase/tutorial/java/concepts/package.html>
- **Generics**
 - **Why Use Generics?** <https://docs.oracle.com/javase/tutorial/java/generics/index.html>
 - **Generic Types** <https://docs.oracle.com/javase/tutorial/java/generics/types.html>
 - **Raw Types** <https://docs.oracle.com/javase/tutorial/java/generics/rawTypes.html>
- **Collection Framework**
 - **Java Collections Framework** https://github.com/Dat17i/13_Java_Collections_framework

Spring

- **Serving Web Content with Spring MVC** <https://spring.io/guides/gs/serving-web-content/>
- **Tutorial: Build a spring boot application using intellij idea**
https://github.com/Dat17i/03_hello_spring
- **My First Website** https://github.com/Dat17i/03_my_first_website
- **The MVC Pattern** https://github.com/Dat17i/03_agenda/blob/master/MVC_.pdf
- **Repository** https://github.com/dat17v1/2_24_Thymeleaf_followup/blob/master/repository.md
- **Tutorial: Create Student** https://github.com/dat17i/04_tutorial_create_student
- **Tutorial: Details Student** https://github.com/dat17i/04_tutorial_details_student
- **Tutorial Delete Student** https://github.com/dat17i/04_tutorial_delete_student/blob/master/README
- **Exercise Update Student** https://github.com/dat17i/04_exercise_update_student

Database

SQL

DML

- **SQL Tutorial** <https://www.w3schools.com/sql/default.asp>
- **Introduction to SQL** https://www.w3schools.com/sql/sql_intro.asp

- **SQL Syntax** https://www.w3schools.com/sql/sql_syntax.asp
- **SQL SELECT Statement** https://www.w3schools.com/sql/sql_select.asp
- **SQL WHERE Clause** https://www.w3schools.com/sql/sql_where.asp
- **SQL AND, OR and NOT Operators** https://www.w3schools.com/sql/sql_and_or.asp
- **SQL ORDER BY Keyword** https://www.w3schools.com/sql/sql_orderby.asp
- **SQL INSERT INTO Statement** https://www.w3schools.com/sql/sql_insert.asp
- **SQL UPDATE Statement** https://www.w3schools.com/sql/sql_update.asp
- **SQL DELETE Statement** https://www.w3schools.com/sql/sql_delete.asp
- **SQL Joins** https://www.w3schools.com/sql/sql_join.asp
- **SQL INNER JOIN Keyword** https://www.w3schools.com/sql/sql_join_inner.asp

DDL

- **SQL CREATE DATABASE Statement** https://www.w3schools.com/sql/sql_create_db.asp
- **SQL DROP DATABASE Statement** https://www.w3schools.com/sql/sql_drop_db.asp
- **SQL CREATE TABLE Statement** https://www.w3schools.com/sql/sql_create_table.asp
- **SQL DROP TABLE Statement** https://www.w3schools.com/sql/sql_drop_table.asp
- **SQL PRIMARY KEY Constraint** https://www.w3schools.com/sql/sql_primarykey.asp
- **SQL FOREIGN KEY Constraint** https://www.w3schools.com/sql/sql_foreignkey.asp

Relationship

- **The features of a relational database** <https://www.lynda.com/Programming-Foundations-tutorials/features-relational-database/412845/438417-4.html?autoplay=true>
- **Primary Keys** https://github.com/Dat17i/09_databases_primary_keys/blob/master/slides/Database%20keys.pdf
- **Database Modeling: Relationships** https://github.com/dat17i/10_Relation_between_tables/blob/master/Database%20Modeling%20Relationships.pdf

Normalisering

- **19 Database Modeling__Normalization.pdf** https://github.com/dat17i/11_normalization/blob/master/19%20Database%20Modeling%20Normalization.pdf

JDBC

- **JdbcTemplate** <https://docs.spring.io/spring/docs/current/javadoc-api/org/springframework/jdbc/core/JdbcTemplate.html>
 - **queryForRowSet** <https://docs.spring.io/spring/docs/current/javadoc-api/org/springframework/jdbc/core/JdbcTemplate.html#queryForRowSet-java.lang.String->
 - **update** <https://docs.spring.io/spring/docs/current/javadoc-api/org/springframework/jdbc/core/JdbcTemplate.html#update-java.lang.String->

- **SqlRowSet** <https://docs.spring.io/spring/docs/current/javadoc-api/org/springframework/jdbc/support/rowset/SqlRowSet.html>

Html og Css

html

- **HTML Introduction** https://www.w3schools.com/html/html_intro.asp
- **HTML Basic Examples** https://www.w3schools.com/html/html_basic.asp
- **HTML Elements** https://www.w3schools.com/html/html_elements.asp
- **HTML Attributes** https://www.w3schools.com/html/html_attributes.asp
- **HTML Headings** https://www.w3schools.com/html/html_headings.asp
- **HTML Paragraphs** https://www.w3schools.com/html/html_paragraphs.asp
- **HTML Styles** https://www.w3schools.com/html/html_styles.asp
- **HTML Text Formatting** https://www.w3schools.com/html/html_formatting.asp
- **HTML Comments** https://www.w3schools.com/html/html_comments.asp
- **HTML Colors** https://www.w3schools.com/html/html_colors.asp
- **HTML Styles - CSS** https://www.w3schools.com/html/html_css.asp
- **HTML Links** https://www.w3schools.com/html/html_links.asp
- **HTML Images** https://www.w3schools.com/html/html_images.asp
- **Tables** https://www.w3schools.com/html/html_tables.asp
- **HTML Lists** https://www.w3schools.com/html/html_lists.asp
- **HTML Block and Inline Elements** https://www.w3schools.com/html/html_blocks.asp
- **HTML The class Attribute** https://www.w3schools.com/html/html_classes.asp
- **HTML Forms** https://www.w3schools.com/html/html_forms.asp
- **HTML Form Elements** https://www.w3schools.com/html/html_form_elements.asp
- **HTML Input Types** https://www.w3schools.com/html/html_form_input_types.asp
- **HTML Input Attributes** https://www.w3schools.com/html/html_form_attributes.asp

Css

- **Everything from CSS Tutorial section** <https://www.w3schools.com/css/default.asp>

—

© clbo@kea.dk

—