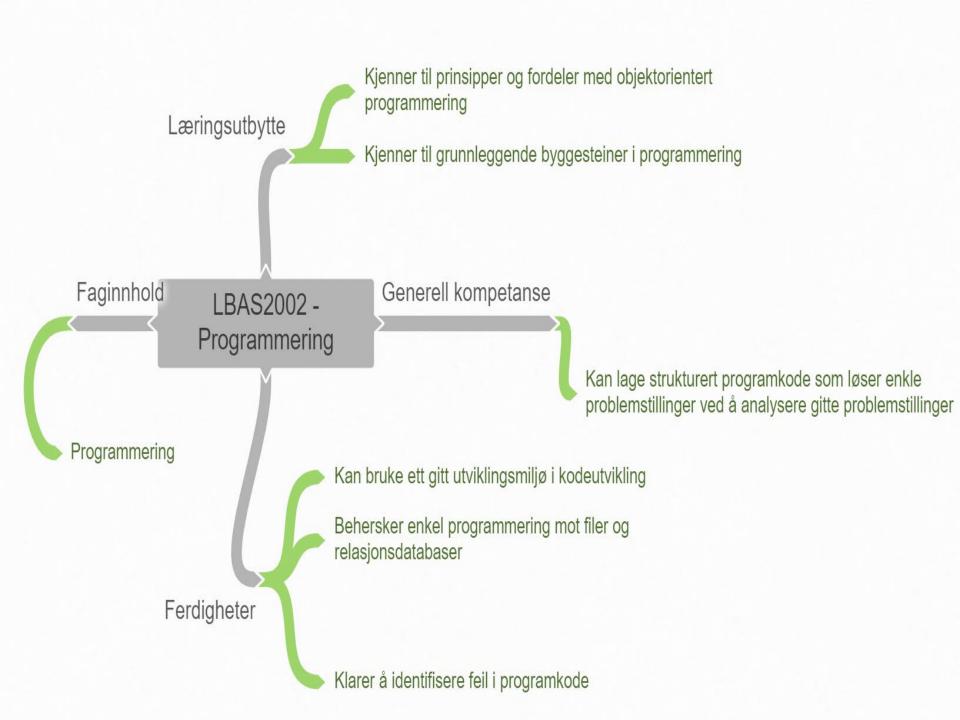


LBAS2002 - Informatikk

Programmering

Leksjon 1: Introduksjon





Pensum

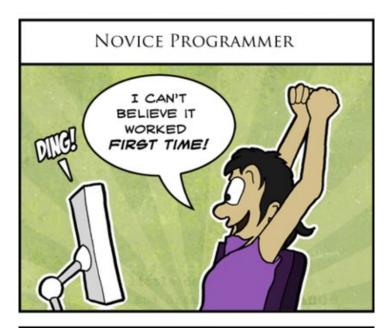
- Se Blackboard
 - Leksjon: Datatyper. Tilgjengelig fra https://ntnu.blackboard.com
 - Leksjon: Kontrolflyt. Tilgjengelig fra https://ntnu.blackboard.com
 - Leksjon: Databaser. Tilgjengelig fra https://ntnu.blackboard.com
 - Leksjon: GUI. Tilgjengelig fra https://ntnu.blackboard.com



Undervisningsmål for idag

- Forelesning:
 - Hvorfor skal vi lære programmering?
 - Gi en kort introduksjon til programmering generelt
 - Grunnleggende programmerings konsepter i Python
- Lab:
 - Installerer utviklingsmiljø
 - Skrive ditt første program









Hva er programmering?





Programmering for alle?

- Information literacy and digital competences
 - must be considered as fundamental competencies (like read, write and calculate)
- The UNESCO (Catts & Lau, 2008) considers information literacy "a basic human right"
- ALA (American Library Association, 2006) calls it a "survival skill in the information age".



Programmering for alle?

- Fremtidige jobber
- Henge med i vår egen verden
- Algoritmisk tankegang

⇒ Leaders and trend-setters all agree on one thing (https://code.org/quotes)



Hva er et programmerings språk?

- Et formelt data språk
- Brukes til å skrive/lage programmer
- Kan klassifiseres i flere generasjoner:
 - 1. generasjon
 - Binary (binært)
 - 2. generasjon
 - Assembly
 - 3. generasjon
 - C, C++, C#, Java, JavaScript, Visual Basic
 - 4. generasjon
 - Perl, PHP, Python, Ruby, SQL
 - 5. generasjon
 - Mercury, OPS5, Prolog



The Evolution Of Computer Programming Languages

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Typer av programvareutvikling (noen eksempler)

- Web Development
- Mobile Development
- Data Science
- Application Development
- Front/Back-end Development
- Software Tools Development
- API Development
- Embedded Systems Developme
- Security Software Development
- Cloud Computing

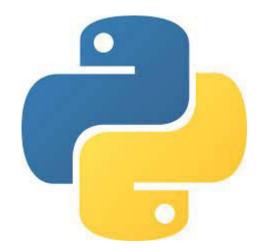




Python

Python er et høynivå språk

Python er interaktive



Python er Object Orientert



Python dokumentasjon

https://docs.python.org/

Download

Download these documents

Docs by version

Python 3.11 (in development) Python 3.10 (pre-release)

Python 3.9 (stable)

Python 3.8 (security-fixes)

Python 3.7 (security-fixes)

Python 3.6 (security-fixes)

Python 3.5 (EOL) Python 2.7 (EOL)

All versions

Other resources

PEP Index Beginner's Guide Book List Audio/Visual Talks Python Developer's Guide

Python 3.9.6 documentation

Welcome! This is the official documentation for Python 3.9.6.

Parts of the documentation:

What's new in Python 3.9?

or all "What's new" documents since 2.0

Tutorial

start here

Library Reference

keep this under your pillow

Language Reference

describes syntax and language elements

Python Setup and Usage

how to use Python on different platforms

Python HOWTOs

in-depth documents on specific topics

Indices and tables:

Global Module Index

quick access to all modules

General Index

all functions, classes, terms

Glossary

the most important terms explained

Meta information:

Reporting bugs

Contributing to Docs

About the documentation

Installing Python Modules

installing from the Python Package Index & other sources

Distributing Python Modules

publishing modules for installation by others

Extending and Embedding

tutorial for C/C++ programmers

Python/C API

reference for C/C++ programmers

FAQs

frequently asked questions (with answers!)

Search page

search this documentation

Complete Table of Contents

lists all sections and subsections

History and License of Python

Copyright