

CE205 Data Structures Week-1

Introduction to Data Structure

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1 CE205 Data Structures

2 Week-1

2.0.1 Course Plan and Communication, Course Plan and Communication, Introduction to Linear & Non-Linear Data Structure and Performance Analysis, Implementing Pointer and Objects for Data and Variables Basic of ASN.1 / BER TLV / PER TLV

Download DOC¹, SLIDE², PPTX³

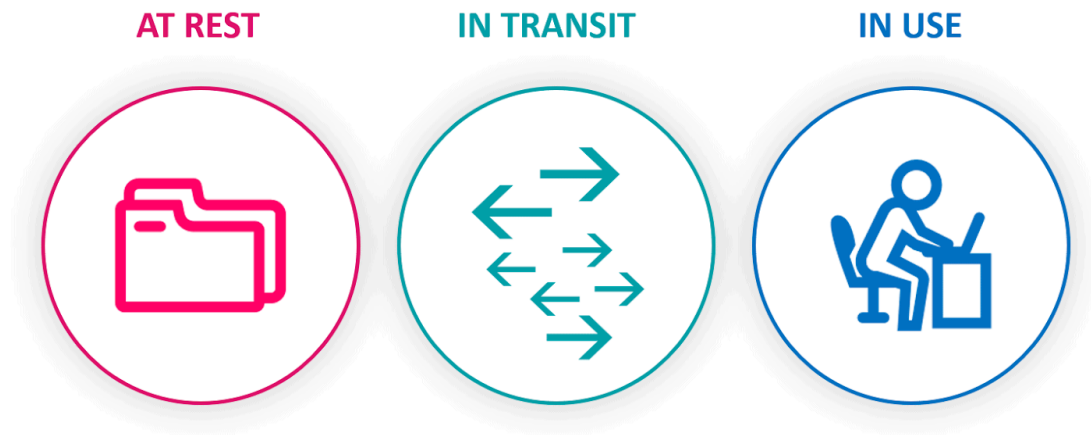
¹ce205-week-1-intro.md_doc.pdf

²ce205-week-1-intro.md_slide.pdf

³ce205-week-1-intro.md_slide.pptx

2.1 Introduction to Data Structures

THE THREE STATES OF DATA



Data-in-use

- Data in use - Wikipedia⁴

Data-in-transit

- Data in transit - Wikipedia⁵

Data-at-rest

- Data at rest - Wikipedia⁶
-

Performance Analysis

- Data Structures Tutorials - Performance Analysis with examples⁷

Space Complexity

- Data Structures Tutorials - Space Complexity with examples⁸

Time Complexity

- Data Structures Tutorials - Time Complexity with examples⁹
-

Data and Variables

- C++ Data Types¹⁰
-

Linear & Non-Linear Data Structures

⁴https://en.wikipedia.org/wiki/Data_in_use

⁵https://en.wikipedia.org/wiki/Data_in_transit

⁶https://en.wikipedia.org/wiki/Data_at_rest

⁷http://www.btechsmartclass.com/data_structures/performance-analysis.html

⁸http://www.btechsmartclass.com/data_structures/space-complexity.html

⁹http://www.btechsmartclass.com/data_structures/time-complexity.html

¹⁰https://www.tutorialspoint.com/cplusplus/cpp_data_types.htm

- Data Structures Tutorials - Linear and Non-linear types¹¹
- Data Structure and Types¹²

Implementing Pointer and Objects

- Check CS50 Pointer Notes¹³
- Week 0 - CS50¹⁴

-
- ASN.1 / BER TLV / PER TLV
 - <http://lionet.info/asn1c/download.html>
 - GitHub - ucoruh/asn1c-wsl-sample: ASN.1 C WSL and Windows Execution, Debugging and Code Generation Sample¹⁵

-
- Sample Standard for ASN.1 Usage
 - https://www.etsi.org/deliver/etsi_ts/125400_125499/125413/04.09.00_60/ts_125413v040900p.pdf

-
- Payment BER TLV Parser Sample
 - TLV Utilities¹⁶
 - <https://paymentcardtools.com/>
-

Week-1 End

3 Week-1 End

¹¹http://www.btechsmartclass.com/data_structures/linear-non-linear-data-structures.html

¹²<https://www.programiz.com/dsa/data-structure-types>

¹³[./files/CS50%20Modified.pdf](https://files.cs50.org/Modified.pdf)

¹⁴<https://cs50.harvard.edu/college/2021/fall/weeks/0/>

¹⁵<https://github.com/ucoruh/asn1c-wsl-sample>

¹⁶<https://emvlab.org/tlvutils/?data=6F1A840E315041592E5359532E4444463031A5088801025F2D02656E>