Análisis y Diseño de Algoritmos

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Agenda

1. Computation fundamentals
2. Computational thinking
3. C/C++ basics
4. Control structures (Selection)
5. Control structures (Repetition)
6. Functions
7. Arrays
8. String & IO Files

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- Brief computer history
- Computing capabilities
- Data representation
- Binary and Hex numbers

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- Definition
- Programming steps
- Flowcharts
- Compilation process

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- C/C++ syntax
- Program structure
- Data types
- Variables & constants
- Comments

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- Truth tables
- Operators
- Math library
- **If ... else** structure
- **switch** structure

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- For loop structure
- While loop structure
- Do… while loop structure
- Premature termination

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- Functions
- Parameters & arguments
- Prototypes
- Variable scope

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- Array
- Matrices

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- String & char operations
- File reading
- ifstream class
- File writing
- ofstream class
- fstream class

Thank you!

Resources

- Visual Studio express
  - http://www.microsoft.com/visualstudio/en-us/products/2010-editions/express

- Deitel Resources
  - http://www.deitel.com/ResourceCenters/Programming/CPlusPlus/tabid/224/Default.aspx