

FACULTY OF ENGINEERING & TECHNOLOGY

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Topics Covered

Reasons for Studying Concepts of Programming Languages

Elements of programming languages

programming languages techniques

Reasons for Studying Concepts of Programming Languages

- Increased ability to express ideas.
- Improved background for choosing appropriate languages.
- Increased ability to learn new languages.
- Better understanding of significance of implementation.
- Better use of languages that are already known.
- Overall advancement of computing.

Elements of programming languages:

(a) Language building blocks:

Atomic elements; composition means; abstraction means.

(b) Language syntax:

Concrete syntax, abstract syntax.

Programming Languages Techniques

1. Substitution operation:

Used in the operational semantics algorithms and in type inference algorithms.

2. Renaming operation:

Used in the operational semantics algorithms and in type inference algorithms.

3. Pattern matching, unification operations:

Used in the operational semantics algorithms and in type inference algorithms.

- •Lazy/eager approaches: Used in various contexts semantics, ADT implementa- tion, partial evaluation.
- Delayed evaluation.
- •Partial evaluation: Currying.
- ·Lexical scoping.

MCQ

1. What is Software?

- Set of computer programs, procedures and possibly associated document concerned with the operation of data processing.
- b) A set of compiler instructions
- c) A mathematical formula
- d) None of above

2. Which of the following is not the characteristic of software

- a) software does not wear out
- b) Software is flexible
- c) Software is not manufactured
- d) Software is always correct

3. Spiral Model was developed by?

- a) Bev Littlewood
- b) Berry Bohem
- c) Roger Pressman
- d) Victor Bisili

4. SDLC stands for ?

- a) Software design life cycle
- b) Software development life cycle
- c) System design life cycle
- d) System development life cycle

5. SRS stands for ?

- a) Software requirement specification
- b) Software requirement solution
- c) System requirement specification
- d) None of Above