

PROGRAMMING GUIDELINES

Stylistic Guidelines

- Use meaningful names for identifiers
- Ensure clarity of expressions.
- Use comment and indentation.
- Insert blank lines and blank spaces.

Characteristic for a Good Program

- Effective and efficient
- User friendly
- Self documenting code
- Reliable
- Portable

Stages of Program Development Process

A program development process is a step by step process where each stage contributes to building of an effective and efficient program.

Stages are as follows

- ✓ Crack the problem
- ✓ Code the algorithm
- ✓ Compile the program
- ✓ Execute the program

Types of Errors

- **Compile Time Error**- Occurs during compile time. When a program compiles its source code is checked for rules of programming language.
Its types are:-
 1. Syntax error : it occurs when a grammatical rule of Java is violated
 2. Semantic error: it occurs when statements are not meaningful.
- **Run Time Error**: Occurs during the execution of the program.
- **Logical Error**: Occurs due to wrong logic of a program.

PROBLEM SOLVING METHODOLOGY AND TECHNIQUES

Steps to creating a working program are:-

1. Understand the problem well
2. Analyze the problem to
 - a) Identify minimum number of inputs required for output
 - b) Identify processing components.
3. design the program by
 - a) Deciding step by step solution.
 - b) Breaking down solution into simple steps.
4. Code the program by
 - a) Identifying arithmetic and logical operation required for solution.
 - b) Using appropriate control structure such as conditional or looping control structure.
5. Test and Debug your program by
 - a) Finding error in it.
 - b) Rectifying the error.
6. Complete your documentation.
7. Maintain your program.