



C PROGRAMING

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Control Statements

- Decision or Selection
 - if-else
 - switch-case
- Iteration (loop)
 - for
 - while
 - do-while
- Jump
 - break
 - continue
 - goto
 - return



break/continue

- break statement
 - Used to early exit from loop, or to exit an infinite loop
 - Takes control out of current loop and continues execution of statements after the loop.
 - Statements after break are skipped.
- continue statement
 - Used to continue next iteration of the loop.
 - Statements after continue are skipped (for current iteration).
- break is used with loop/switch case.
- continue used with only loop.
- In case of nested loops, break/continue affects current loop only (not outer).

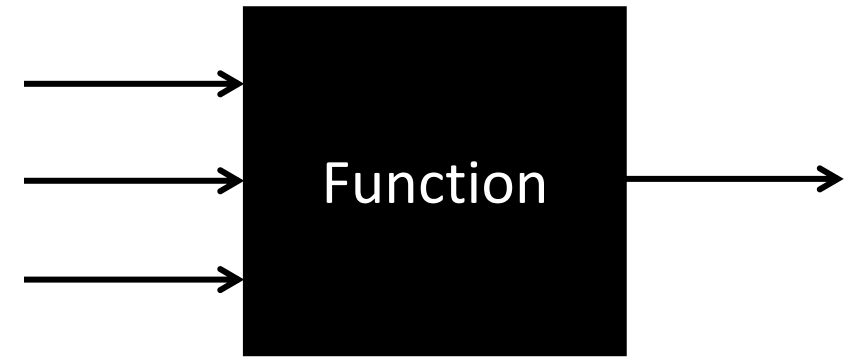


Functions

- C program is made up of one or more functions.
- C program contains at least one function i.e. main() function.
 - Execution of C program begins from main.
 - It returns exit status to the system.

- Advantages

- Reusability
- Readability
- Maintainability



- Function is set of instructions, that takes zero or more inputs (arguments) and return result (optional).
- Function is a black box.



Functions

- Each function has
 - Declaration
 - Definition
 - Call
- A function can be called one or more times.
- Arguments
 - Arguments passed to function → Actual arguments
 - Arguments collected in function → Formal arguments
 - Formal arguments must match with actual arguments

Examples:

1. addition()
2. print_line()
3. factorial()
4. combination()



Function execution

- When a function is called, function activation record/stack frame is created on stack of current process.
- When function is completed, function activation record is destroyed.
- Function activation record contains:
 - Local variables
 - Formal arguments
 - Return address
- Upon completion, next instruction after function call continue to execute.





Thank you!

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