



Cambridge International AS & A Level

COMPUTER SCIENCE

9618/02

Paper 2 Fundamental Problem-solving and Programming Skills

For examination from 2021

SPECIMEN INSERT

2 hours

INFORMATION

- This insert contains all the resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



This document has 4 pages. Blank pages are indicated.

Pseudocode Functions

An error is generated if the syntax is incorrect, or if a parameter type is incorrect.

MID(ThisString : STRING, x : INTEGER, y : INTEGER) RETURNS STRING
returns a string of length y starting at position x from ThisString

Example: MID("ABCDEFGH", 2, 3) returns "BCD"

LENGTH(ThisString : STRING) RETURNS INTEGER
returns the integer value representing the length of ThisString

Example: LENGTH("Happy Days") returns 10

LEFT(ThisString : STRING, x : INTEGER) RETURNS STRING
returns leftmost x characters from ThisString

Example: LEFT("ABCDEFGH", 3) returns "ABC"

RIGHT(ThisString: STRING, x : INTEGER) RETURNS STRING
returns rightmost x characters from ThisString

Example: RIGHT("ABCDEFGH", 3) returns "FGH"

LCASE(ThisChar : CHAR) RETURNS CHAR
returns the character value representing the lower case equivalent of ThisChar

If ThisChar is not an upper-case alphabetic character, it is returned unchanged.

Example: LCASE('W') returns 'w'

UCASE(ThisChar : CHAR) RETURNS CHAR
returns the character value representing the upper case equivalent of ThisChar

If ThisChar is not a lower-case alphabetic character, it is returned unchanged.

Example: UCASE('a') will return 'A'

TO_UPPER(ThisString : STRING) RETURNS STRING
returns a string formed by converting all alphabetic characters of ThisString to upper case.
Non-alphabetic characters are unchanged.

Example: TO_UPPER("Disk Error 27") returns "DISK ERROR 27"

TO_LOWER(ThisString : STRING) RETURNS STRING
returns a string formed by converting all alphabetic characters of ThisString to lower case.

Non-alphabetic characters are unchanged.

Example: TO_LOWER("ERROR - Password Invalid") returns "error - password invalid"

NUM_TO_STRING(x : REAL) RETURNS STRING
 returns a string representation of a numeric value.
 Note: This function will also work if x is of type INTEGER

Example: NUM_TO_STRING(87.5) returns "87.5"

STRING_TO_NUM(x : STRING) RETURNS REAL
 returns a numeric representation of a string.
 Note: This function will also work if x is of type CHAR

Example: STRING_TO_NUM("87.5") returns 87.5

INT(x : REAL) RETURNS INTEGER
 returns the integer part of x

Example: INT(27.5415) returns 27

ASC(ThisChar : CHAR) RETURNS INTEGER
 returns the ASCII value of ThisChar

Example: ASC('A') returns 65

CHR(x : INTEGER) RETURNS CHAR
 returns the character whose ASCII value is x

Example: CHR(87) returns 'W'

MOD(ThisNum : INTEGER, ThisDiv : INTEGER) RETURNS INTEGER
 returns the integer value representing the remainder when ThisNum is divided by ThisDiv

Example: MOD(10, 3) returns 1

DIV(ThisNum : INTEGER, ThisDiv : INTEGER) RETURNS INTEGER
 returns the integer value representing the whole number part of the result when ThisNum is divided by ThisDiv

Example: DIV(10, 3) returns 3

Pseudocode Operators

Operator	Description
&	Used to concatenate (join) two strings Example: "Summer" & " " & "Pudding" produces "Summer Pudding"
AND	Used to perform a logical AND on two Boolean values Example: TRUE AND FALSE produces FALSE
OR	Used to perform a logical OR on two Boolean values Example: TRUE OR FALSE produces TRUE
NOT	Used to perform a logical NOT on a Boolean value Example: NOT FALSE produces TRUE

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