C LIBRARY - <CTYPE.H>

Introduction

The **ctype.h** header file of the C Standard Library provides declares several functions useful for testing and mapping characters.

All the functions accepts **int** as a parameter, whose value must be EOF or representable as an unsigned char.

All the functions return non-zero (true) if the argument c satisfies the condition described, and zero if not.

Library Functions

Following are the functions defined in the header ctype.h:

S.N.	Function & Description
1	int isalnum(int c) This function check whether the passed character is alphanumeric.
2	int isalpha(int c) This function check whether the passed character is alphabetic.
3	int iscntrl(int c) This function check whether the passed character is control character.
4	int isdigit(int c) This function check whether the passed character is decimal digit.
5	int isgraph(int c) This function check whether the passed character has graphical representation using locale.
6	int islower(int c) This function check whether the passed character is lowercase letter.
7	int isprint(int c) This function check whether the passed character is printable .
8	int ispunct(int c) This function check whether the passed character is punctuation character.
9	int isspace(int c) This function check whether the passed character is white-space.
10	int isupper(int c) This function check whether the passed character is uppercase letter.
11	int isxdigit(int c) This function check whether the passed character is hexadecimal digit.

The library also contains two conversion functions that also accept and return an "int"

S.N.	Function & Description
1	int tolower(int c) This function convert uppercase letter to lowercase.
2	int toupper(int c)

	This function convert lowercase letter to uppercase.

Character Classes

S.N.	Character Class & Description
1	**Digits** A set of whole numbers { 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 }
2	**Hexadecimal digits** This is the set of { 0 1 2 3 4 5 6 7 8 9 A B C D E F a b c d e f }
3	**Lowercase letters** This is a set of { a b c d e f g h i j k l m n o p q r s t u v w x y z }
4	**Uppercase letters** A set of whole numbers {A B C D E F G H I J K L M N O P Q R S T U V W X Y Z }
5	**Letters** This is a set of lowercase letters and uppercase letters
6	**Alphanumeric characters** This is a set of Digits, Lowercase letters and Uppercase letters
7	**Punctuation characters** This is a set of ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | } ~
8	**Graphical characters** This is a set of Alphanumeric characters and Punctuation characters.
9	**Space characters** This is a set of tab, newline, vertical tab, form feed, carriage return, and space.
10	**Printable characters** This is a set of Alphanumeric characters, Punctuation characters and Space characters.
11	**Control characters** In ASCII, these characters have octal codes 000 through 037, and 177 (DEL).
12	**Blank characters** These are space and tab.
13	**Alphabetic characters** This is a set of Lowercase letters and Uppercase letters.