C Library - <locale.h>

The **locale.h** header defines the location specific settings, such as date formats and currency symbols. You will find several macros defined along with an important structure **struct lconv** and two important functions listed below.

Library Macros

Following are the macros defined in the header and these macros will be used in two functions listed below −

Sr.No.	Macro & Description
1	**LC_ALL** Sets everything.
2	**LC_COLLATE** Affects strcoll and strxfrm functions.
3	**LC_CTYPE** Affects all character functions.
4	**LC_MONETARY** Affects the monetary information provided by localeconv function.
5	**LC_NUMERIC** Affects decimal-point formatting and the information provided by localeconv function.
6	**LC_TIME** Affects the strftime function.

Library Functions

Following are the functions defined in the header locale.h −

Sr.No.	Function & Description
1	char *setlocale(int category, const char *locale) Sets or reads location dependent information.
2	struct lconv *localeconv(void) Sets or reads location dependent information.

Library Structure

```
typedef struct {
   char *decimal_point;
   char *thousands_sep;
   char *grouping;
   char *int_curr_symbol;
   char *currency_symbol;
   char *mon_decimal_point;
   char *mon_thousands_sep;
   char *mon_grouping;
   char *positive_sign;
   char *negative_sign;
   char int_frac_digits;
   char frac_digits;
   char p_cs_precedes;
   char p_sep_by_space;
   char n_cs_precedes;
   char n_sep_by_space;
   char p_sign_posn;
   char n_sign_posn;
} lconv
```

Following is the description of each of the fields −

Sr.No.	Field & Description
1	**decimal_point** Decimal point character used for non-monetary values.
2	**thousands_sep** Thousands place separator character used for non-monetary values.
3	**grouping** A string that indicates the size of each group of digits in non-monetary quantities. Each character represents an integer value, which designates the number of digits in the current group. A value of 0 means that the previous value is to be used for the rest of the groups.
4	**int_curr_symbol** It is a string of the international currency symbols used. The first three characters are those specified by ISO 4217:1987 and the fourth is the character, which separates the currency symbol from the monetary quantity.
5	**currency_symbol** The local symbol used for currency.
6	**mon_decimal_point** The decimal point character used for monetary values.
7	**mon_thousands_sep** The thousands place grouping character used for monetary values.
8	**mon_grouping** A string whose elements defines the size of the grouping of digits in monetary values. Each character represents an integer value which designates the number of digits in the current group. A value of 0 means that the previous value is to be used for the rest of the groups.
9	**positive_sign** The character used for positive monetary values.
10	**negative_sign**

	The character used for negative monetary values.
11	**int_frac_digits** Number of digits to show after the decimal point in international monetary values.
12	**frac_digits** Number of digits to show after the decimal point in monetary values.
13	**p_cs_precedes** If equals to 1, then the currency_symbol appears before a positive monetary value. If equals to 0, then the currency_symbol appears after a positive monetary value.
14	**p_sep_by_space** If equals to 1, then the currency_symbol is separated by a space from a positive monetary value. If equals to 0, then there is no space between the currency_symbol and a positive monetary value.
15	**n_cs_precedes** If equals to 1, then the currency_symbol precedes a negative monetary value. If equals to 0, then the currency_symbol succeeds a negative monetary value.
16	**n_sep_by_space** If equals to 1, then the currency_symbol is separated by a space from a negative monetary value. If equals to 0, then there is no space between the currency_symbol and a negative monetary value.
17	**p_sign_posn** Represents the position of the positive_sign in a positive monetary value.
18	**n_sign_posn** Represents the position of the negative_sign in a negative monetary value.

The following values are used for **p_sign_posn** and **n_sign_posn** −

Value	Description
0	Parentheses encapsulates the value and the currency_symbol.
1	The sign precedes the value and currency_symbol.
2	The sign succeeds the value and currency_symbol.
3	The sign immediately precedes the value and currency_symbol.
4	The sign immediately succeeds the value and currency_symbol.