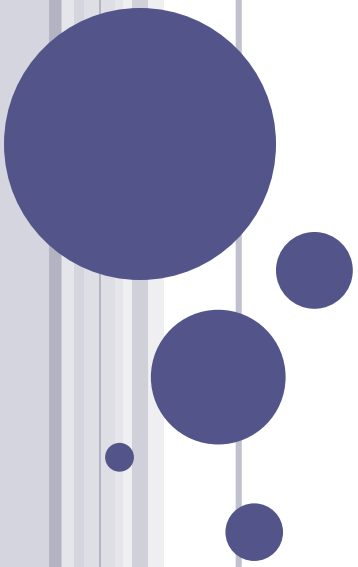

Chapter 15

Strings

Declaration

- <data type> <name> [<size>];

- char word[20];

The Null Character

- \0

Initialization

- char word[20] = {‘h’, ‘e’, ‘l’, ‘l’, ‘o’, ‘\0’};
- Char word[20] = “hello”;
- scanf(“%s”, word);

The String Library

- #include <string.h>

Copy

- *int strcpy(char* s1, const char* s2);*
- *int strcpy(char s1[ ], const char s2[ ]);*
- *void strcpy(char s1[ ], const char s2[ ]);*

Length

- *int strlen(const char s[ ]);*

Compare

- String comparisons are Lexicographical comparisons.

- Based on ASCII values:
  - A-Z 65-90
  - a-z 97-122

Lexicographical Comparisons

- Corresponding characters are compared until:
  1 – One of the strings ends
  2 – There is a difference between characters.

Lexicographical Comparisons

- dog
- cat
- Dog
- cat
- baseball
- basketball
- baseball
- base

Compare

- *int strcmp(const char s1[ ], const char s2[ ]);*

- 0 – The strings are identical
- < 0 – s1 comes first
- >0 – s2 comes first

Concatenate

- *char* strcat(char s1[ ], const char s2[ ]);*

Practice

- Consider the task of password verification. Write a short program that asks the user to enter their password and then re-enter their password. Check to ensure that these two passwords are exactly the same.

CTYPE LIBRARY

- *char toupper(char c);*
- *char tolower(char c);*
- *int isalpha(char c);*
- *int ispunct(char c);*

Arrays of Strings

- *char words[10][20];*

- *strcpy(words[0], “hello”);*