C++

LAUNCHPAD

CODING BLOCKS

Lecture-5

Arrays

- Character Arrays

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Doubts ?

Character Arrays!

Character Array Basics

- char str[100];
- char str[4] = { ‘A’, ‘B’, ‘C’, ‘D’};
- char str[] = {‘A’, ‘B’, ‘C’};
- char str[] = “Welcome”;
- char str[8] = “Welcome”;

So what are strings?

- In C/C++ we use a character array to simulate strings.
- By convention, a string is a sequence of characters followed by a null character.
- Null characters is a special character whose ascii value is 0 and its representation is '\0'
- In the previous slide example 4 and 5 are valid strings.

Printing a character array

- cout command treats characters address differently.
- If you give it any other type of address it will just print the address
- But if you give it an address of type character it will print characters byte by byte starting from that byte till it finds a byte which stores null character.
- It doesn't care about the allocated space.

Lets see it with some code.

Reading a string.

- We can read character by character from the screen and keep adding to an array till we find our delimiter which in most cases is '\n' and append 0 character to the end of the array.
- cin.getline

cin.getline

- cin.getline(char * BA, int max_space);
- cin.getline(char * BA, int max_space, char delimiter);

max_space is the available space starting from the passed address.

delimiter is the character which specifies the end of the string. By default it is '\n'.

cin.getline would automatically add '\0' at the end.

Since end of the string can be checked by looking for null character('\0') we don't need to pass number of elements to a function.

Lets do some problems!

- Calculate Length of the String
- Check if a string is palindrome or not

Time to Try ?

- Write a function which takes two strings A and B and appends B to A.
- Read N strings from a user and print the largest string.

Again – We can only initialize the array and not assign!
So if you want to update the string, you need do it character by character.

Always remember to append null character at the end of the string after any operation.