C-String

```cpp
char letters[] = {'A', 'B', 'C', '\0'};        // null character at the end
char letters[] = "ABC";                        // automatically inserts null character at the end
                                               // so the same initialization
int numbers[] = {1,2,3};
cout << numbers;                               // Displays the address of the first element
cout << letters;                               // Displays "ABC", up to the null character


char letters[] = "ABC";
cout << sizeof(letters);                        // 4, since \0 is at the end


char sentence[] = "This is a test in coding";
char* ptr = nullptr;


ptr = strstr(sentence, "test");                 // sets 'ptr' to point to the element of the array
                                                // at which "test" starts
cout << ptr;                                    // Displays "test in coding"


char name1[10];
char name2[10];
if (strcmp(name1, name2) == 0)                  // Checks if they are the same


if (strcmp(name1, name2) < 0)                   // Checks if name1 is alphabetically less than name2
if (strcmp(name1, name2) > 0)                   // Checks if name1 is alphabetically greater than name2


int num = atoi("12345");                        // Assigns 12345 to 'num'
int num = atoi("12ABC");                        // Assigns 12 to 'num'
double d = atof("3.14159");                     // Assigns 3.14159 to 'd'
```

String

```
string name;

getline(cin, name);                    // Any length name will be stored

cin >> name;                           // Any length name will be stored, up to a space


if (name1 == name2)                    // Can check if strings are equal using standard syntax


if (name1 < name2)                     // Check if name1 is alphabetically less than name2

        >

        !=

string name2;

name2 = name1;                         // Can assign strings
```