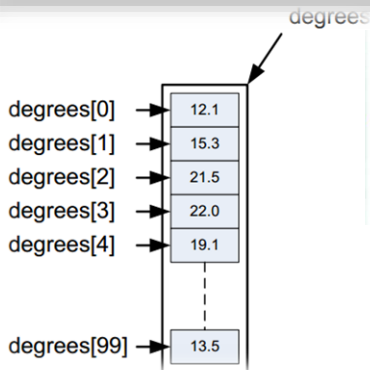
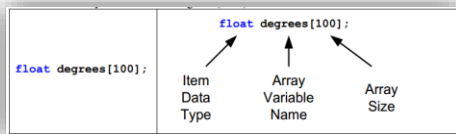


scanf takes only the first word in the input text and leave the rest

gets takes all the char until the enter key

Advanced Data Types: Arrays

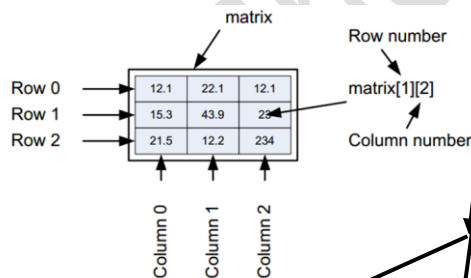
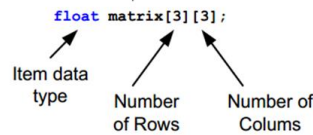
1D



```
float matrix[3][3];
```

2D

2D Array Variable Name



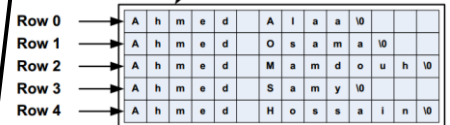
Strings (array of char)

```
char Text[] = {'h', 'e', 'l', 'l', 'o', 0};
```

```
char text1[] = {"hello"};  
char text2[] = "hello";
```

Strings (array of char)

```
char names[5][14] = {"Ahmed Alaa", "Ahmed Osama", "Ahmed Mamdouh",  
"Ahmed Samy", "Ahmed Hossain"};
```



strlwr

strupr

```
char a[20] = "Amn";  
char b[20] = "Hisham";  
strlwr(a);  
strupr(b);  
printf("%s %s\r\n", a, b);
```

```
char a[20] = "Alaa";  
char b[20] = "Ezzat";  
strcat(a, " ");  
strcat(a, b);  
printf("%s\r\n", a);
```

strcat

strcpy

```
void main()  
{  
    char a[20] = "Alaa Ezzat";  
    char b[20];  
    strcpy(b, a);  
    printf("%s\r\n", b);  
}
```

strlen

strlen function calculates the given string length, it simply counts the number of letters until the null termination.

```
char name[] = "Ahmed Said";  
printf("Name: %s, Length: %d\r\n", name, strlen(name));
```

atoi/atof

strcmp/stricmp

atoi function helps computer to convert string to a number of type (int)

if it is applicable
otherwise it gives zero, for example:
"1025" → 1025
"120KG" → 120
"The Cost is 30" → 0

atof function helps computer to convert string to a number of type (float)

if it is applicable
otherwise it gives zero, for example:
"10.25" > 10.25
"1.2KG" > 1.2
"The Cost is 3.5" > 0

strcmp function compares two strings and produces one of three results:

if the two string are identical it gives 0

if the first string is lower in the alphabetic order it gives -1

if the second string is higher in the alphabetic order it gives 1

"ahmed" and "ahmed" → 0

"ahmed" and "amgad" → -1 because the second letter "h" is less than "m"

"maged" and "aya" → 1 because the first letter "m" is greater than "a"

strcmp differentiate between capital and small letters which means "MAGED" is less than "ahmed", because the ASCII code of the capital letters is lower than the ASCII code of the small letters. To solve this problem you can change the case of both strings to the same case then use strcmp function. Alternatively you can use

stricmp function which performs the comparison independent on the string case