10.3 Pre defined functions

To invoke a function that requires some data for performing the task, such data is called parameter or argument. Some functions return some value back to the called function.

10.3.1 String functions

To manipulate string in C++ a header file called string.h must be included.

a) strlen()- to find the number of characters in a string(i.e. string length).

Syntax: strlen(string);

Eg.

cout<<strlen("Computer"); It prints 8.

b) strcpy()- It is used to copy second string into first string.

Syntax: strcpy(string1, string2);

Eg.

strcpy(str,"BVM HSS");

cout<<str; It prints BVM HSS.

c) strcat()- It is used to concatenate second string into first one.

Syntax: strcat(string1,string2)

Eg.

strcpy(str1,"Hello");

strcpy(str2," World");
strcat(str1,str2);
cout<<str1; It displays the concatenated string "Hello World"

d) strcmp()- It is used to compare two strings and returns an integer.

Syntax: strcmp(string1,string2)

* if it is 0 both strings are equal.
* if it is greater than 0(i.e. +ve) string1 is greater than string2
* if it is less than 0(i.e. -ve) string2 is greater than string1

Eg.

```
#include<iostream>
#include<cstring>
using namespace std;
int main()
{
char str1[10],str2[10];
strcpy(str1,"Kiran");
strcpy(str2,"Jobi");
cout<<strcmp(str1,str2);
}
```

It returns a +ve integer.

e) strcmpi()- It is same as strcmp() but it is not case sensitive. That means uppercase and lowercase are treated as same.

Eg. "ANDREA" and "Andrea" and "andrea" these are same.

```
#include<iostream>
#include<cstring>
using namespace std;
int main()
{
char str1[10],str2[10];
strcpy(str1,"Kiran");
strcpy(str2,"KIRAN");
cout<<strcmpi(str1,str2);
}
```

It returns 0. That is both are same.

10.3.2 Mathematical functions.

To use mathematical functions a header file called math.h must be included

a) abs( )- To find the absolute value of an integer.
Eg. cout<<abs(-25); prints 25.
Cout<<abs(+25); prints 25.

b) sqrt( )- To find the square root of a number.
Eg. cout<<sqrt(49); prints 7.

c) pow( )- To find the power of a number.
Syntax. pow(number1, number2)
Eg. cout<<pow(2,10); It is equivalent to 2^{10}. It prints 1024.

d) sin( )- To find the sine value of an angle and the angle must be in radian. To convert an angle into radian multiply by 3.14(“) and divide by 180.

float x=60*3.14/180;

cout<<sin(x); prints 0.86576.

e) cos( )- To find the cosine value of an angle and the angle must be in radian. To convert an angle into radian multiply by 3.14(“) and divide by 180.

float x=60*3.14/180;

cout<<cos(x); prints 0.50046.