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Date:................... PF (Programming) Day:.....................

ASSIGNMENT # 1
C string in C++

C- string :-
A c-string is a character array
that ends with a special character
called the null terminator ('\0').
It is the traditional way of
storing text in C++.
e.g = "Hello" is stored as :
{ 'H', 'e', 'l', 'l', 'o', '\0' }
They are defined using char arrays,
not the string class.

Syntax of C-String :-

```
# include <cstring>
char   str [20];
char   word [] = "Computer";
```

Important C-string Functions :-

P.T.O

1) strlen() :-

Finds and returns the length of a C-string (number of characters before '\0'). It does not count the null terminator and comes from the <cstring> library.

2) strcpy() :-

Copies the content of one C-string into another one. It overwrites the destination string completely.

3) strcat() :-

Joins (concatenates) two strings into one. the second string is added at the end of the first one.

4) strcmp() :-

Compares two C-strings and returns 0 if they are equal, otherwise a positive / negative value. It compares character by character

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using ASCII values.

Example code of C-string :-

```cpp
# include <iostream>
# include <cstring>
using namespace std;
int main () {
char      name1 [20] = "Hello";
char      name2 [20] = "World";
cout <<" Length of name1 :"<<strlen(name1) <<endl;
strcpy (name2 , name1);
cout <<"After strcpy (name2 become name1): ",
<< name2 <<endl;
strcat (name1, "C++") ;
cout<<"After strcat (joining): "<<name1 << endl;
if (strcmp (name1 , name2) == 0)
  { cout <<"Strings are equal "<< endl; }
else
cout <<"Strings are not equal "<< endl;
return 0;
}
```
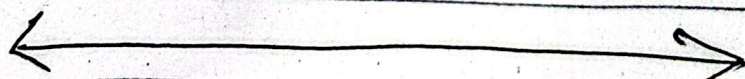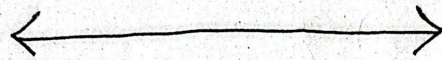
$\longleftarrow$ $\longrightarrow$

OUTPUT :-

Length of name1 : 5

After strcpy (name2 becomes name1): Hello

After strcat (joining) : Hello C++

Strings are not equal.

$\longleftrightarrow$

OUTPUT OF Assignment :-
thos is a string

$\longleftrightarrow$
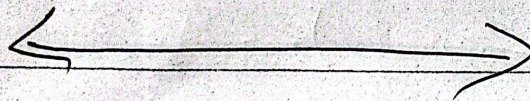
5) strncat () :-

is used to add (concatenates) a
limited number of characters from
one C -string to another.

6) substr () :-

is used to extract a part of
a C++ string.

$\longleftrightarrow$