

# **FUNCTIONS**

# **IN C**

# *Objectives*

To learn the relationship of  
strings and pointers.

# STRINGS

Array of characters  
or a pointer to  
characters.

Terminated by a ‘\0’.

Can hold a maximum  
number of characters  
equal to  $\text{size}-1$ .

```
char var_name[size];
```

```
//allocate in the memory  
//an array of size 30 char  
char name[30];
```



```
//This string can hold up  
//to 29 characters.
```

```
char name[30];
```

```
//The last space is reserved  
//for the null terminator.  
char name[30];
```

```
char nombre[10] = "Antonio";
```

|     |     |     |     |     |     |     |      |   |   |
|-----|-----|-----|-----|-----|-----|-----|------|---|---|
| 'A' | 'n' | 't' | 'o' | 'n' | 'i' | 'o' | '\0' |   |   |
| 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7    | 8 | 9 |

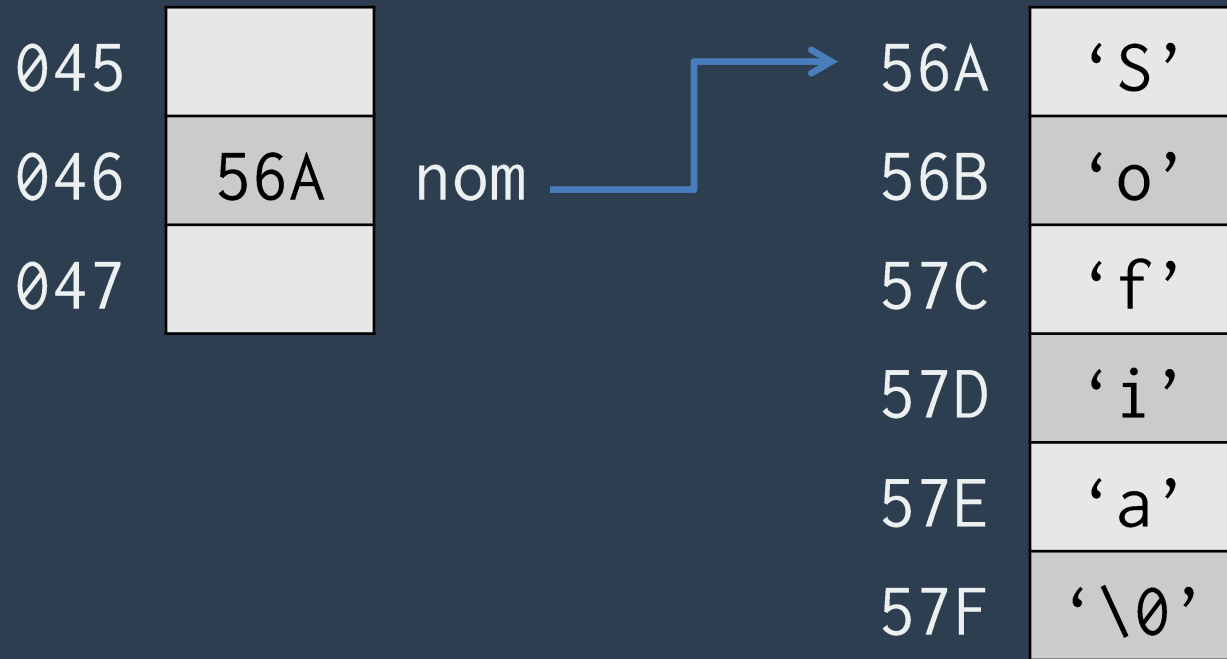
```
char namae[] = "Haruhi";
```

|     |     |     |     |     |     |      |
|-----|-----|-----|-----|-----|-----|------|
| 'H' | 'a' | 'r' | 'u' | 'h' | 'i' | '\0' |
| 0   | 1   | 2   | 3   | 4   | 5   | 6    |

```
char nom[] =  
    {'J', 'e', 'a', 'n', '\0'};
```

|     |     |     |     |      |
|-----|-----|-----|-----|------|
| 'J' | 'e' | 'a' | 'n' | '\0' |
| 0   | 1   | 2   | 3   | 4    |

```
char *nom = "Sofia";
```



Notes

//Are these valid?

```
char s[10];
```

```
char s1[];
```

```
s = "hoenn";
```

```
s1 = "unova";
```



//CORRECT WAY

```
char s[10];
```

```
char s1[] = unova;
```

```
strcpy(s, "hoenn");
```

```
char *sp;  
char s[10] = "kanto";
```

//Are these valid?

```
sp = "johto"; //(1)
```

```
sp = s; //(2)
```

```
strcpy(sp, "sinnoh"); //(3)
```

```
char *sp;  
char s[10] = "kanto";
```

//Are these valid?

```
sp = "johto"; //yes
```

```
sp = s; //yes
```

```
strcpy(sp, "sinnoh"); //yes
```