# Aula prática 6

- Utilização de ponteiros em linguagem C – arrays de ponteiros para caracter.
- Tradução para assembly.

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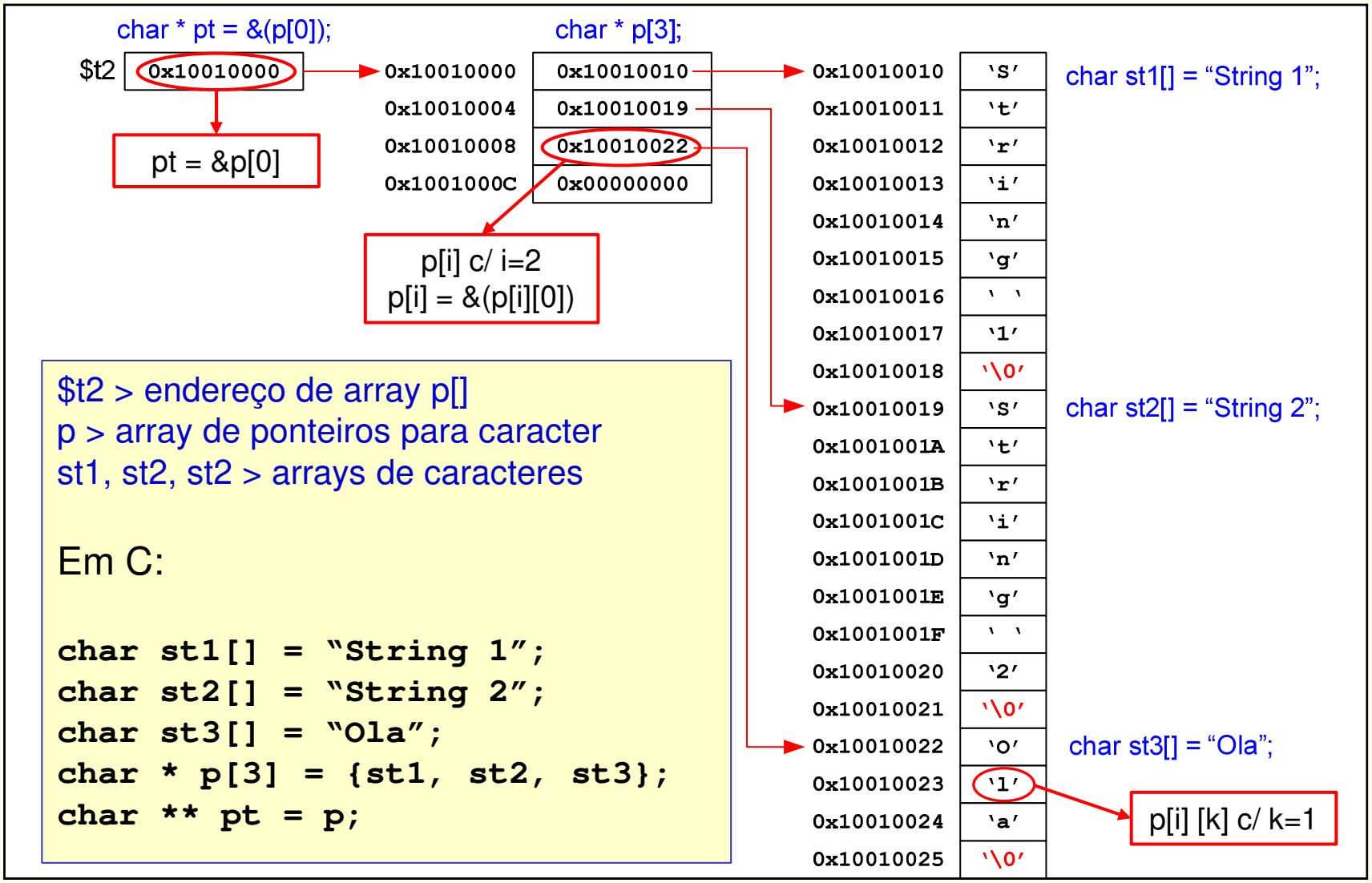
# Arrays de ponteiros para caracter.

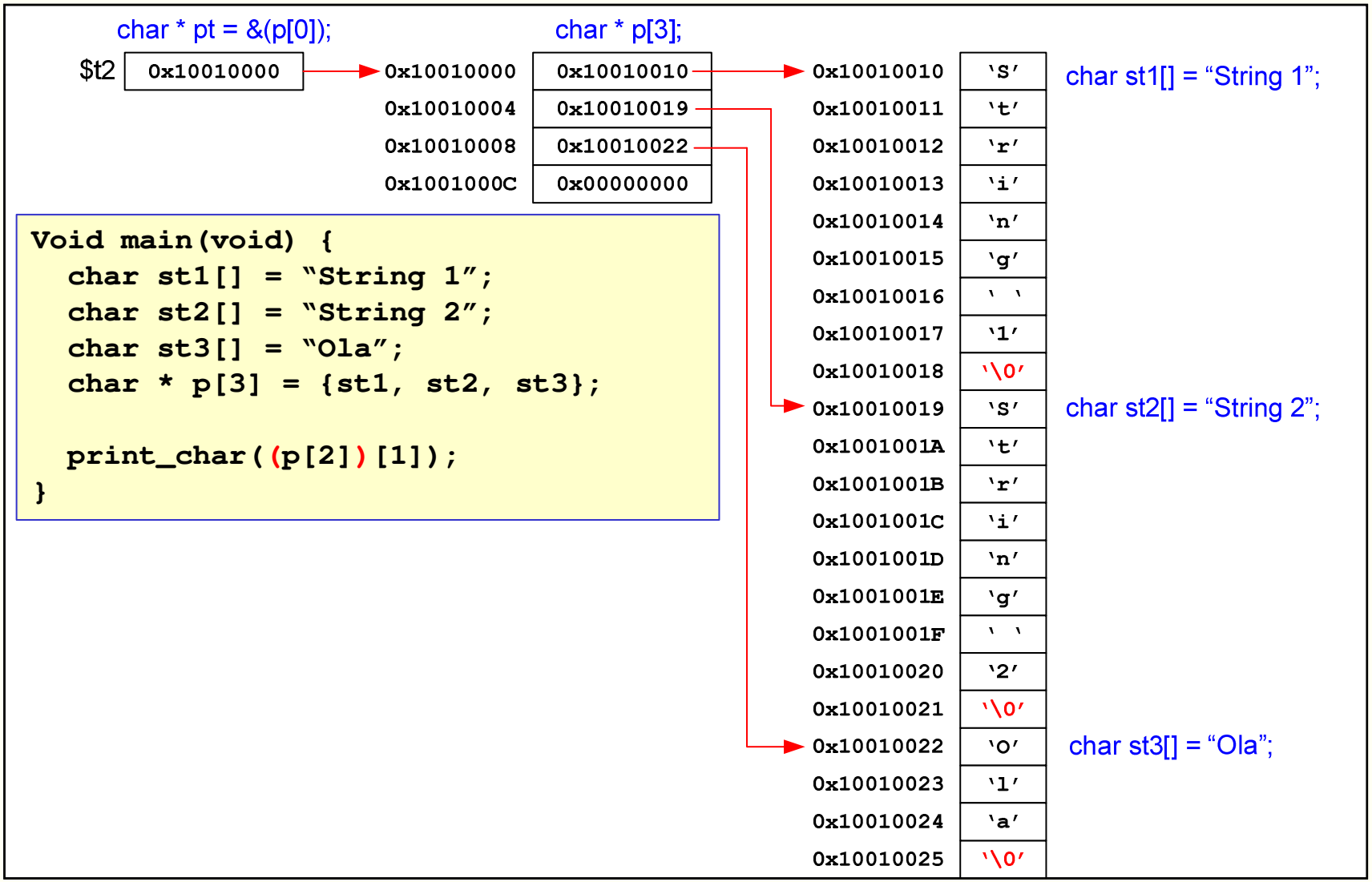



$t2 > endereço de array p[]
p > array de ponteiros para caracter
st1, st2, st2 > arrays de caracteres

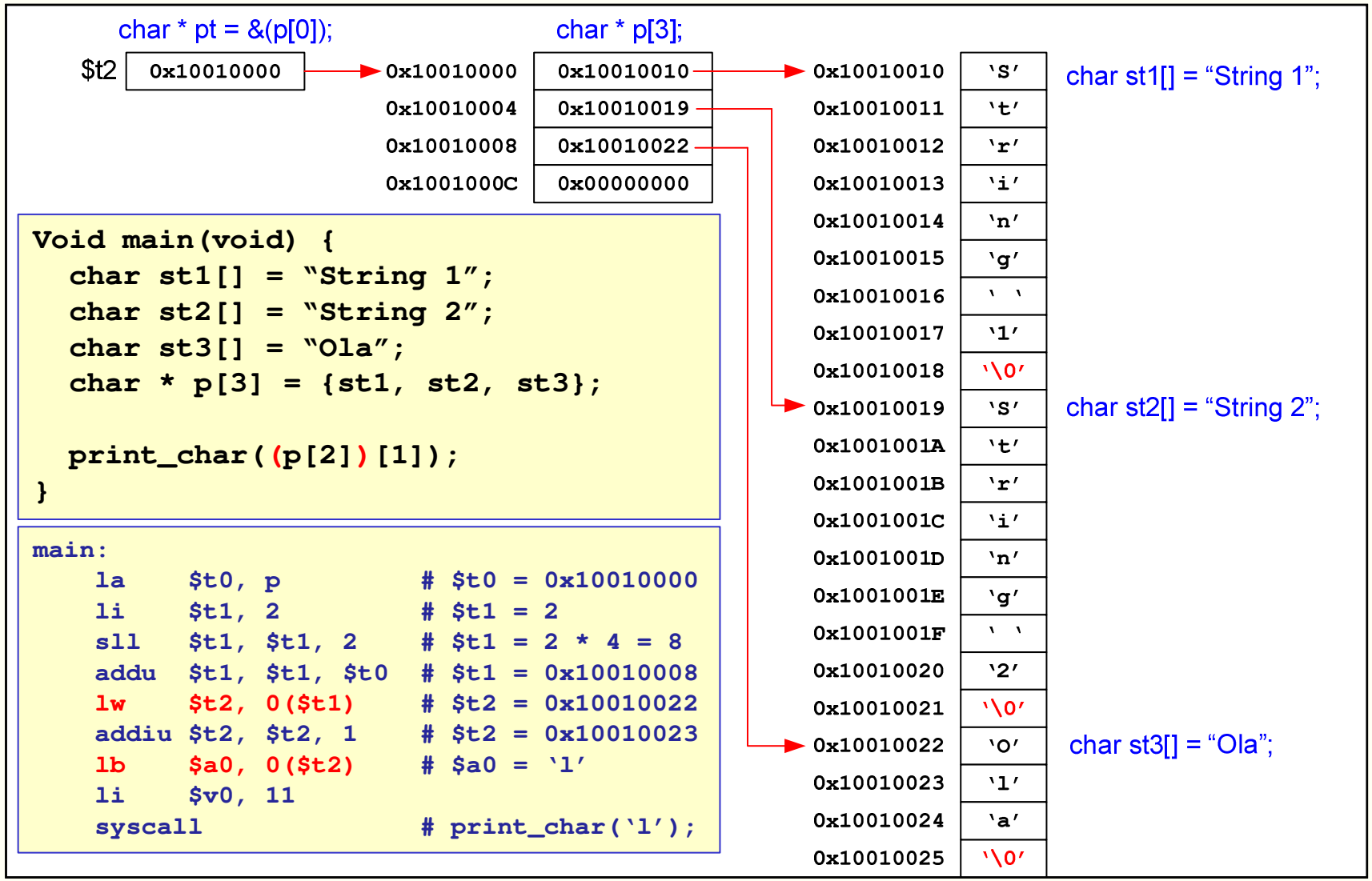
Em C:

```
char st1[] = "String 1";
char st2[] = "String 2";
char st3[] = "Ola";
char * p[3] = {st1, st2, st3};
char ** pt = p;
```

# Arrays de ponteiros para caracter.



# Arrays de ponteiros para caracter.

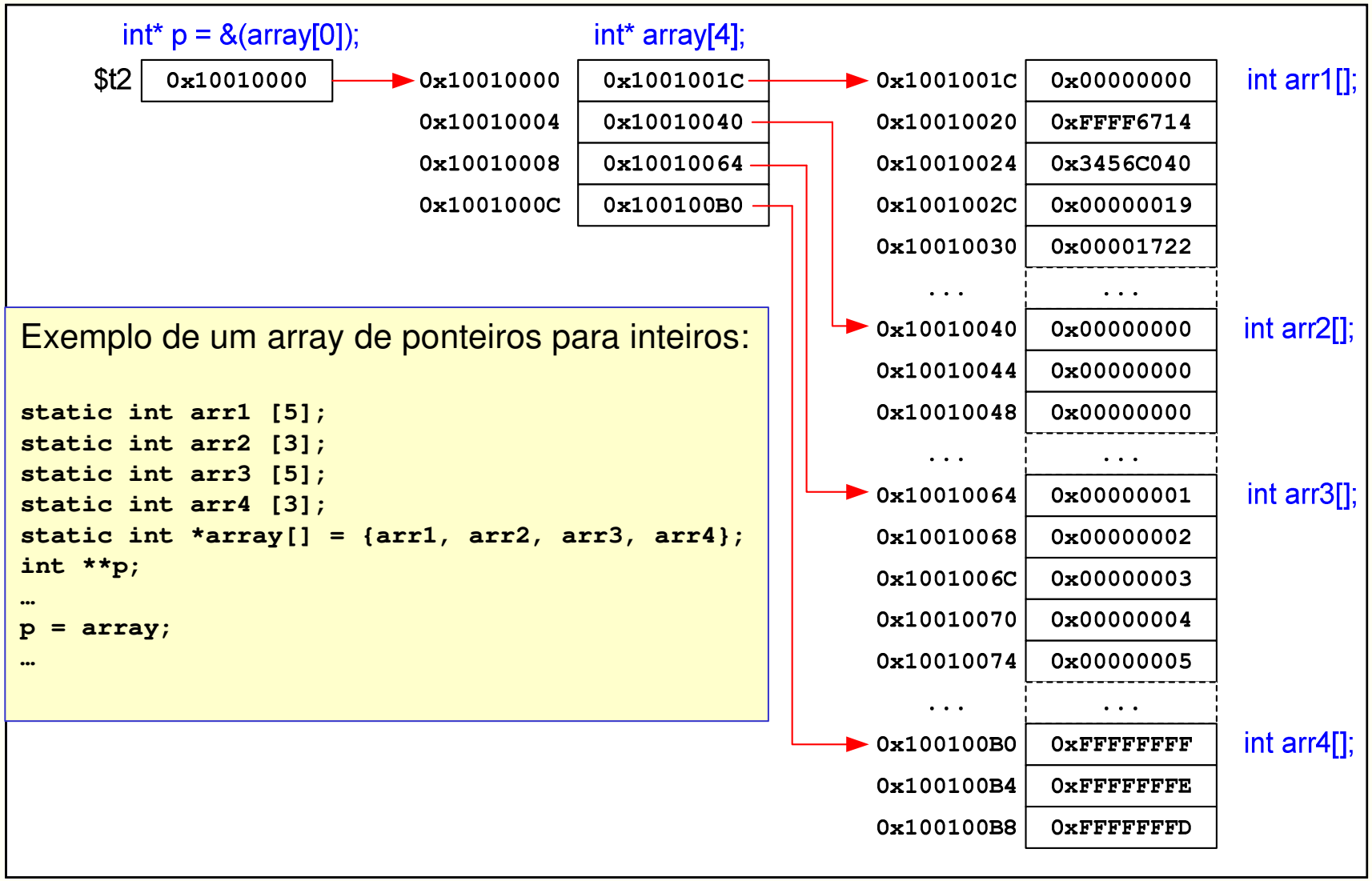



```
Void main(void) {
  char st1[] = "String 1";
  char st2[] = "String 2";
  char st3[] = "Ola";
  char * p[3] = {st1, st2, st3};

  print_char((p[2])[1]);
}
```

```
main:
    la    $t0, p          # $t0 = 0x10010000
    li    $t1, 2          # $t1 = 2
    sll   $t1, $t1, 2     # $t1 = 2 * 4 = 8
    addu  $t1, $t1, $t0   # $t1 = 0x10010008
    lw    $t2, 0($t1)     # $t2 = 0x10010022
    addiu $t2, $t2, 1     # $t2 = 0x10010023
    lb    $a0, 0($t2)     # $a0 = 'l'
    li    $v0, 11
    syscall               # print_char('l');
```

# Arrays de ponteiros  para inteiros.




Exemplo de um array de ponteiros para inteiros:

```
static int arr1 [5];
static int arr2 [3];
static int arr3 [5];
static int arr4 [3];
static int *array[] = {arr1, arr2, arr3, arr4};
int **p;
…
p = array;
…
```