```
#include <stdio.h>
#include <assert.h>
#define SIZE_OF_ARRAY  7
#define
NUM_OF_ROWS_OF_TWO_DIM_CHAR_ARRAY
12
#define LENGTH(A)  (sizeof(A)/sizeof(A[0]))
char (*fn(size_t index)) [] ;
typedef char (*char_array_pt_t)[] ;
char (*Fn()) [] [16];
typedef char (*two_dim_char_array_pt_t)[][16];
char (*union_de_dias(
     char str1[], char str2[]))[];
char (*tokenizer(char arr[],
size_t *tokens_nr))[][16];

int main()
{
 size_t i;
 char_array_pt_t char_pt;
 two_dim_char_array_pt_t
```

```
two_dim_char_array_pt;
 for (i=0;i<SIZE_OF_ARRAY;i++) {
   char_pt = fn(i);
   printf("%16s\n",*char_pt);
 }
 char_pt = fn(SIZE_OF_ARRAY);
 printf ("%16s",*char_pt);

 two_dim_char_array_pt = Fn();
 printf("\n");
 for
(i=0;i<NUM_OF_ROWS_OF_TWO_DIM_CHAR_AR
RAY;i++) {
     printf("%16s\n",(*two_dim_char_array_pt)[i]);
 }


 return 0;
}

char_array_pt_t fn(size_t index) {
 size_t i;
 static char empty_set[] = "{ }";
```

```
 static char array[][16] = {
 "DOMINGO",
 "LUNES",
 "MARTES",
 "MIERCOLES",
 "JUEVES",
 "VIERNES",
 "SABADO"
 };
static_assert(SIZE_OF_ARRAY ==
LENGTH(array),"SIZE_OF_ARRAY y
LENGTH(array) deben ser iguales") ;

 for (i=0;i<LENGTH(array);i++){
  if (index == i) {
     return array[i];
  }
 }

  return &empty_set;
}

two_dim_char_array_pt_t Fn()
```

```
{
 static char two_dim_array[][16] = {
 "ENERO",
 "FEBRERO",
 "MARZO",
 "ABRIL",
 "MAYO",
 "JUNIO",
 "JULIO",
 "AGOSTO",
 "SEPTIEMBRE",
 "OCTUBRE",
 "NOVIEMBRE",
 "DICIEMBRE"
 };
static_assert(
NUM_OF_ROWS_OF_TWO_DIM_CHAR_ARRAY ==
LENGTH(two_dim_array),
"NUM_OF_ROWS_OF_TWO_DIM_CHAR_ARRAY \
y LENGTH(two_dim_array) deben ser \
iguales");
  return &two_dim_array;
}
```

```
char_array_pt_t union_de_dias(
     char str1[], char str2[])
{
 size_t i,j,n1,n2;
 static char array[SHRT_MAX] = {
 '\0'
 };
 array[0] = '{';
 two_dim_char_array_pt_t
 two_dim_char_array_pt1 =
 tokenizer(str1,&n1);
 two_dim_char_array_pt_t
 two_dim_char_array_pt2 =
 tokenizer(str2,&n2);
 for (i=0;strcmp(
(*two_dim_char_array_pt1)[i],"");i++)
 {
   for (j=0;
strcmp(*two_dim_char_array_pt1)[i]],
"");j++){
if(strcmp(
   (*two_dim_char_array_pt1)[i],
```

```
   (*two_dim_char_array_pt2)[j])
  ){
    strcpy(
    (*two_dim_char_array_pt1)[n1++],
    (*two_dim_char_array_pt2)[j]);
   }
 }

 return &array;
}
```