


Algorithm

constructor:

string (const char *)

member:

```
string { ..... private:  
    char * elements;  
    char * end;  
    std::allocator<char> alloc;  
}  
?
```

1st step

char [] it $\xrightarrow{\text{const_cast<char*> (it)}}$ char * it1

2nd step

find it1's begin and end auto it2 = it1
while (it2) it2++ \Rightarrow it1 $\boxed{e = it2 + 1}$ [1]

3rd step take b, e as parameters
in range_initializers

(sub1: alloc_n_copy(b, e))

prepare to return
 \rightarrow pair(char *, char *)
(name, str.)

sub1-1: allocate (e-b) return str.first

sub1-2: uninitialized_copy (b, e, str.first) \rightarrow str.second.

sub 2: takes the str.

elements = str.first end = str.second.

\Rightarrow (sub1 & 2: range_initializer)

[1] Notice that a C-style string needs a '\0' at the end of its content.

```
void free( ~ string();  
           { free();  
           }  
if (elements)  
    for_each (elements, end, [this] (char&a) { alloc. destroy(&a); })  
alloc. deallocate (elements, end - elements);
```

o.k for char* pointers, uninitialized

```
void f(int *a) { *a = 35; }  
int c;          int *b = &c;      ← to define  
f(&b)           ← to call  
pass by a pointer
```