

# Programación Avanzada I

## Tarea 18

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### Problema 6.

La diferencia entre poner o no la “r” al principio antes del nombre de cada función es para indicar si es *reverse* o no, es decir, para ver si el iterador comienza al principio o al final.

Agrego las definiciones:

Fuente: <http://www.cplusplus.com/reference/string/string/begin/>

#### 1.1. **string::begin**

public member function

iterator begin(); const\_iterator begin() const;

##### **Return iterator to beginning**

Returns an iterator referring to the first character in the string.

##### **Parameters**

none

##### **Return Value**

An iterator to the beginning of the string.

The type of this iterator is either `string::iterator` member type or `string::const_iterator` member type, which are compiler specific iterator types suitable to iterate through the elements of a string object.

#### 1.2. **string::end**

public member function

iterator end(); const\_iterator end() const;

##### **Return iterator to end**

Returns an iterator referring to the next element after the last character in the string.

##### **Parameters**

none

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### Return Value

An iterator past the end of the string.

The type of this iterator is either `string::iterator` member type or `string::const_iterator` member type, which are compiler specific iterator types suitable to iterate through the elements of a string object.

### 2.1 `string::rbegin`

public member function

```
reverse_iterator rbegin(); const_reverse_iterator rbegin() const;
```

#### Return reverse iterator to reverse beginning

Returns a reverse iterator referring to the last character in the string, which is considered the reverse beginning.

`rbegin` refers to the character right before the one that would be referred to by member `end`.

#### Parameters

none

### Return Value

A reverse iterator to the reverse beginning of the string (i.e., the last character).

The type of this iterator is either `string::reverse_iterator` member type or `string::const_reverse_iterator` member type, which are compiler specific iterator types suitable to perform a reverse iteration through the elements of a string object.

### 2.2. `string::rend`

public member function

```
reverse_iterator rend(); const_reverse_iterator rend() const;
```

#### Return reverse iterator to reverse end

Returns a reverse iterator referring to the element right before the first character in the string, which is considered the reverse end.

`rend` refers to the character right before the one that would be referred to by member `begin`.

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### Parameters

none

### Return Value

A reverse iterator to the reverse end of the string (i.e., the element right before its first character).

The type of this iterator is either `string::reverse_iterator` member type or `string::const_reverse_iterator` member type, which are compiler specific iterator types suitable to perform a reverse iteration through the elements of a string object.

3. Para una contenedor  $\langle T \rangle$ , el tipo iterator actúa como un **T\***, mientras que `const_iterator` actúa como un **const T\***. Para más detalles se puede consultar:

*Fuente: [http://www.aristeia.com/Papers/CUJ\\_June\\_2001.pdf](http://www.aristeia.com/Papers/CUJ_June_2001.pdf)*