

Step-by-step walkthrough for example on
page 47 of the lecture notes:

Object Initialization,
Construction and Destruction

```
#include <cstring> /* File: default-assign-bug.cpp */
class Word
{
    private:
        int frequency; char* str;
    public:
        Word() : frequency(0), str(nullptr) { }
        Word(const char* s, int k = 0): frequency(k)
            { str = new char [strlen(s)+1]; strcpy(str, s); }
        ~Word() { delete [] str; }
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void Bug(Word& x) { Word bug("bug", 4); x = bug; }

int main() { Word movie("Titanic"); Bug(movie); return 0; }
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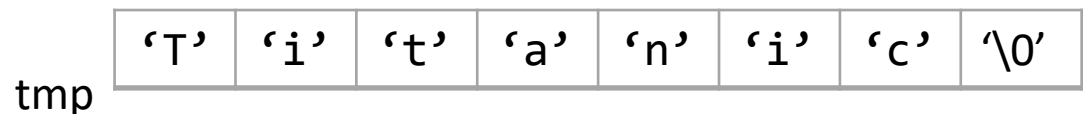
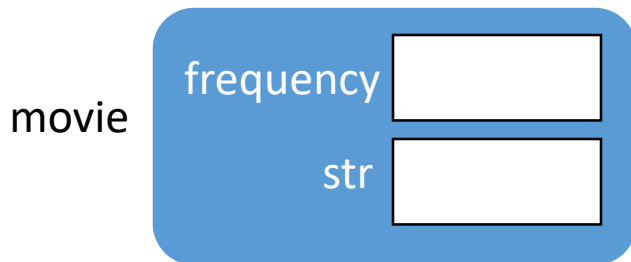
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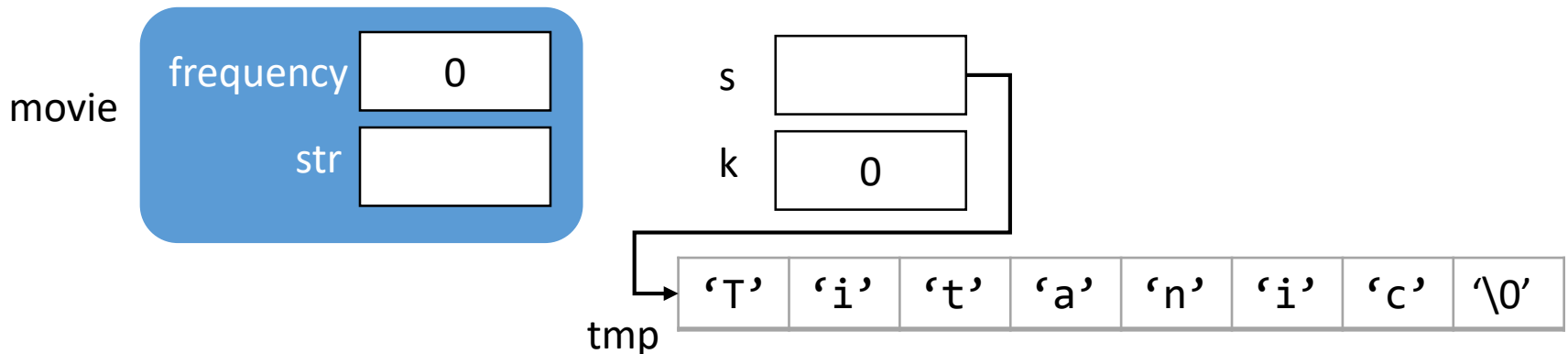
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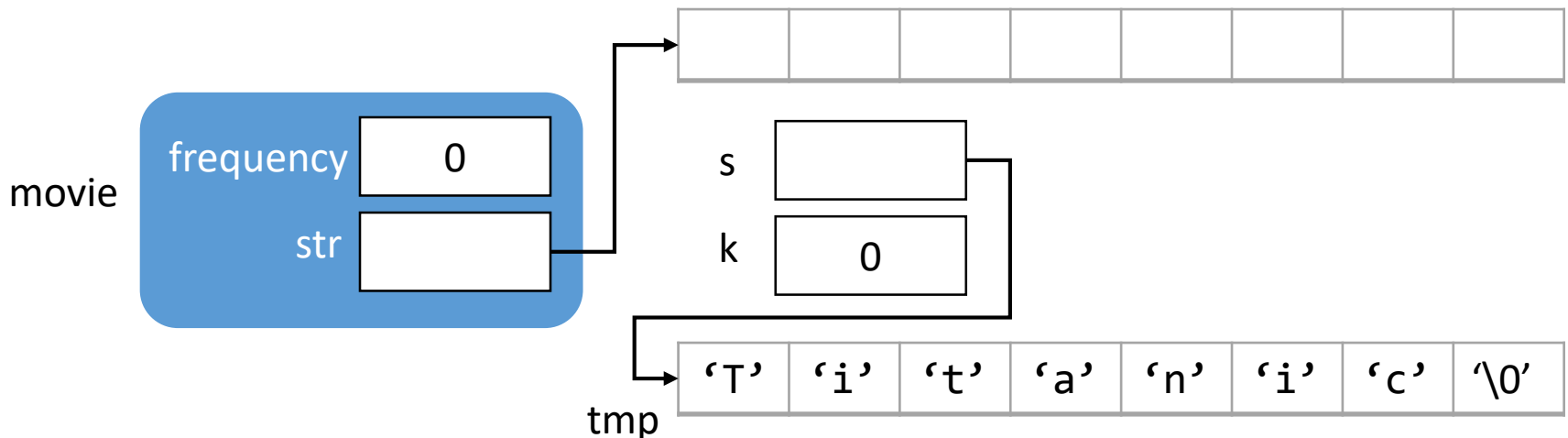
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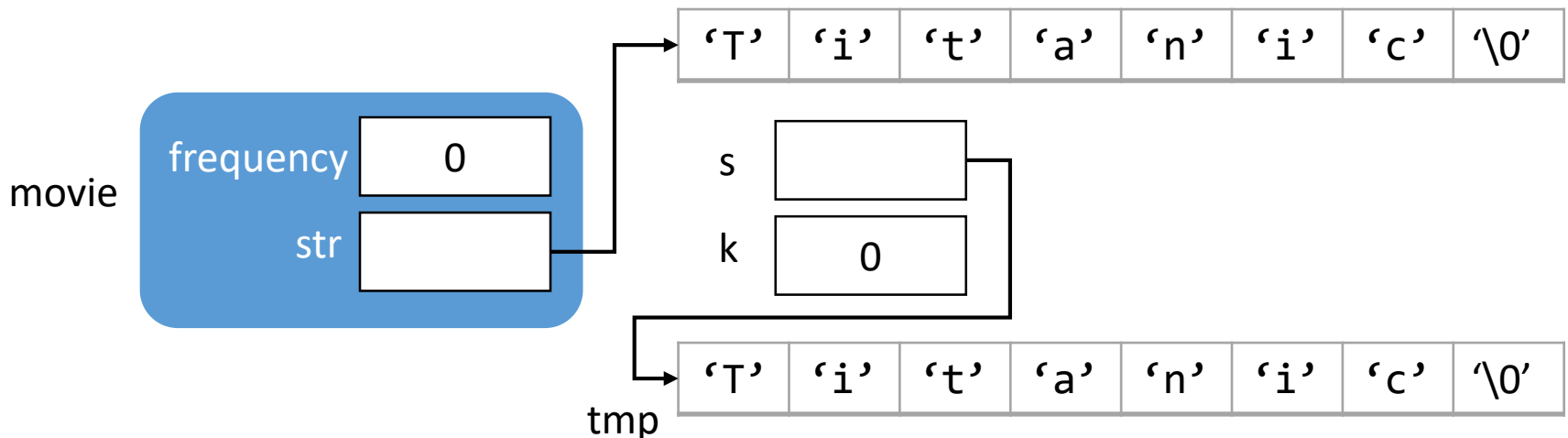
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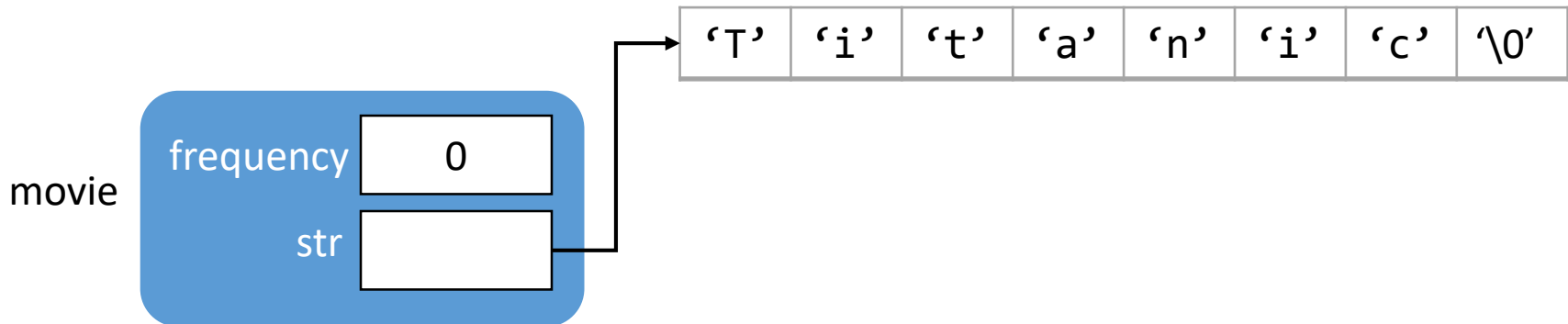
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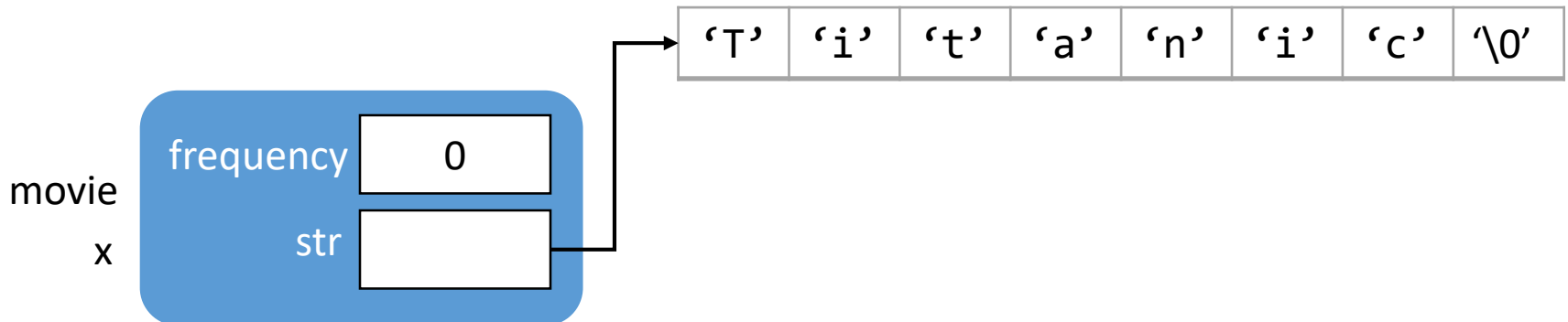
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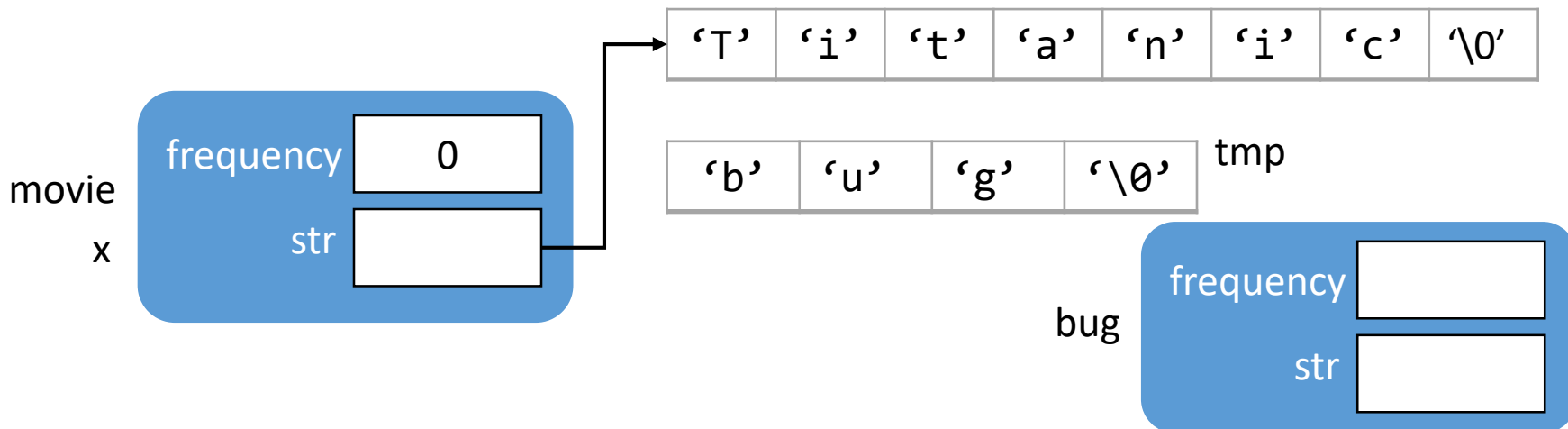
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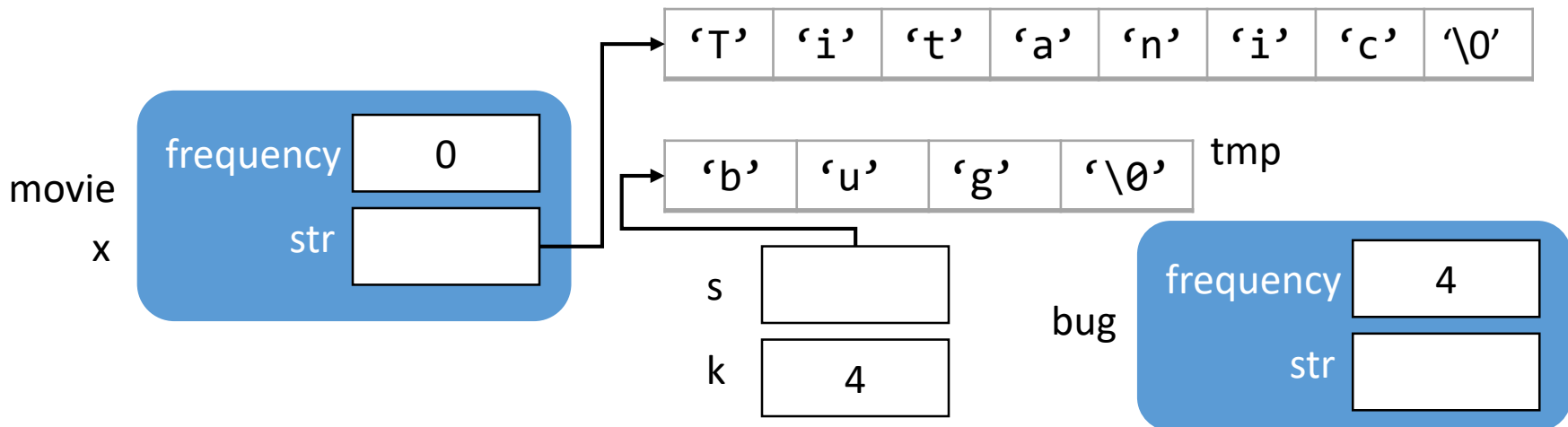
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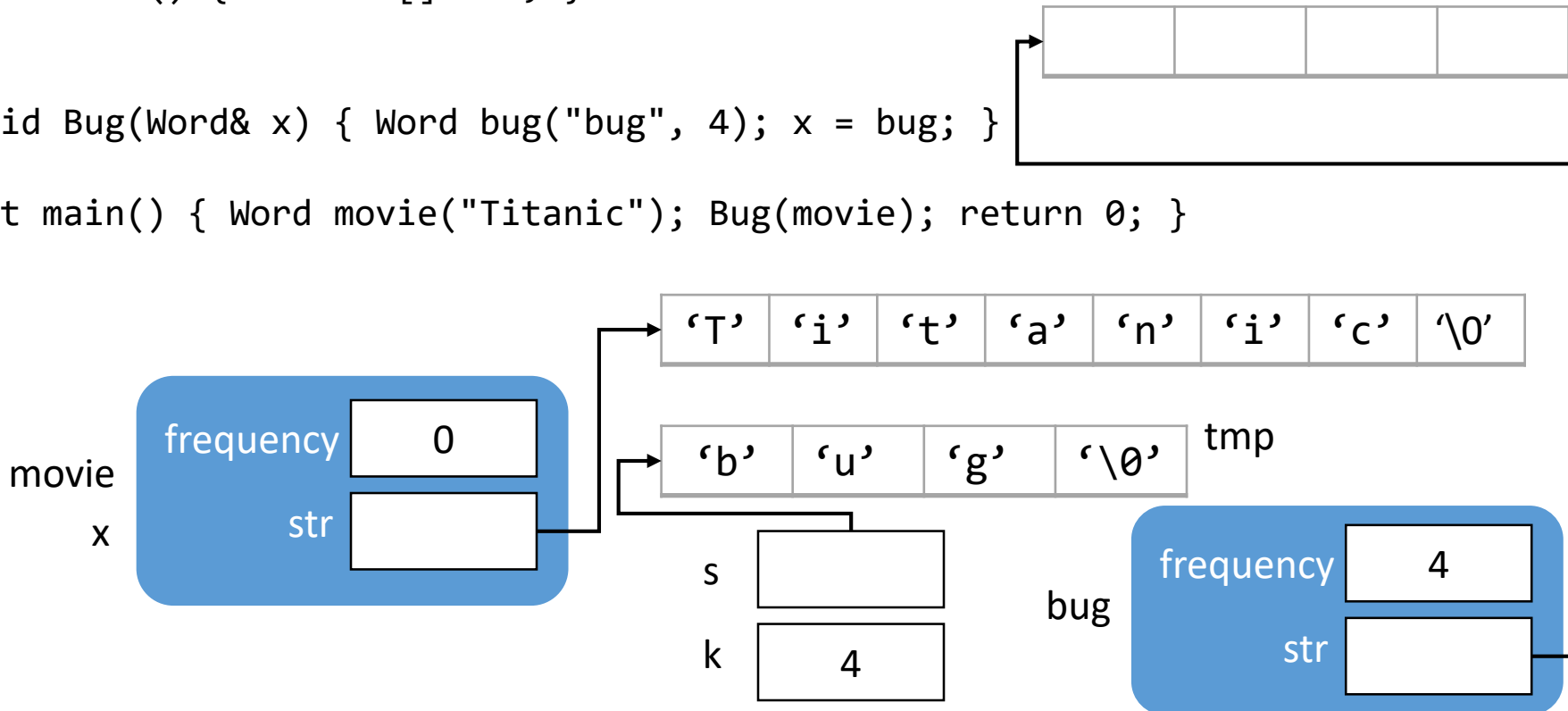
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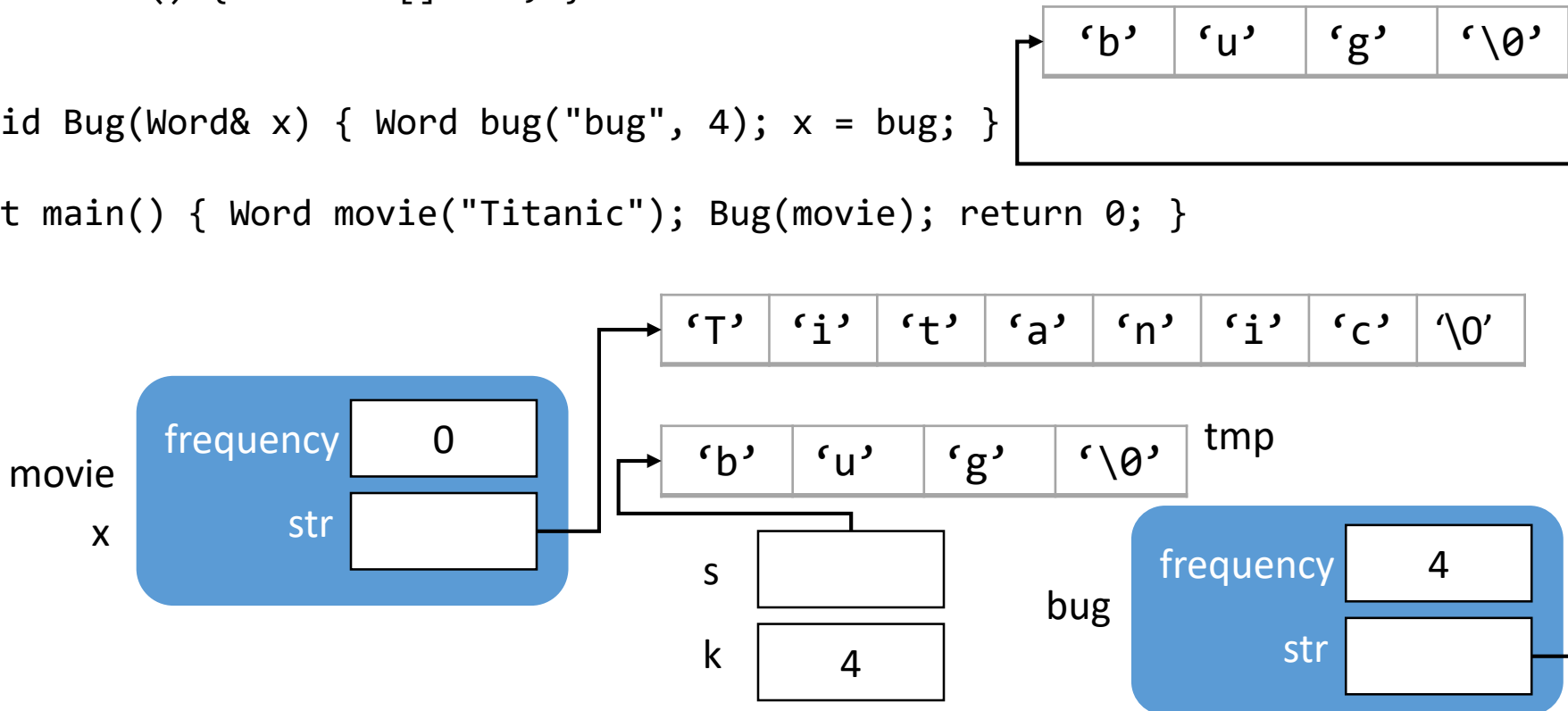
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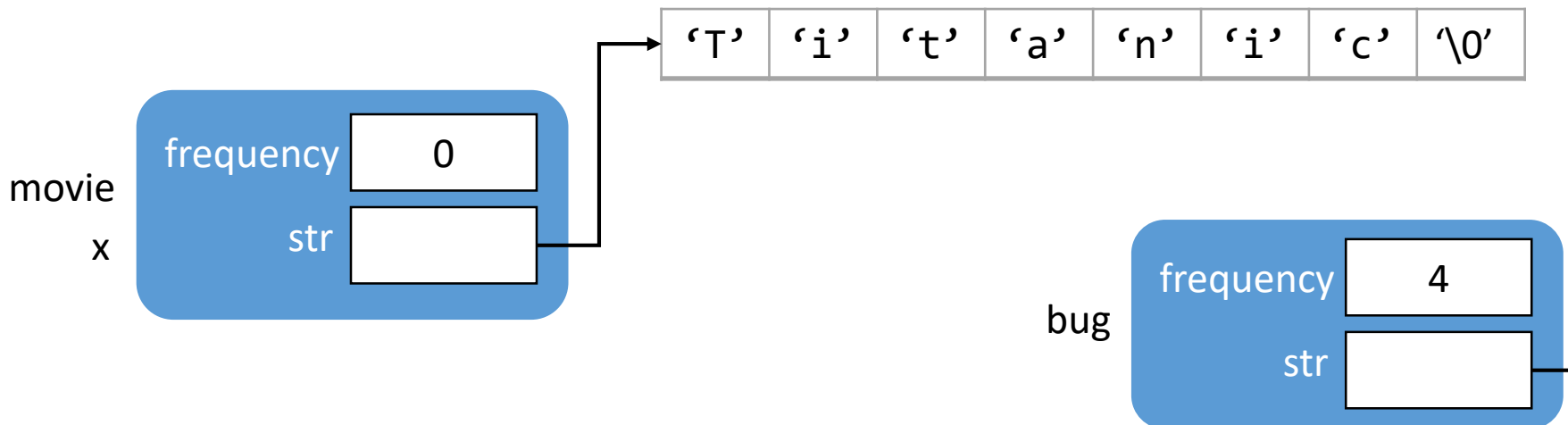
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'b'	'u'	'g'	'\0'
-----	-----	-----	------

'T'	'i'	't'	'a'	'n'	'i'	'c'	'\0'
-----	-----	-----	-----	-----	-----	-----	------

Memory leakage

movie
x

frequency

4

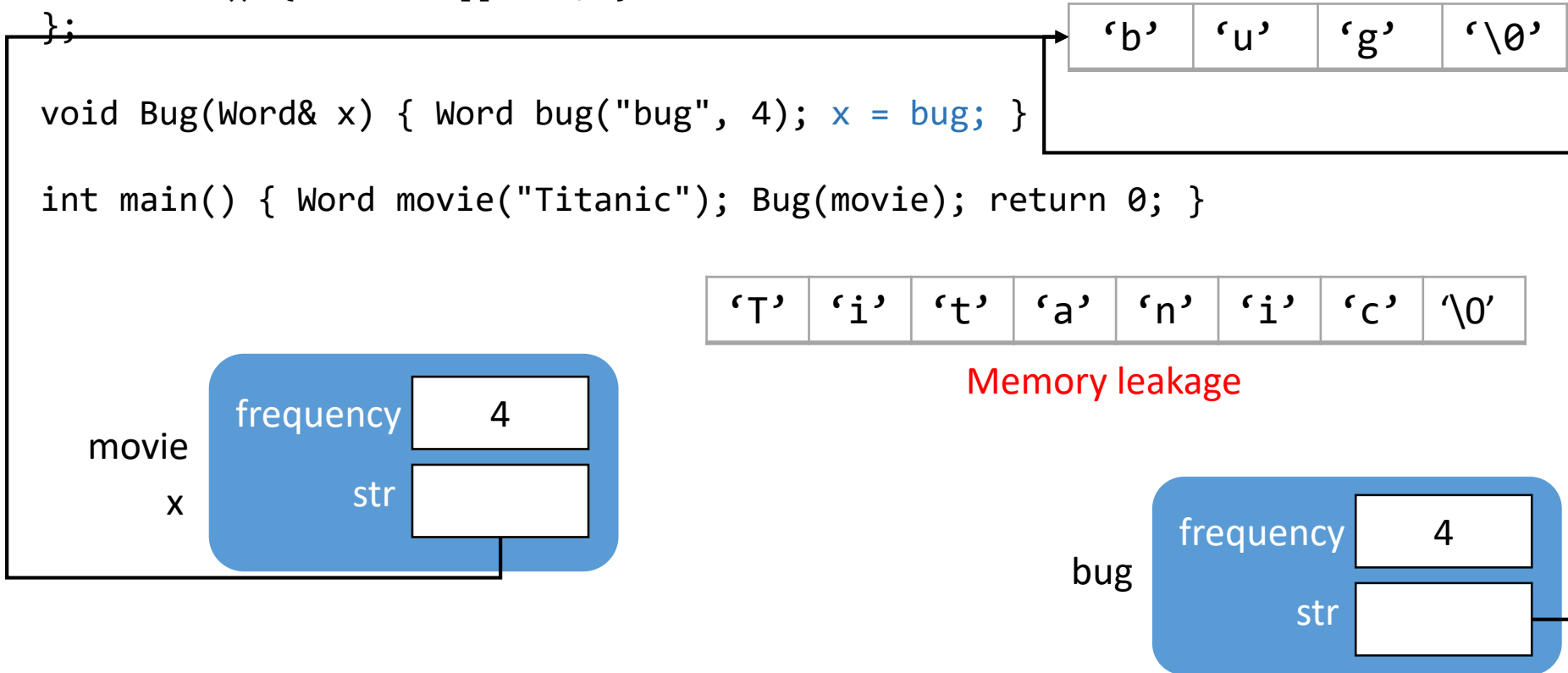
str

bug

frequency

4

str



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```

'T'	'i'	't'	'a'	'n'	'i'	'c'	'\0'
-----	-----	-----	-----	-----	-----	-----	------

Memory leakage

movie
x

frequency

4

str

bug

frequency

4

str

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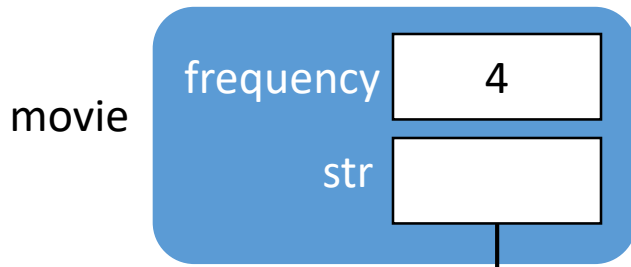
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Runtime error!



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'T'	'i'	't'	'a'	'n'	'i'	'c'	'\0'
-----	-----	-----	-----	-----	-----	-----	------

Memory leakage

