

How Can We Print Citations for All References?

Say we have a **function**

```
void print_citation
(reference_t* ref);
```

that **prints a citation** for a reference.

We **want to print citations for all references in** a bibliography (a sentinel):

```
static double_list_t biblio;
```

How can we accomplish this task?

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Loop Over All Elements, Cast Explicitly, and Call

Let's do it directly this time...

```
double_list_t* elt;
for (elt = biblio.next;
    &biblio != elt;
    elt = elt->next) {
    print_citation
        ((reference_t*)elt);
}
```

Iterate over all elements in the bibliography.

Cast forces change of type. Value is not affected for pointer casts. All elements are references.

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All Elements of Bibliography Start with a Reference

Note that **a given element of biblio may not be a reference.**

So how is casting acceptable?

The element may also be a paper, a book, an article, a conference papers, a textbook, or a book from a series.

But **all of them start with a reference_t!**

(**reference_t** is the ancestor of all of the types.)

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Can We Cast to Pointers of Subtypes?

So that's nice.

Unfortunately, in reality,

- citations for books are printed differently
- than citations for conference papers and
- differently than citations for journal articles.

What can we do?

Can we cast from **reference_t*** to **book_t***? Or to **article_t***? (to subtypes in general?)

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