Developer's Guide

to

the PARI library

(version 2.3.5)

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Chapter 1:
Work in progress

This draft documents private internal functions for hard-core PARI developers. Anything in here is liable to change on short notice. Don't use anything in there, unless you are implementing new features for the PARI library. Try to fix the interfaces before using them. If you find an undocumented hack somewhere, add it here.

Hopefully, this will eventually document everything that we burried in `paripriv.h` or even more private header files like `anal.h`. Possibly, even implementation choices ! Way to go.

1.1 Growarrays.

A **growarray** is a container type, wich enlarges itself as one appends elements to it. It has the following fields, accessed as `A->v`, `A->len`, `A->n`:

`v`: an array of values, of type `void*`, possibly from 0 to $\texttt{len}-1$, the ones from 0 to $\texttt{n}-1$ being occupied. This array is allocated using `malloc`, not on the PARI stack.

`len`: the number of cells allocated in `v`.

`n`: the number of occupied cells.

These containers are used when initializing the library, before the PARI stack is available, hence allocate memory using `malloc(3)`, not on the stack. They are manipulated with the following functions.

`void` **grow_init**`(growarray A)` initialize the `growarray` `A`.

`void` **grow_append**`(growarray A, void *e)` append `e` to `A`, enlarging `A` if necessary.

`void` **grow_copy**`(growarray A, growarray B)` creates a copy `B` of `A`. Do not initialize `B` first (memory leak otherwise). If `A` is `NULL`, this has the same effect as `grow_init(B)`.

`void` **grow_kill**`(growarray A)` frees `A`

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SomeWord refers to PARI-GP concepts.
`SomeWord` is a PARI-GP keyword.
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