## Draw Stack Frames for a Program with Several Functions

Let's **draw the stack frames for our prime number printing example**.

Here was our `main` function:

```
int main ()
{
    int32_t check;
    // ... code doesn't matter to us
}
```

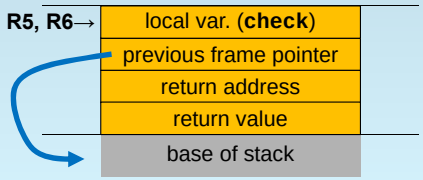
no parameters

one local variable

## Stack Frame for `main` (During Execution of Code)

OS usually has data below `main`'s stack frame, but **from the program's point of view, `main`'s stack frame starts at the base**.

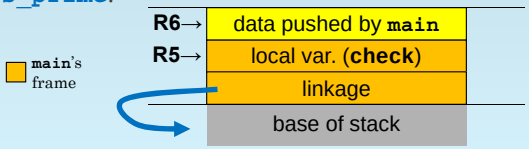


## Stack Frame for `main` (Just Before Call to `is_prime`)

Let's
- collapse the linkage into one block, and
- add space for saved values.

Here's what we might have **before calling `is_prime`**.



## Our `is_prime` Function for Checking Primality

`main` calls `is_prime`:

```
int32_t is_prime (int32_t num)
{
    int32_t divisor;
    // ... code doesn't matter to us
}
```

one parameter

one local variable