

# Slay Some Earthly Demons XV (Updates n3419)

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**Changes:** Rephrase and change to external linkage (SC22WG14.28267), also allow multiple definition to still be UB (this will be addressed later)

**Undefined Behavior:** Non-supported definition of main (or no definition).

## Example:

```
int main(int argc, char *argv[], int *p)
{
// ...
}
```

## Analysis:

POSIX defines an extension, but we explicitly allow implementation-defined forms, so this does not fall under this UB in this case. It is UB if there is no corresponding implementation-defined extension.

**Recommendation:** Make this a constraint violation.

## Wording

### 5.2.2.3.2 Program startup

The function called at program startup is named `main`. The implementation declares no prototype for this function. It shall be defined with a return type of `int` and with no parameters:

```
int main(void) { /* ... */ }
```

or with two parameters (referred to here as `argc` and `argv`, though any names can be used, as they are local to the function in which they are declared):

```
int main(int argc, char *argv[]) { /* ... */ }
```

or equivalent; ~~or in some other implementation-defined manner.~~ **using a type compatible with one of these two types, or using some other implementation-defined type.**

### 6.9.1. General

#### Constraints

**1 There shall be a definition for the identifier `main` with external linkage. A definition for `main` shall have a permitted function type as specified in 5.2.2.3.2.**