Programming in Ada in 2026

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What would happen if I wrote the backend for my website with the programming language used in airplanes and traffic lights then shared the source code with a bunch of hackers?

What is Ada?

Ada is an imperative, strongly typed, memory safe language from the 1980s that is used in aerospace, defense, and traffic control.

(Why don't we use it more often?)

Basic Example with gcc

```
with ada.text_io;
 use ada.text_io;
procedure hello is
begin
    put_line("hello, world!");
end hello;
```

```
sudo pacman -S gcc-ada
```

```
gcc -c hello.adb
gnatbind hello.ali
gnatlink hello.ali
./hello
```

In Practice, with a build system

`alr with ada_sqlite3`

```
File  Edit  View  Terminal  Tabs  Help
a4b7:[user]:~/Documents/dev/thoughtform$ alr build
 Building mycgi=0.1.0-dev/mycgi.gpr...
Compile
   [Ada]          cgi_main_post.adb
   [Ada]          cgi_utils.adb
   [Ada]          code_limits.adb
   [Ada]          codes.adb
   [Ada]          html.adb
   [Ada]          posts.adb
cgi_utils.adb:126:07: warning: "buffer" is not modified, could be declare
d constant [-gnatwk]
Bind
   [gprbind]      cgi_main_post.bexch
   [Ada]          cgi_main_post.ali
Link
   [link]         cgi_main_post.adb
 Build finished successfully in 9.28 seconds.
```

Difference between C and Ada

Pointers must match the lifetime of an object.

If you did the equivalent of:

```c
#include <stdio.h>
int *get_dangling_pointer(void) {
    int local = 42;
    return &local;
}
int main(void) {
    int *p = get_dangling_pointer();
    printf("%d\n", *p);  // segfault
    return 0;
}
```

In Ada, you get `.adb:24:18: error: non-local pointer cannot point to local object`

Difference between C and Ada (2)

Limited types do not exist in C.

```
-- from https://github.com/jklmnn/st7789-ada/
--...
with HAL.SPI;
with HAL.Framebuffer;

package St7789 is

   type Device is limited new
   HAL.Framebuffer.Frame_Buffer_Display with
      private;
   type Any_Device is access all Device;
```

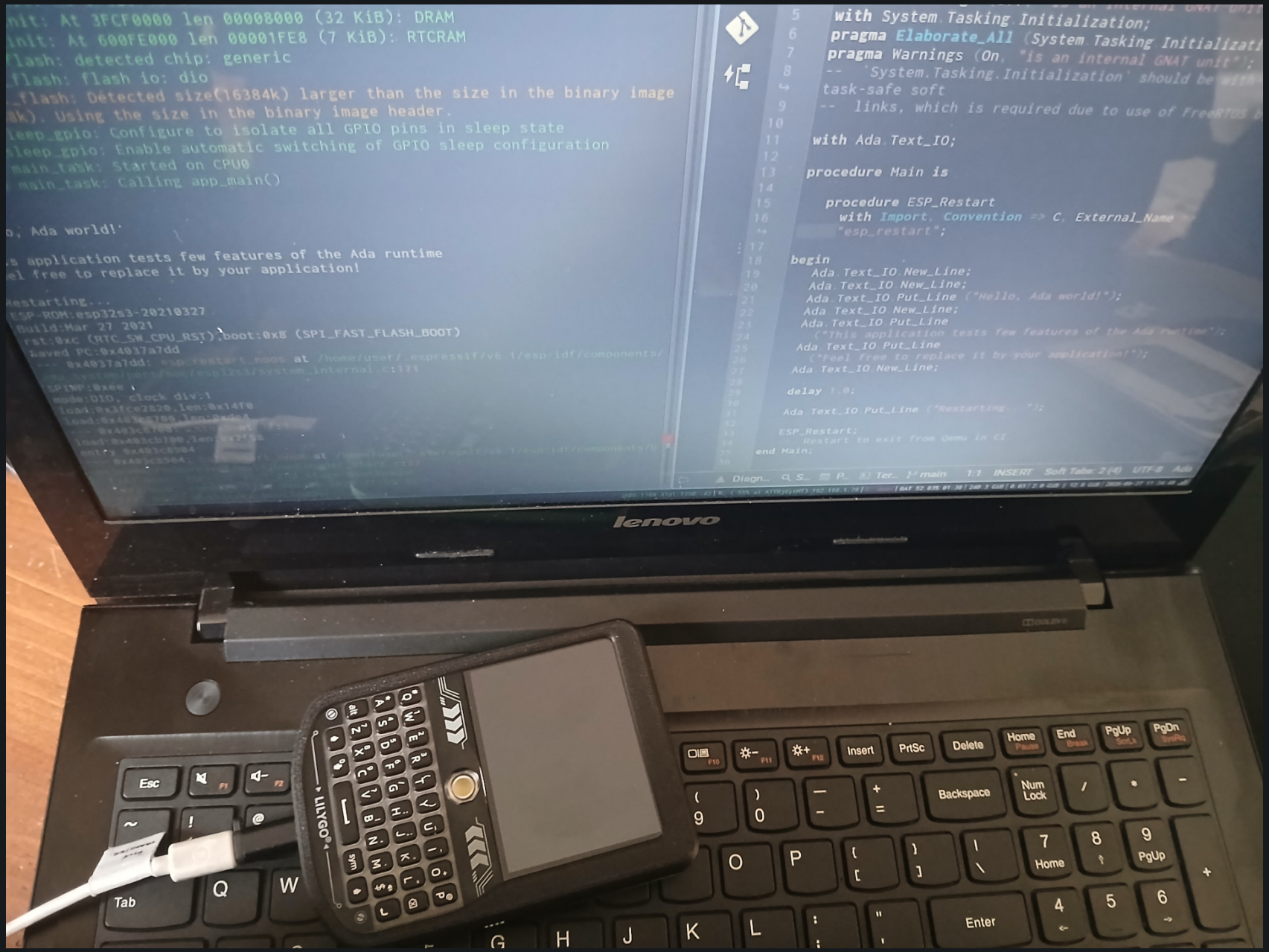
This is a ‘struct’ that can not be copied or assigned. Use case: an embedded system that only has 1 device at a set of given ports and only needs 1 handle.

Difference between C and Ada (3)

Concurrency is built in.

```
-- from  https://learn.adacore.com/courses/
-- Ada_For_The_CPP_Java_Developer/
-- chapters/11_Concurrency.html
procedure Main is
   task After is
      entry Go;
   end After ;
   task body After is
   begin
      accept Go;
      Put_Line ("After");
   end After;
begin
   Put_Line ("Before");
   After.Go;
end;
```

I got Hello World running on an ESP32-S3!



I made a backend for my website

I made one passcode public, and now a spam bot is trying to sell drugs.

```
Will yo kindly drop me a e-mail?

My website; <a href="https://
bulk-raw-ketamine-crystal-online/">buy bulk raw k
etamine crystal online</a>|2026-11-07|1794022428|6|3
81|12|Ramona|This wweb site c e rtainly has alll the info
rmation andd facts I wanted concernbing this subject and

didn't ĸnow who to asĸ.

Also visit my homepage; <a href="https:/
/buy-neurocaine-powder-in-bulk-usa/">buy neur
ocaine powder in bulk usa</a>|2026-11-09|1794190194|6|3
sqlite>
```

What do you think?

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