




# Retro Development: Alternatives and Constraints

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24/06/11



# Alternatives

Platform(s)

Compilation or cross-compilation

Programming languages

Frameworks and libraries



# Platform(s)

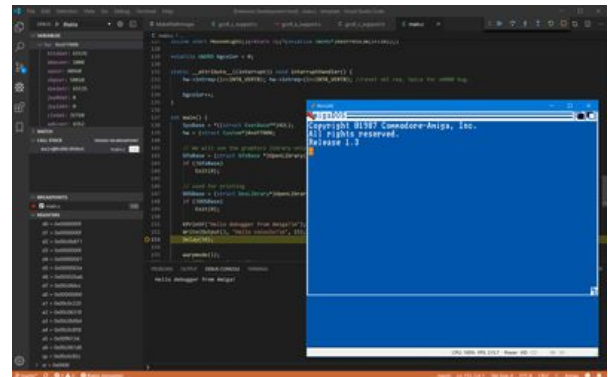
- Real hardware
  - Rare/expensive
    - Apple Lisa, Amiga CD32
  - Upload programs
    - Dying tapes and disks
    - No networking
    - Limited expansions



- Emulators
  - Many emulators by hobbyists
    - Some work very well
      - WinUAE
    - Other much less so
      - ZSNES
  - Many emulators need ROMs
    - Amiga Kickstarts are copyrighted and licensed
    - C65 Kernal and BASIC ROMs are in a gray area

# Compilation or Cross-compilation

- Real hardware
  - “It's the Real Thing”™
  - Usability
    - Editors?
    - Compilers?
    - Speed...
  - Frustration
    - Memory protection
- Emulators
  - Variable quality/stability
  - Debugging capability
  - Quick(er) turn around
- Modern OS/hardware
  - Not the same experience
  - Usability
    - Modern IDEs
    - Speed!
  - Frustration
    - Transfer to real hardware



Software Failure. Press left mouse button to continue.  
Guru Meditation #00000004.0000AACB

# Programming Languages

- Assembled/Compiled
  - Dialects of Assembler and C
  - Pros
    - Fast
    - Low level
  - Cons
    - Complexity
    - Understandability
    - Safety/Security

```
**** COMMODORE 64 BASIC V2 ****
64K RAM SYSTEM 38911 BASIC BYTES FREE
READY.
● INTERPRETED
  * DIALECT OF BASIC...
  * PROS
    - SIMPLICITY
    - UNDERSTANDABILITY
    - SAFETY/SECURITY
  * CONS
    - SLOW(ER)
    - HIGH LEVEL
```

- Licensing and cost
  - Some compilers, IDEs, BASIC are copyrighted and not free

# Frameworks and Libraries

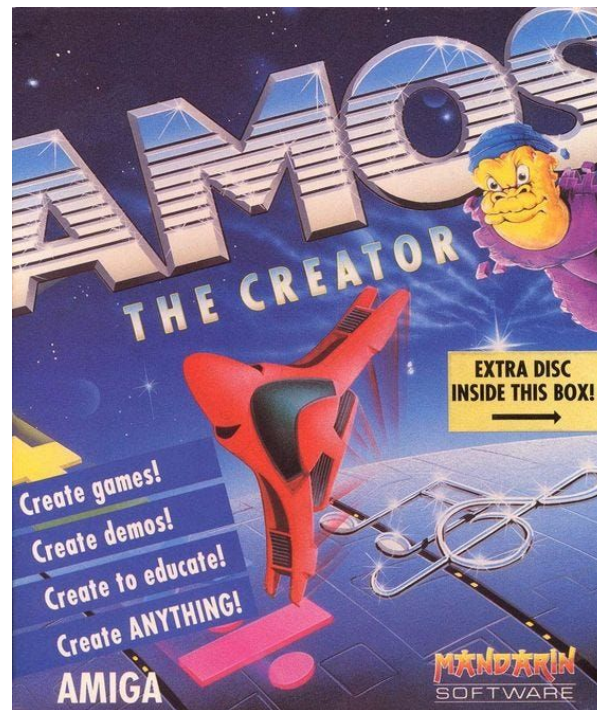
- Do Not Reinvent the Wheel
  - Levels
    - Game creators
    - Game engines
    - Frameworks
  - Pros
    - Simplicity
    - Time/Effort
    - Learning curve
  - Cons
    - Style/Target
    - Bugs



- Reinvent the Wheel
  - Pros
    - Lots of effort
    - Learning
    - Control
    - Simplicity
  - Cons
    - Complexity
    - Time/Effort
    - Learning curve



# WinUAE



# AmigaForever and WinUAE

Grab a ticket with the license number

Download AmigaForever

- <https://drive.google.com/drive/folders/1zshChxDfg40aufrPZJMu3WhfVnhpmtRj>
- `AmigaForever2013Plus.msi`

Install AmigaForever





# AmigaForever and WinUAE

## Download WinUAE

- <https://www.winuae.net/download/>

## Install WinUAE

- It should detect automatically the Kickstarts (ROMs)

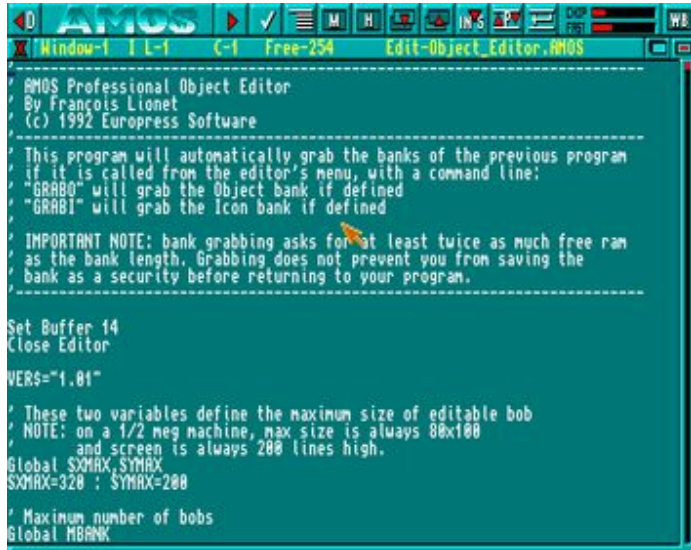
## Download

- `Amos600.uae`
- `GameJamReAnimate24.7z`

Run WinUAE with this config.

# AMOS

AMOS BASIC, dialect of BASIC for Amigas



```
AMOS Professional Object Editor
By François Lionet
(c) 1992 Europress Software

-----
This program will automatically grab the banks of the previous program
if it is called from the editor's menu, with a command line:
"GRAB0" will grab the Object bank if defined
"GRAB1" will grab the Icon bank if defined

IMPORTANT NOTE: bank grabbing asks for at least twice as much free ram
as the bank length. Grabbing does not prevent you from saving the
bank as a security before returning to your program.
-----

Set Buffer 14
Close Editor

VER$="1.01"

' These two variables define the maximum size of editable bob
NOTE: on a 1/2 meg machine, max size is always 80x100
      and screen is always 200 lines high.
Global $XMAX,$YMAX
$XMAX=320 : $YMAX=200

' Maximum number of bobs
Global MBANK
```



<https://amospromanual.dev/>