

# Where have the women of tech history gone?

Laura Durieux - PG Day France 2025 - 03/06/2025

# Laura Durieux

A.K.A

# DevGirl\_

Fullstack web developer

WorldSkills Belgium gold medal 2020 & 2021

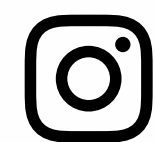
Streamer on Twitch



DevGirL\_



devgirl\_



devgirl\_



contact@lauradurieux.dev



# Once upon a time...



# Once upon a time...

Why do you present so few women in your syllabus?

# Once upon a time...

Why do you present so few women in your syllabus?

Because I don't have enough class time to add more artists to my syllabus. Some students may not have the required foundations for the future.

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# Once upon a time...

Because I do not have class time to  
add more activities. Some  
students need a required  
foundation





# Once upon a time...



Why are women not considered as the required “basis” ?  
What do they have less than men ?

# Once upon a time...



Who is the person or the group of persons who decide what someone deserves more than another to be in a syllabus ?

# Once upon a time...

Present in the majority of fields

But let's focus on the field of computer  
science for today.

**And you, do you know any women  
in computer science?**



# Women in tech history



# Computer

# Computer

was a job



# Nicole-Reine Lepaute 1723 - 1788



- One of the most famous astronomers of the Age of Enlightenment
- She calculated the return date of Halley's Comet as **April 13th, 1759** almost exactly as it returns on **March 13th, 1759**.



# Maria Mitchell

1818 - 1889



- Astronomer, librarian, naturalist, and professor at Vassar College
- First professional woman astronomer in America
- First person to discover a telescopic comet

# The 19th century

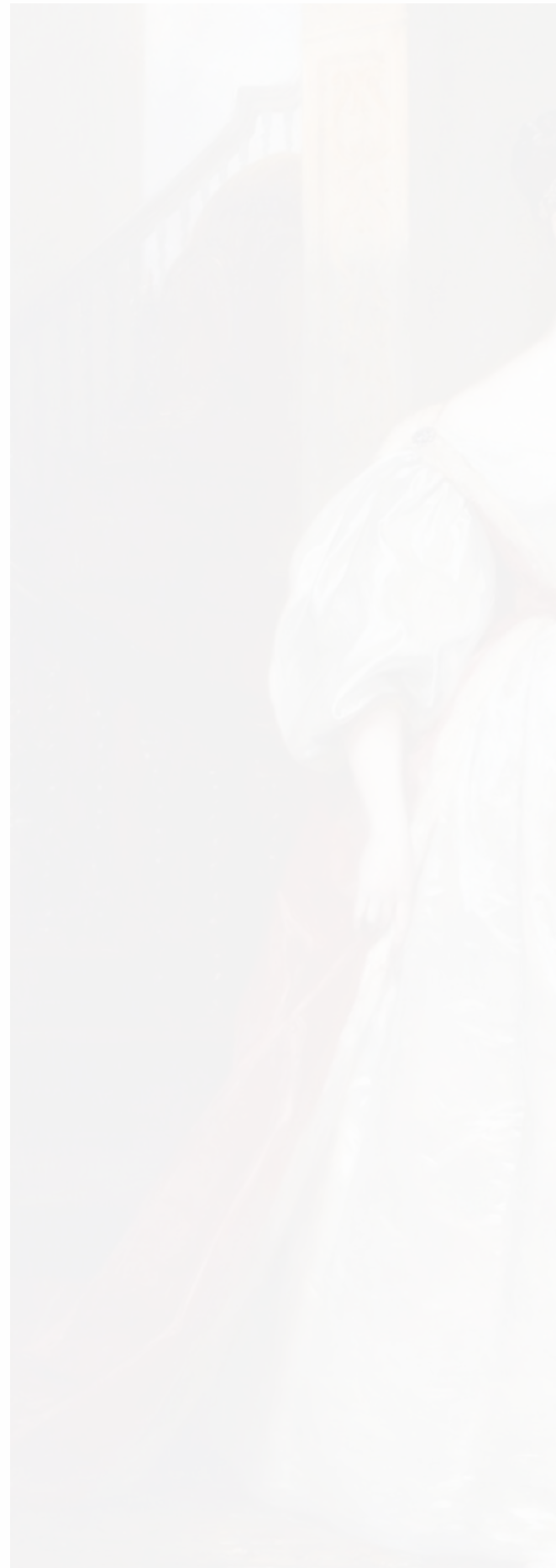


# The 19th century

Access to degrees 

Must resign when married 

Ada Lovelace





# Ada Lovelace

1815 - 1852

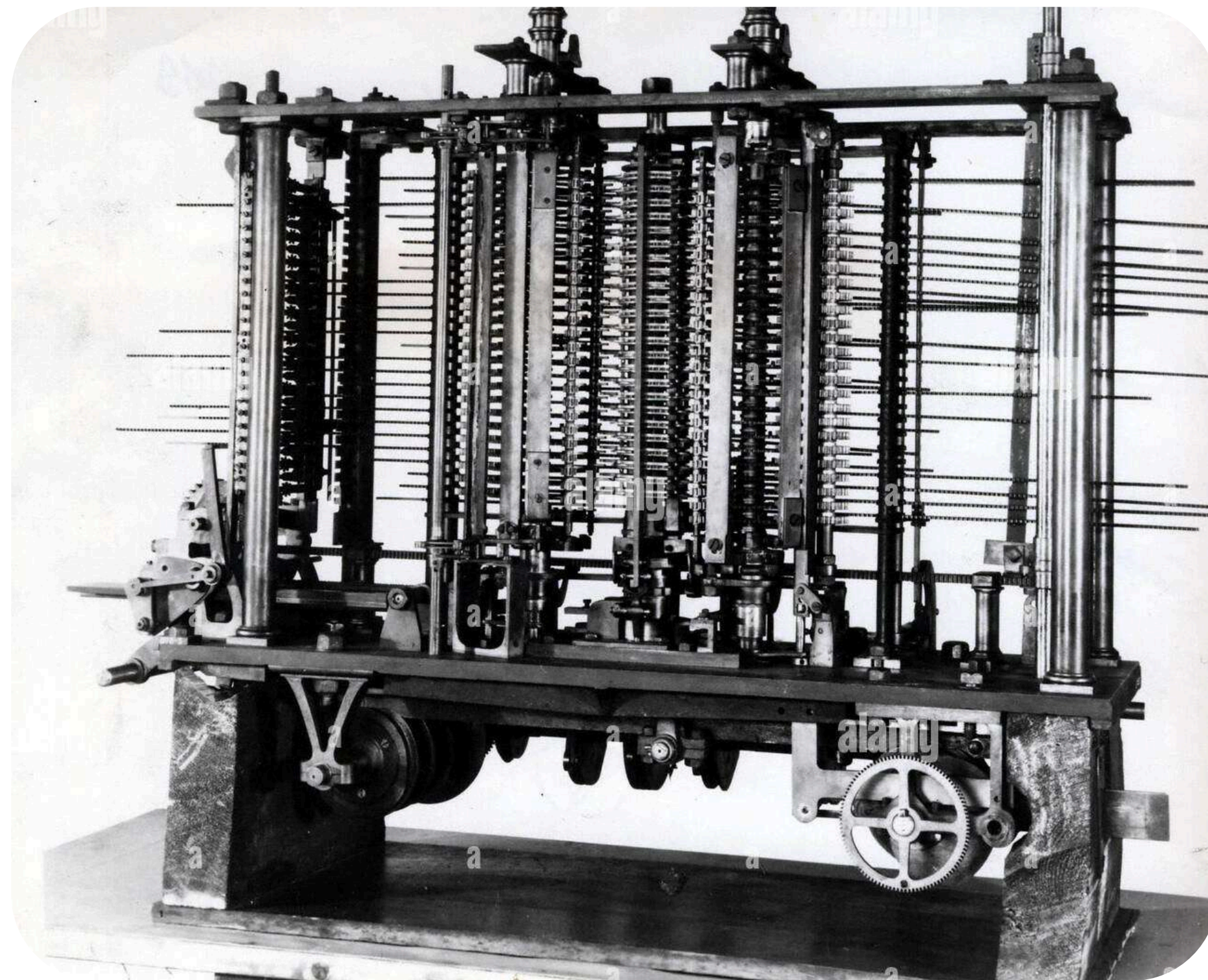


Only the first programmer ?





Ad



# Analytical Engine

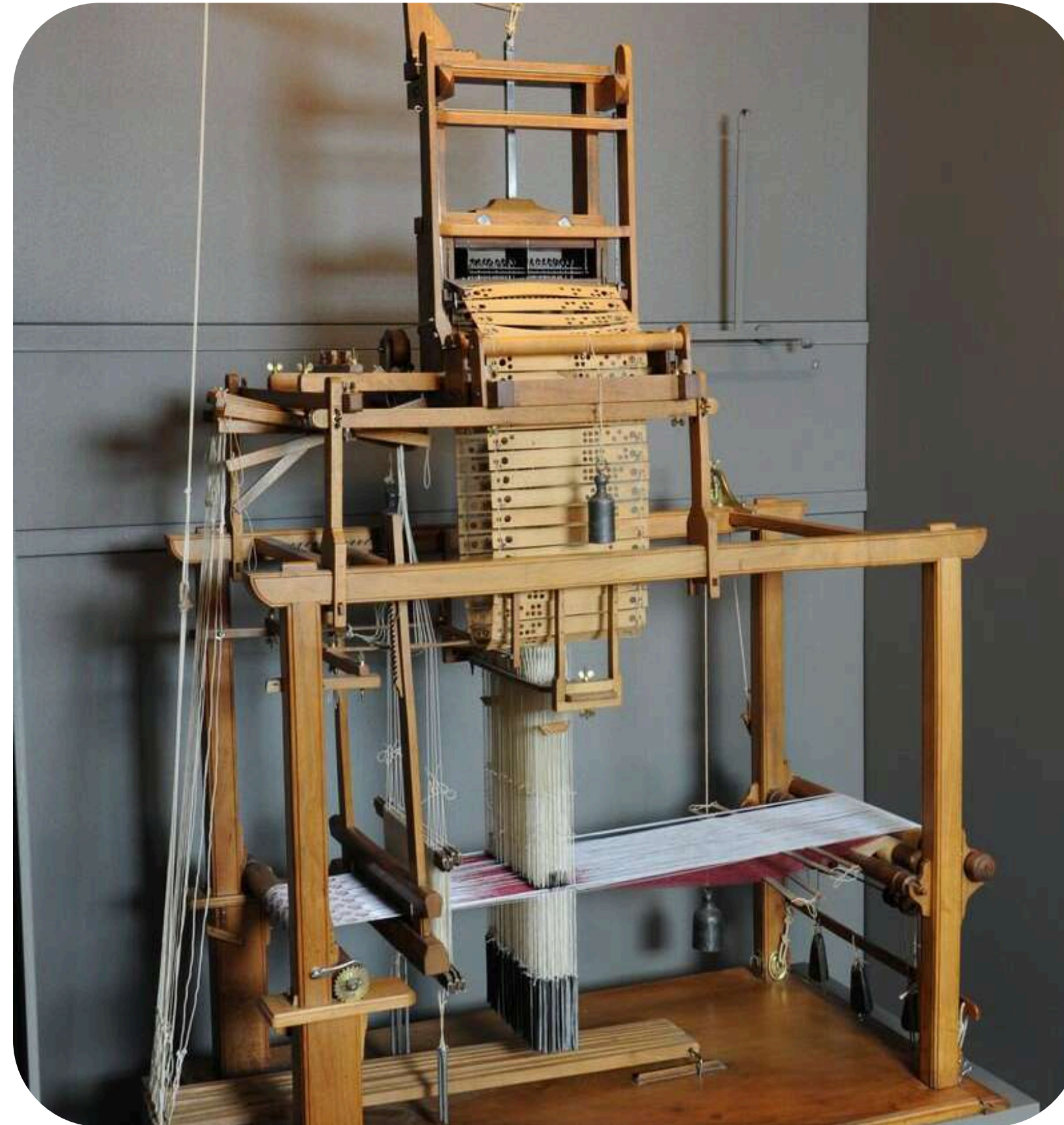


Charles Babbage





Ad



## Machine à tisser de jacquard

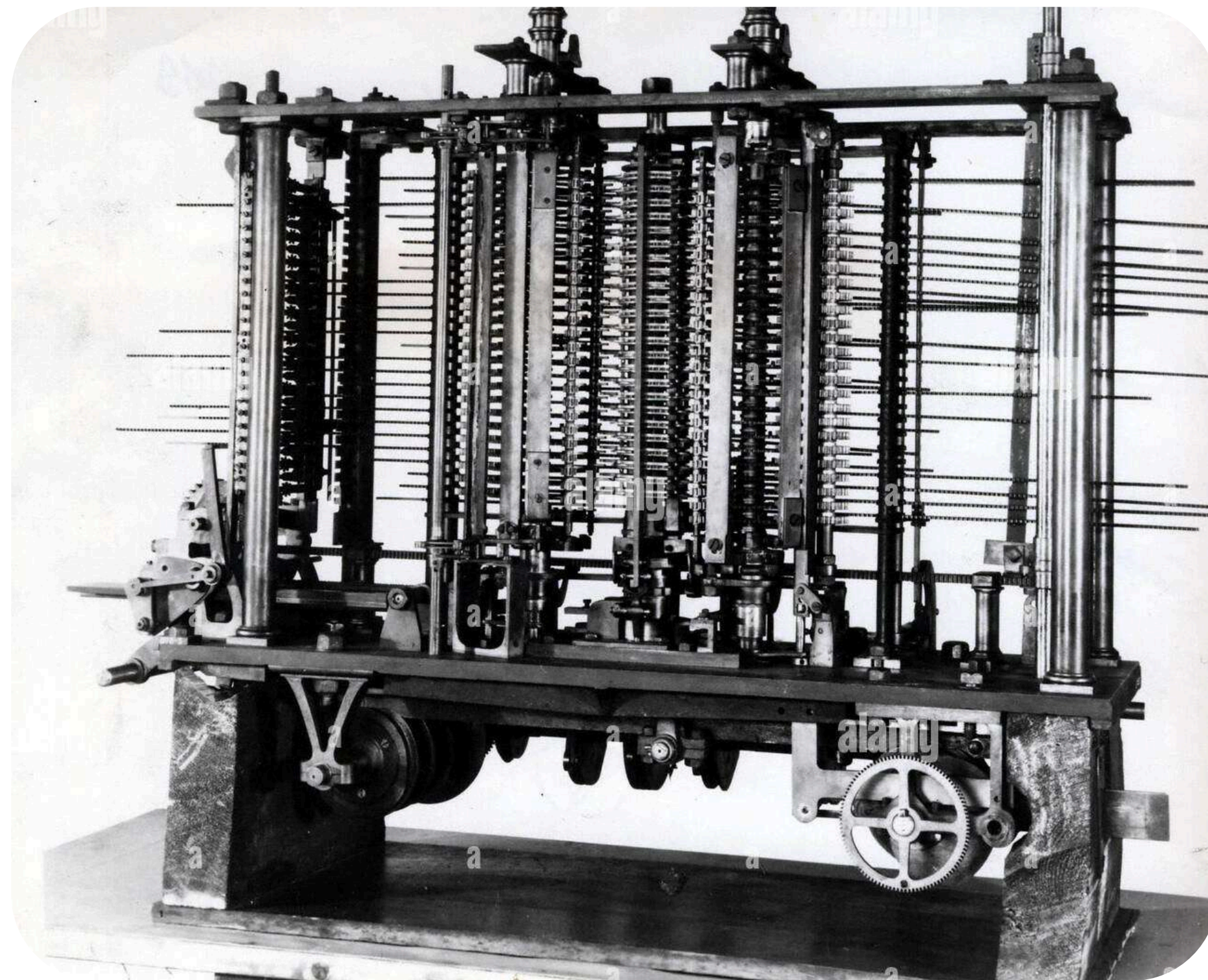


Joseph Marie Jacquard





Ad



# Analytical Engine



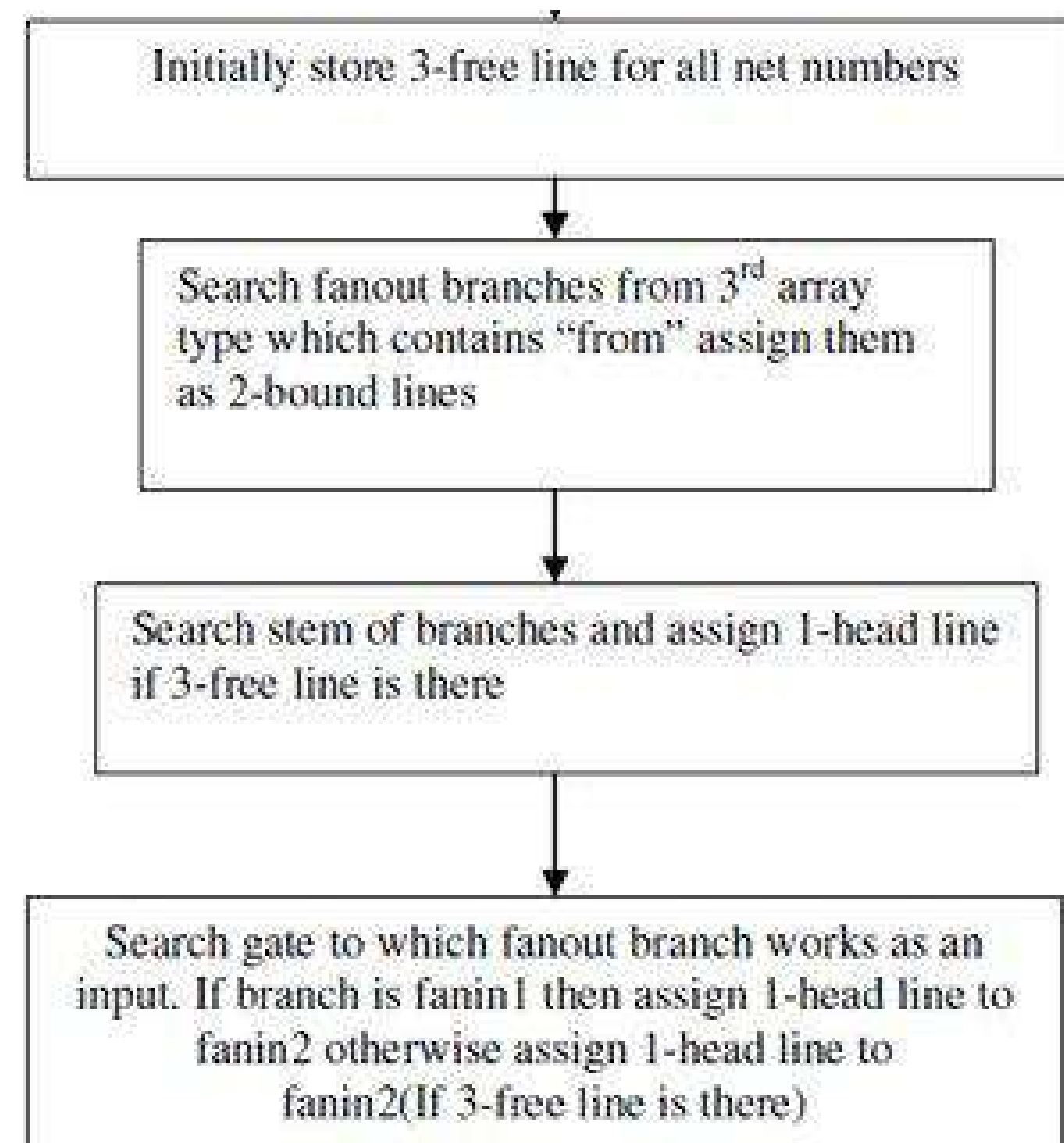
Charles Babbage



Ada



## Algorithmes avant Ada Lovelace



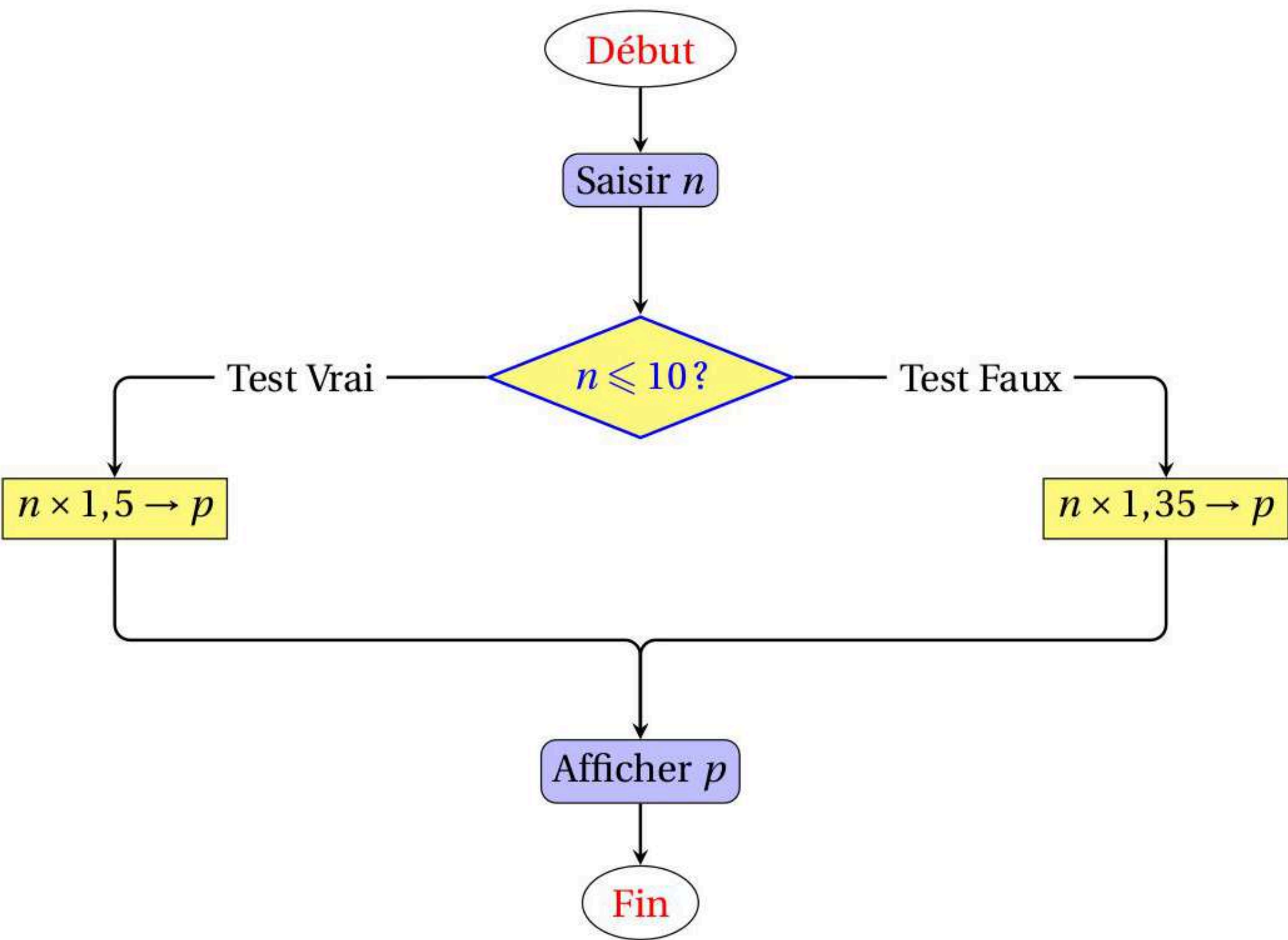
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Ada



# Algorithmes after Ada Lovelace



ngine



# Ada Lovelace

1815 - 1852



Only the first programmer ?

- Famous for her notes on the Analytic Engine
- She wrote the first algorithm  
→ Kind of not true



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## She is the mother of computer science



# Harvard Computers



A group of women working at the Harvard Observatory, founded by Edward Charles Pickering.

- They classified more than 10.000 stars

# Annie Jump Cannon 1863 - 1941



- Astronomer and an Harvard Computer
- Develops a method for classifying stars, which will be adopted by all astronomers starting from 1910
- Classified 5.000 stars per month, or 3 stars per minute



# Between the 1940s and the 1970s

Women were widely hired as coders



# Between the 1940s and the 1970s

Women were widely hired as coders

- Emerging field
- Few job opportunities or blocked careers in other scientific fields
- Shortage of manpower

# Grace Hopper

1906 - 1992



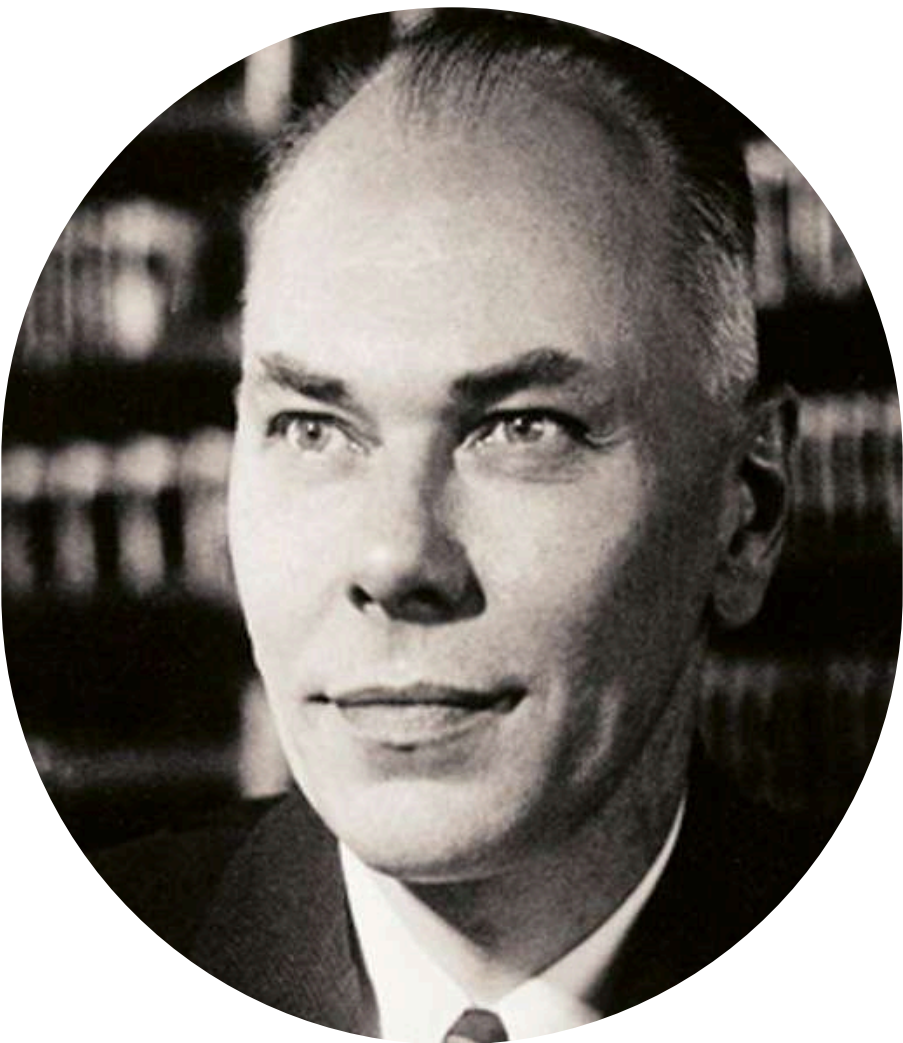
- Creation of the Mark I in 1937 by Howard Aiken
- The third developer of the Mark I and wrote the 521-page user manual



Gr



# Mark I



Howard Aiken

d Aiken

rote the



# Grace Hopper

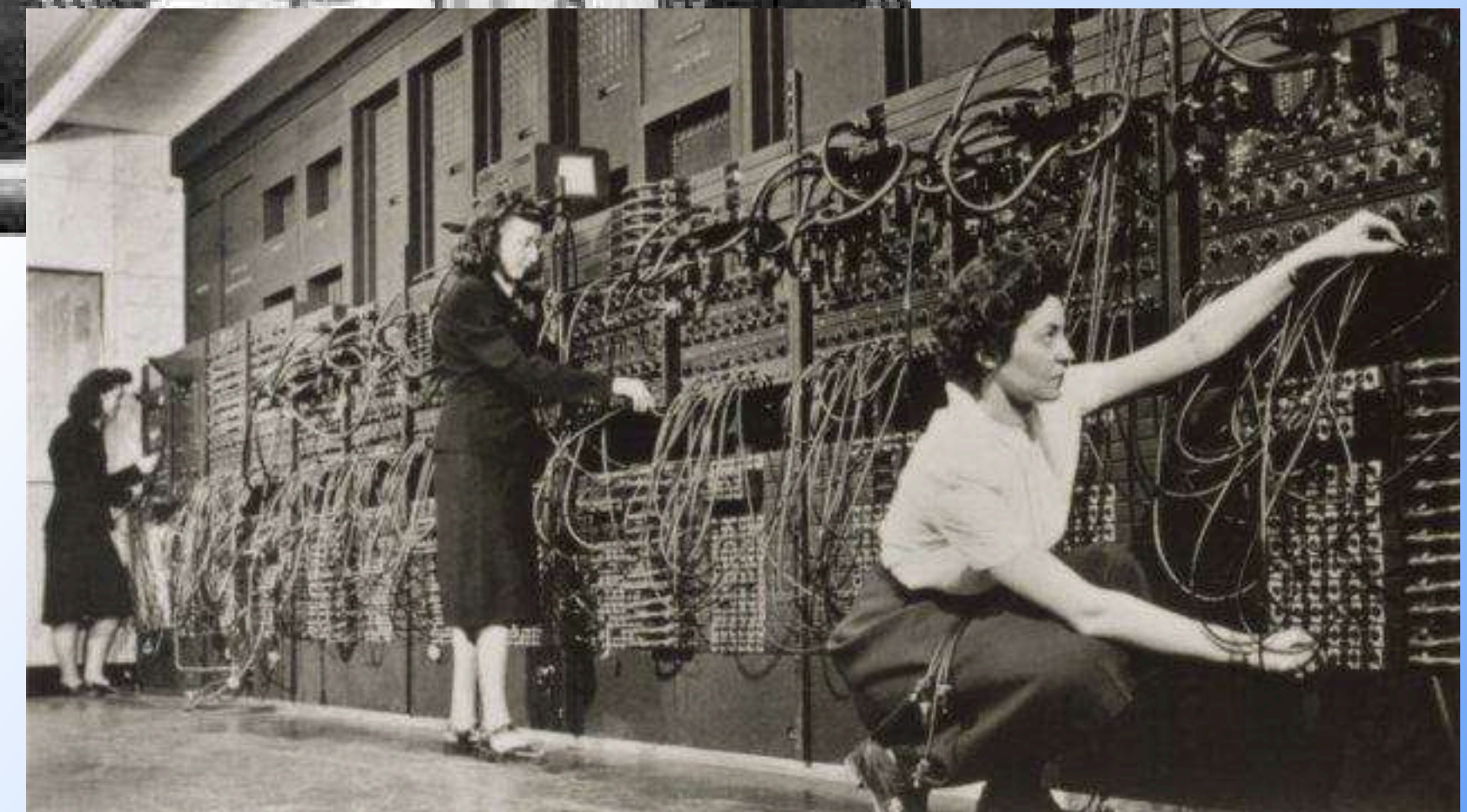
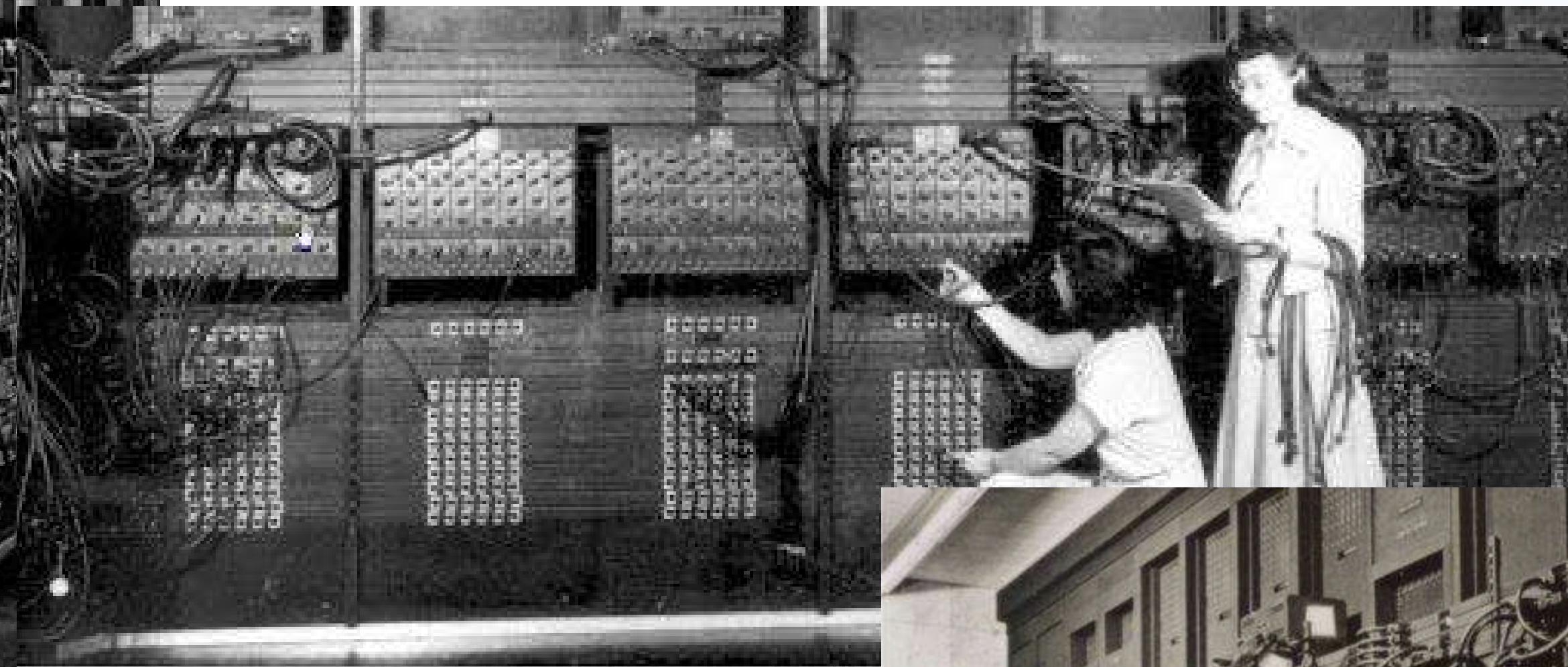
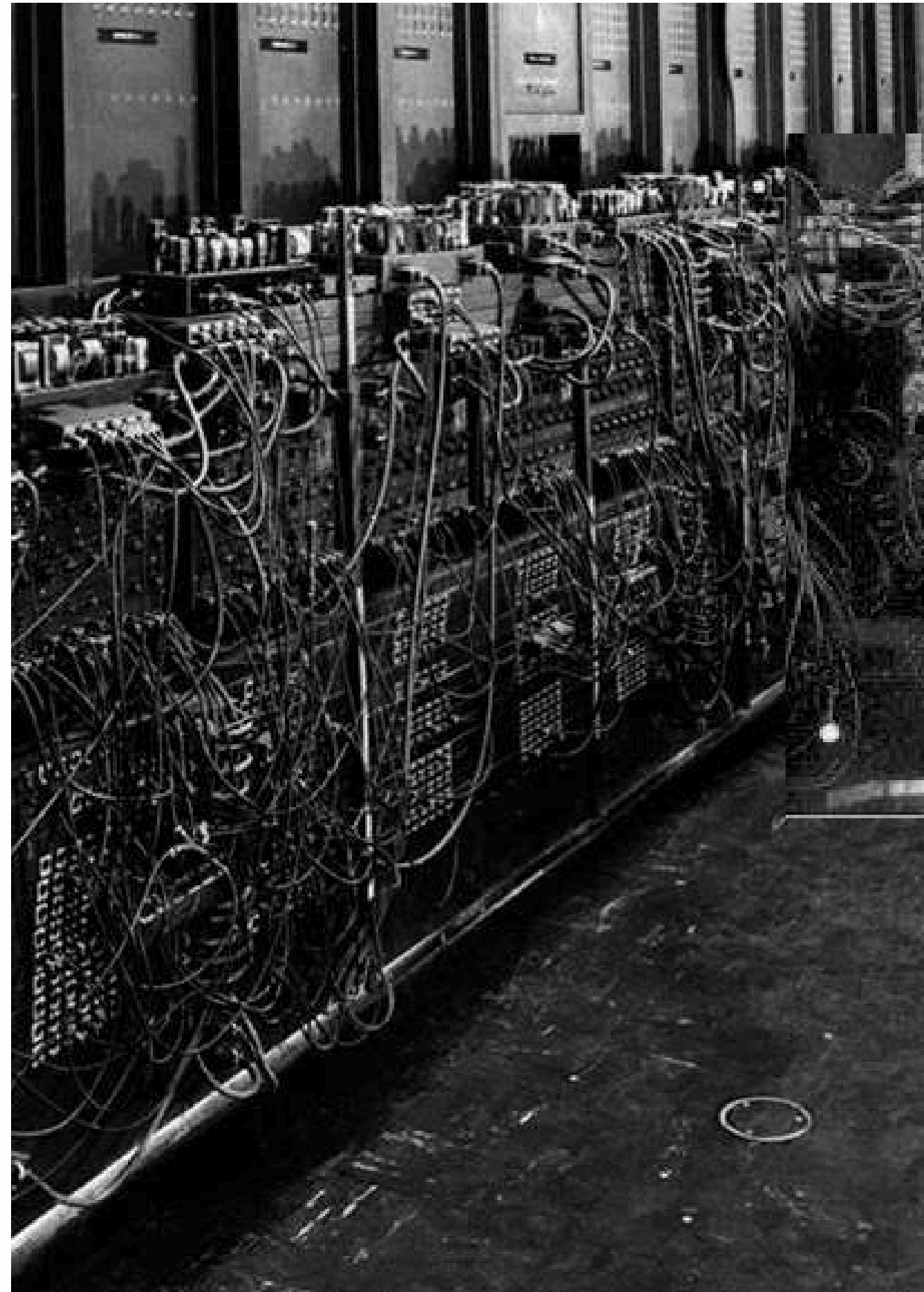
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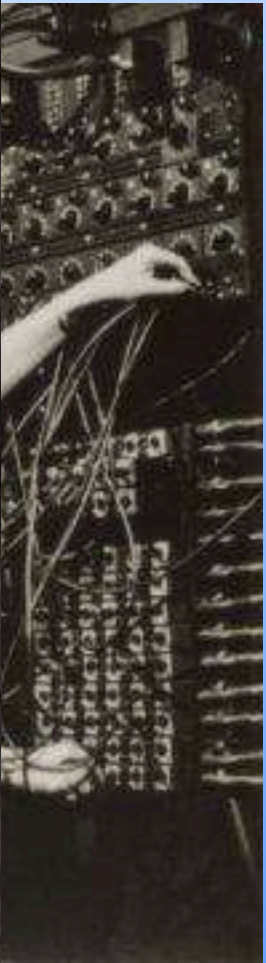
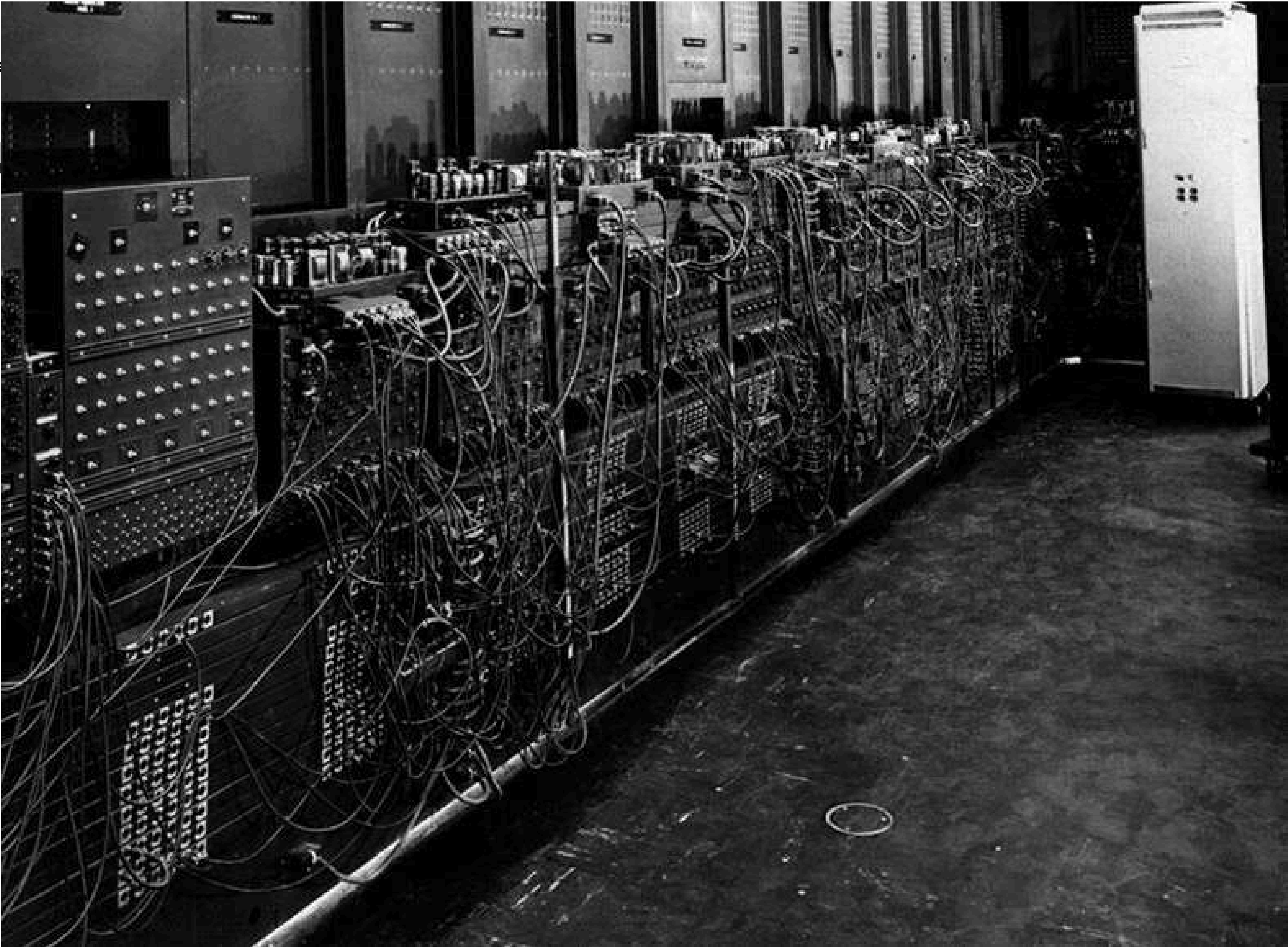
# ENIAC Girls

ENIAC; **E**lectronic **N**umerical Integrator **A**nd **C**omputer





EN





# ENIAC Girls



6 astounding women have revolutionized the IT world as we know it today

**Kathleen McNulty Antonelli**

**Marlyn Wescoff Meltzer**

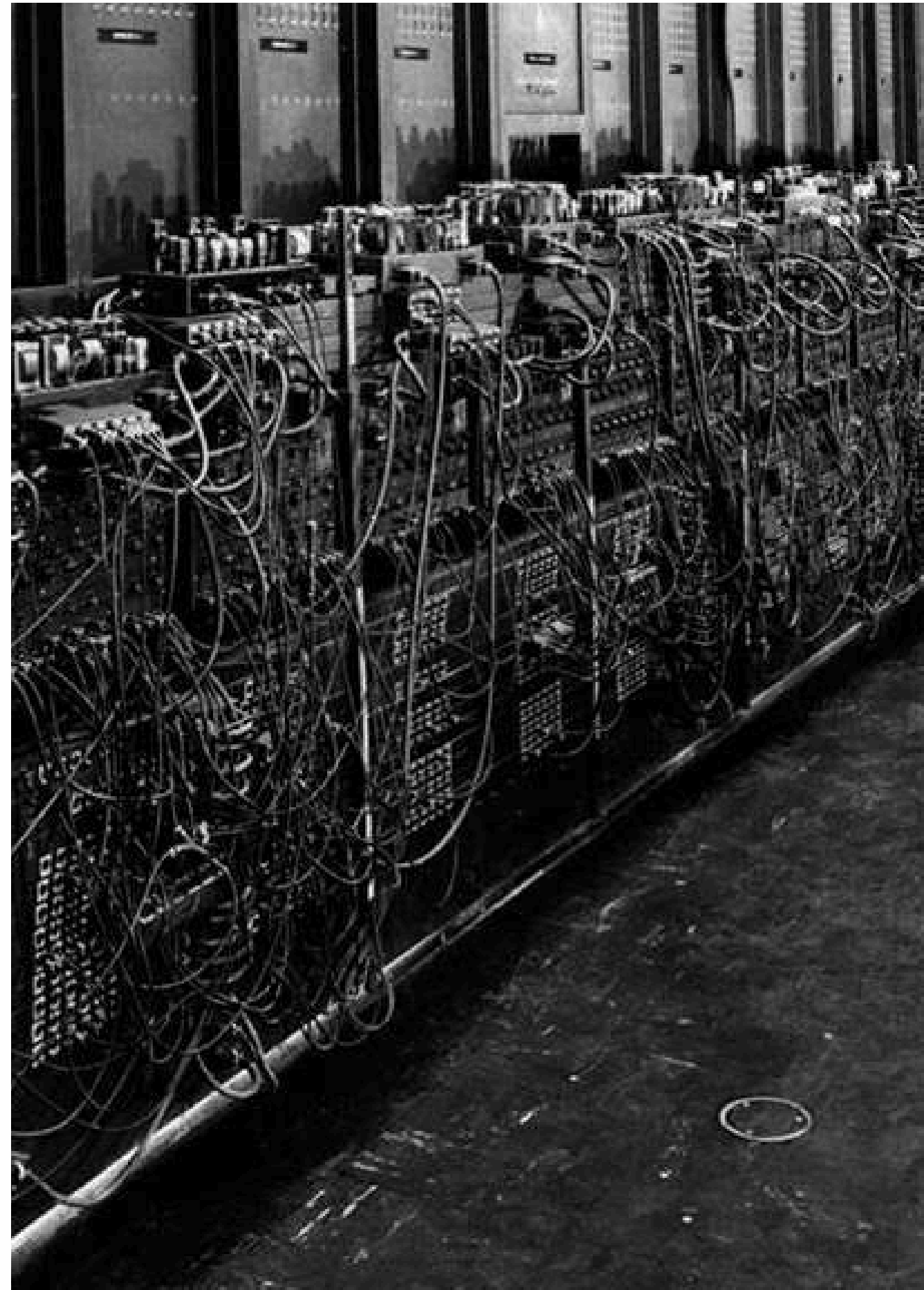
**Betty Jean Jennings**

**Frances (Bilas) Spence**

**Betty (Snyder) Holberton**

**Ruth (Lichterman) Teitelbaum**

# ENIAC Girls



## Anecdotes

- Mathematics degree in common
- They were responsible for installing and assembling the ENIAC
- Ancestors of the debugger



# Hedy Lamarr

1914 - 2000



- Renowned movie star
- She invented the FHSS, the technology that is still behind the Wi-Fi and Bluetooth today

**When it comes to unusual career changes, I think  
we're reaching new heights**

# The 1950s

A new way of thinking about code is emerging



# The 1950s

A new way of thinking about code is emerging

- hardware constraints
- Rise of the image of the creative genius
- Beginning of stereotypes

# Grace Hopper

1906 - 1992



## Known as the queen of software

- Created the compiler in 1949
- One of the main creator of the COBOL language



Gr



# A-0 System

🌐 19 languages ▾

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From Wikipedia, the free encyclopedia

The **A-0 system** (*Arithmetic Language version 0*) was an early<sup>[1]</sup> [compiler](#) related tool developed for electronic computers, written by [Grace Murray Hopper](#)<sup>[2]</sup> in 1951 and 1952 originally for the [UNIVAC I](#).<sup>[3]</sup> The A-0 functioned more as a [loader](#) or [linker](#) than the modern notion of a compiler.<sup>[4][5][6]</sup> A program was specified as a sequence of subroutines and its arguments. The subroutines were identified by a numeric code and the arguments to the subroutines were written directly after each subroutine code. The A-0 system converted the specification into [machine code](#) that could be fed into the computer a second time to execute the said program.

The A-0 system was followed by the A-1, A-2,<sup>[7]</sup> A-3 (released as [ARITH-MATIC](#)), AT-3 (released as [MATH-MATIC](#)), and B-0 (released as [FLOW-MATIC](#)).

Source: Wikipedia



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ware

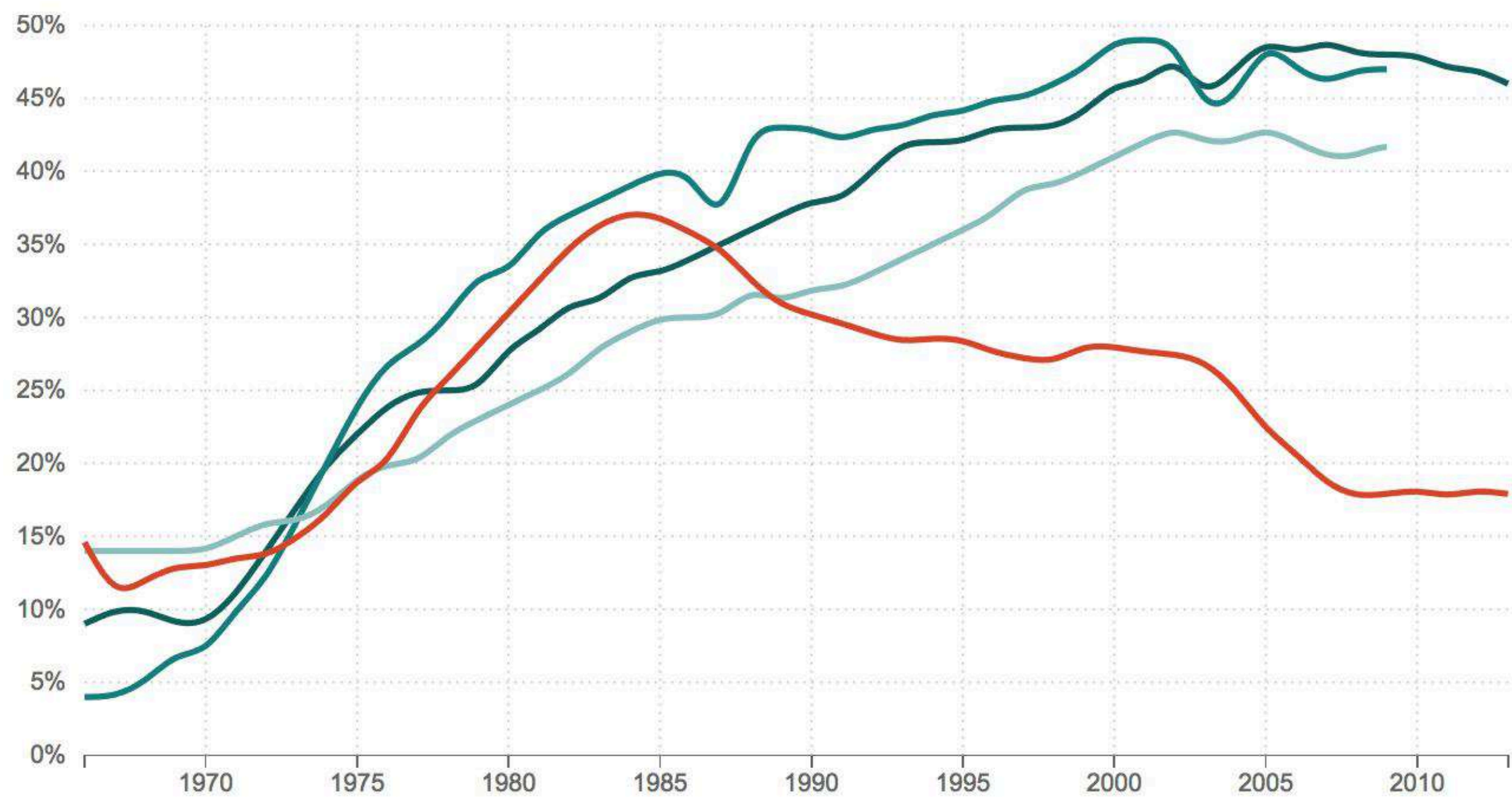
language



What Happened To Women In Computer Science?

% Of Women Majors, By Field

Medical School   Law School   Physical Sciences   Computer science



Source: National Science Foundation, American Bar Association, American Association of Medical Colleges  
Credit: Quoc Trung Bui/NPR

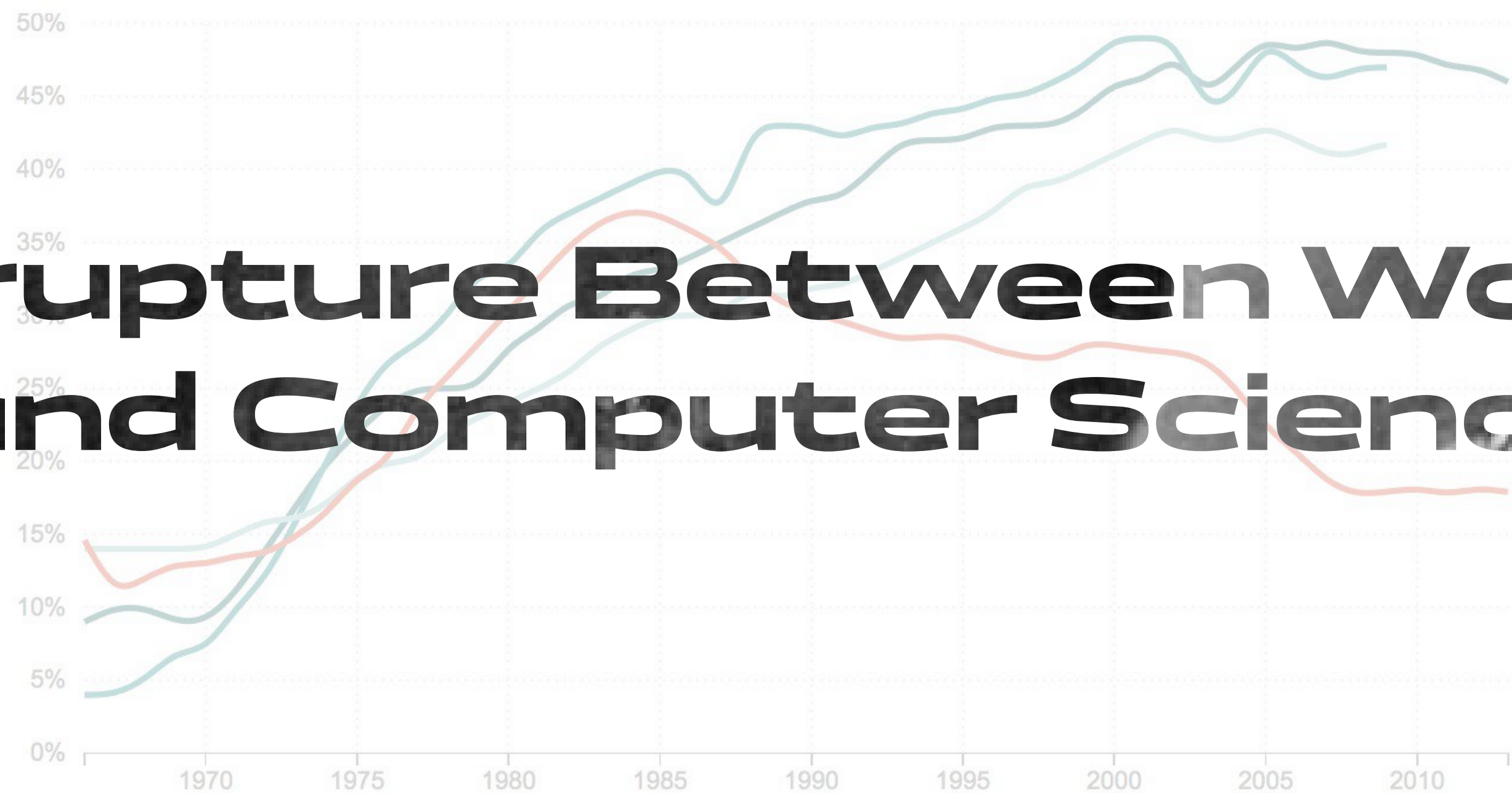


# The rupture Between Women and Computer Science

What Happened To Women In Computer Science?

% Of Women Majors, By Field

Medical School   Law School   Physical Sciences   Computer science



Source: National Science Foundation, American Bar Association, American Association of Medical Colleges  
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# The arrival of the Personal Computer (or PC) in 1981



The arrival of the personal computer (or PC)



TI's Home Computer.  
Unbeatable value. Unrivalled software.

When you choose a TI Home Computer you're choosing a "real" computer. A computer that can grow with you and your family. A computer that lets you play, invent, discover...that lets your imagination soar.

What makes this possible is our wide range of software. You'll find subjects as simple as "Early Reading" and as complex as "TMS 9900 Assembler Editor." Many of our programs are packaged in our unique Solid State Software™ Command Modules. Some have sound. Others have superb colour graphics. Simply plug them in and begin.

When you want to learn to

program for yourself, the TI 99/4A is ready too. TI BASIC is built in. The programming manual is easy to understand, easy to follow every step of the way. You will be amazed

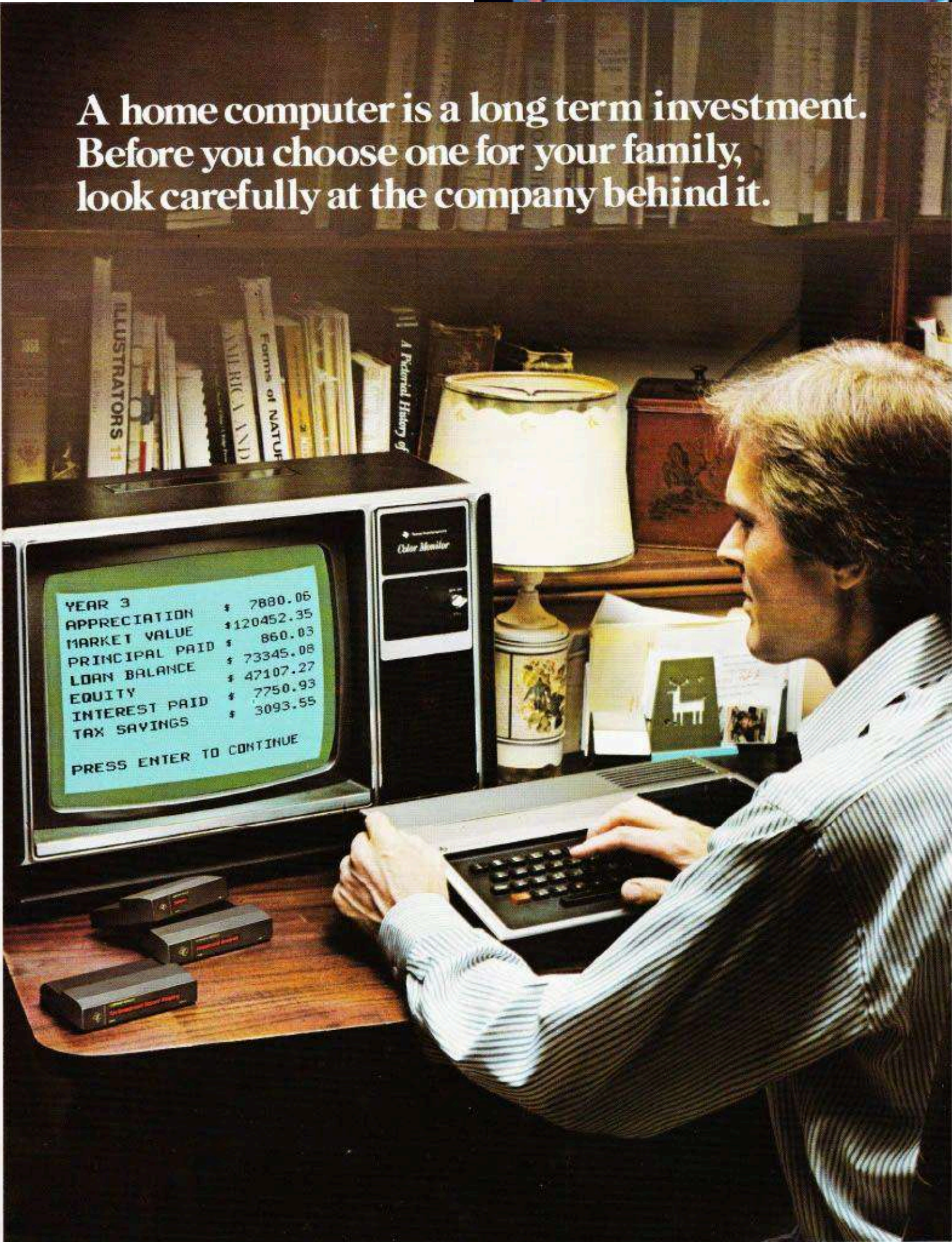
WHAT THE PROFESSIONALS LOOK FOR IN A HOME COMPUTER	
Feature	Texas Instruments TI 99/4A
Microprocessor	TMS 9900 16 BIT
Graphics	16 colour, high resolution
Languages	TI-BASIC (built-in), extended BASIC, UCSD-PASCAL, TI-LOGO, Assembler
Memory	16K RAM standard—expandable to max ROM/RAM of 110K
Keyboard	Full size, standard typewriter style
Software	1000 programs to choose from worldwide
Solid State	Yes
Speech Capability	

to discover how much fun programming can be. And when you're ready to expand your system, we're ready too. Our unique Peripheral Expansion System can house up to seven peripherals without extra cables or clutter. There is even a speech synthesiser that gives your computer a voice. Sound impressive? Try the TI Home Computer for yourself at your nearest dealer. At around £200 you'll look no further.

TEXAS  
INSTRUMENTS



T



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**Unrivalled software.**

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**PROFESSIONALS LOOK AT THE TI 99/4A HOME COMPUTER**

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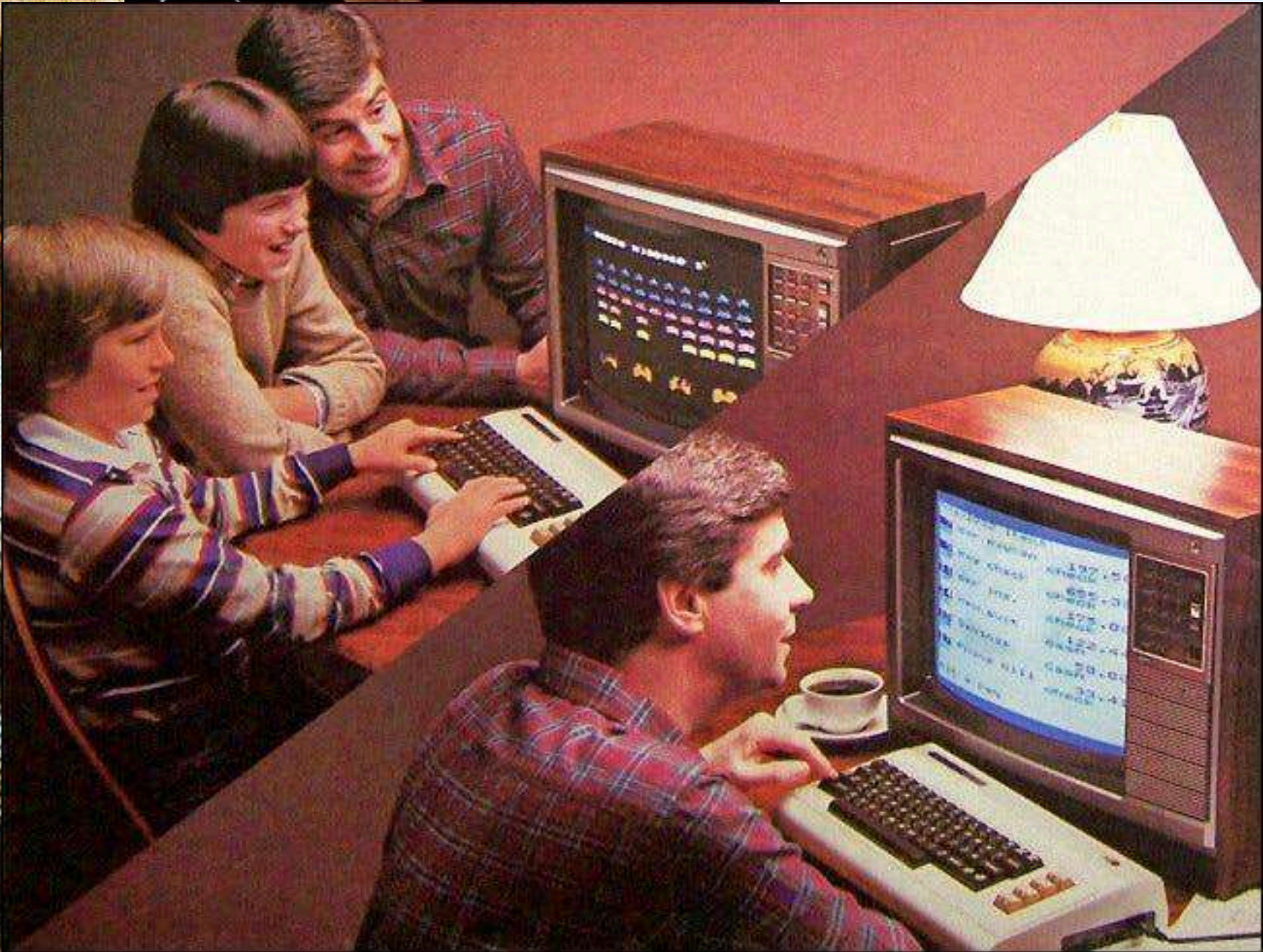
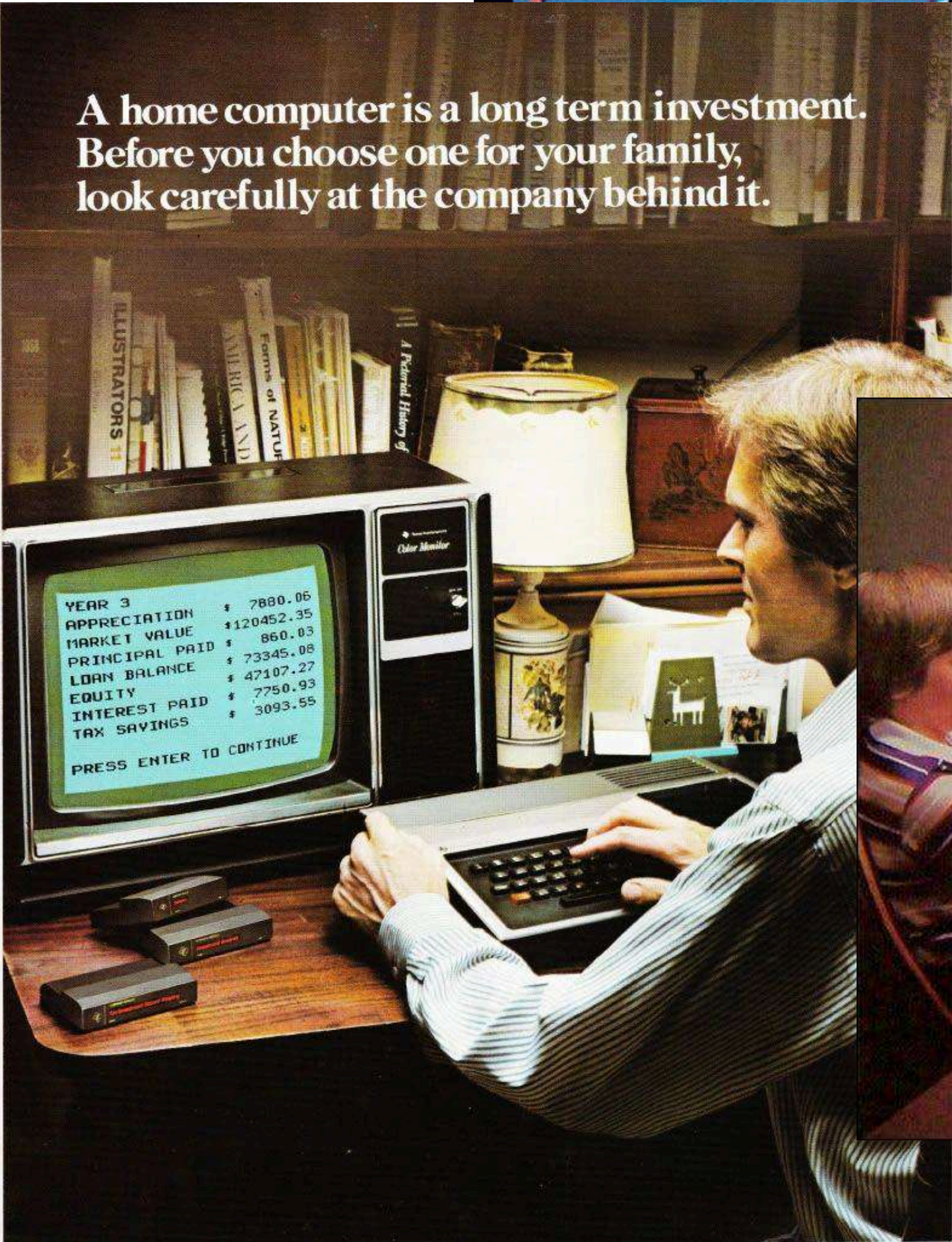
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**TEXAS INSTRUMENTS**

Computer (or PC)



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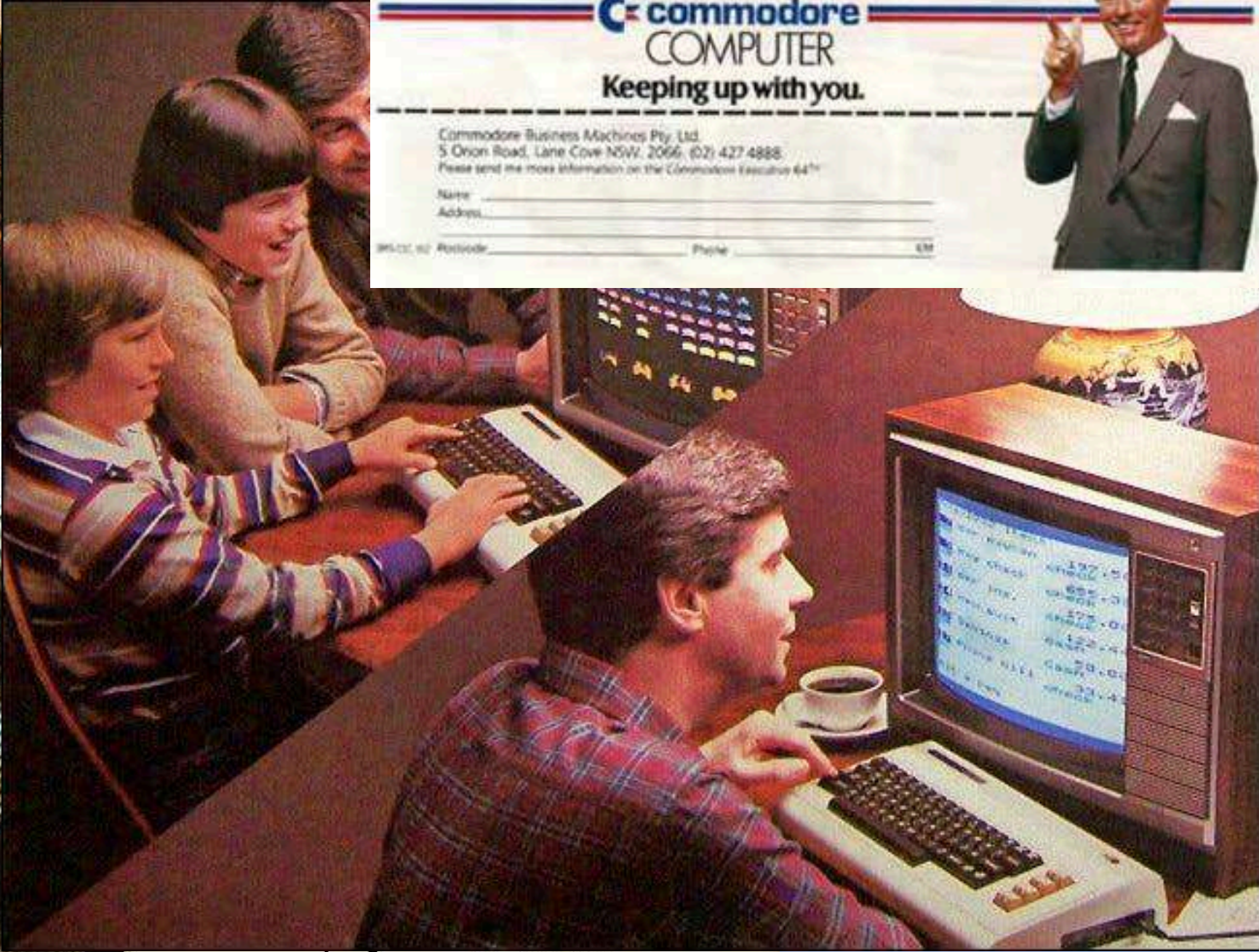
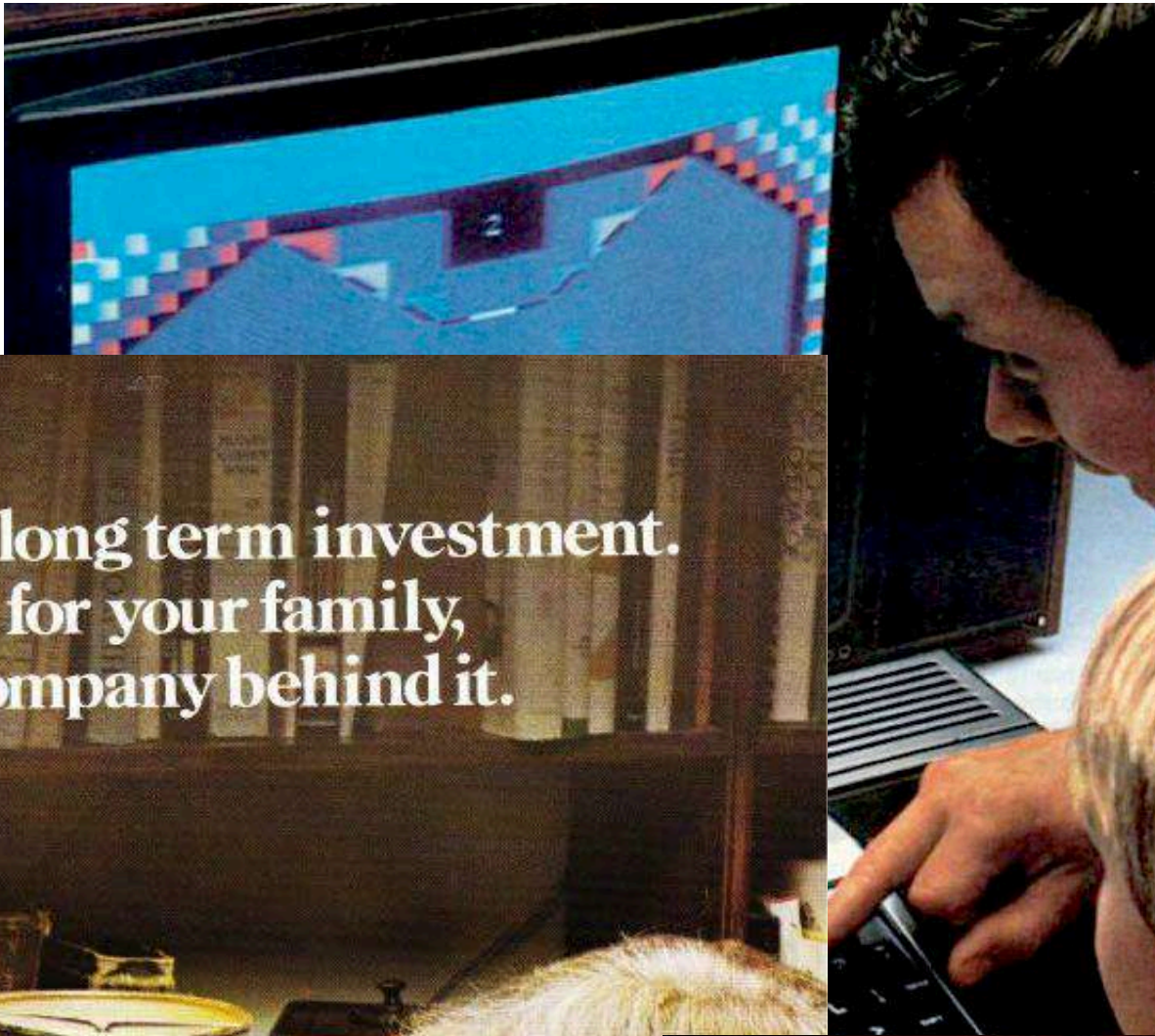
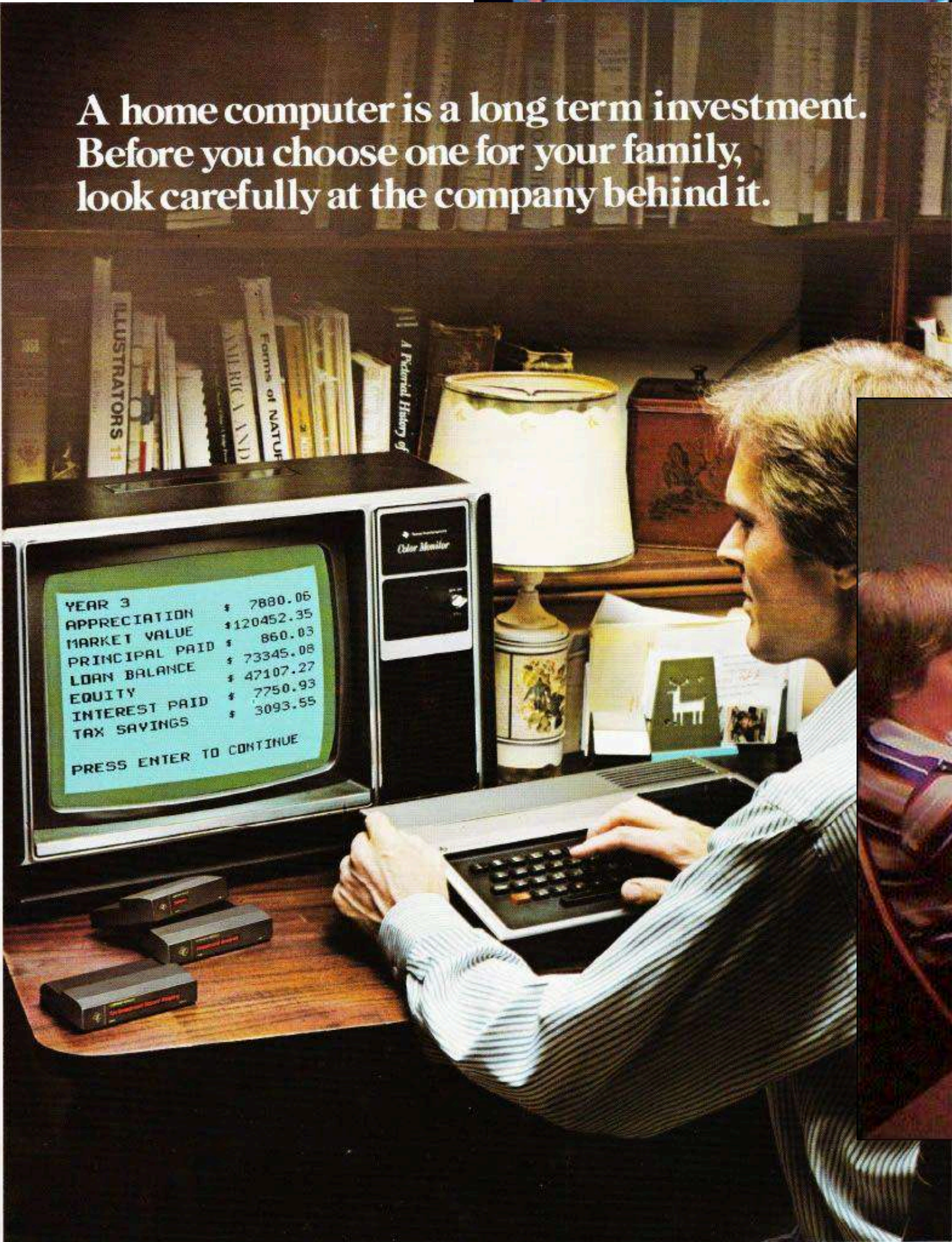


PC)

INSTRUMENTS



T



### Who's keeping up with Commodore?

The Commodore EXECUTIVE 64. A personal, portable computer with outstanding graphics, colour, music and astonishing computing capability, all in an easy-to-carry case.

64 is designed for the movers of this world. Designed to give you the power. Power at your fingertips. The power of 64K memory. The power to keep up. In the office. At home. Or in your home away from home.

**commodore**  
COMPUTER  
Keeping up with you.

Commodore Business Machines Pty. Ltd.  
5 Orion Road, Lane Cove NSW, 2066, (02) 427 4888.  
Please send me more information on the Commodore Executive 64™.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Postcode \_\_\_\_\_ Phone \_\_\_\_\_

PC)



T

A home computer. Before you choose, look carefully at the features.

**commodore VIC-20**  
The Computer for everyone.

Just \$399

Why buy just a video game when you can get a full colour computer for this price.

A computer like this would have been fiction a few years ago. Now it's a reality. It's the new Commodore VIC-20, a full-fledged, expandable colour computer that costs little more than the video games.

Everybody loves video games and the VIC-20 has some of the best. But the Commodore VIC-20 can also help the kids with their homework and men with their home budgeting. Dad can even take the light portable VIC-20 to the office for financial and business applications. And Commodore has many more applications on the way. With full capability for:

- Educational programmes
- Recreational programmes
- Personal computing
- Includes Microsoft, PET BASIC
- Connects to any TV set
- 4 sound generators
- 16 colours
- 66 graphic character-style keyboard
- Full-size typewriter-style manual
- Easy-to-follow instruction manual
- 25K total memory
- 5K RAM
- Memory expansion to 32K RAM

The VIC-20 is the friendliest way we know to learn computing. It has a full computer keyboard even a small child can operate. It plays music, has exciting graphics and lets you create pictures. It even tells you when you've made a mistake and how to correct it. The VIC-20 can take your children from pre-school through post-graduate studies.

So much brain for so little.

Learn more about Commodore VIC-20. The micro computer you can depend on. Call or write for the name, location of your Commodore dealer nearest you.

The Commodore Information Centre, 3 Campbell St., Artarmon, NSW 2064. Phone: 437 6296

**commodore COMPUTER**

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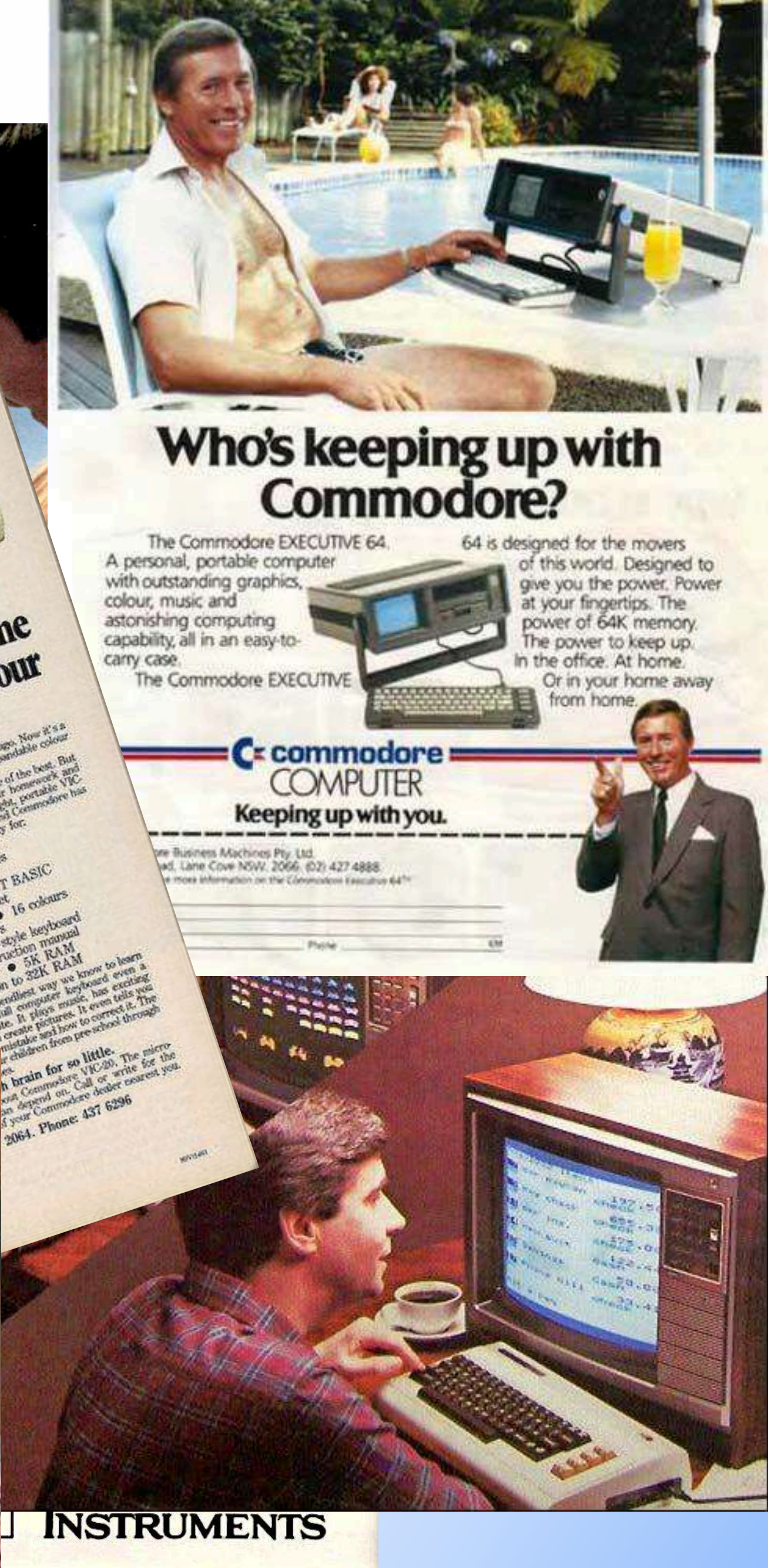
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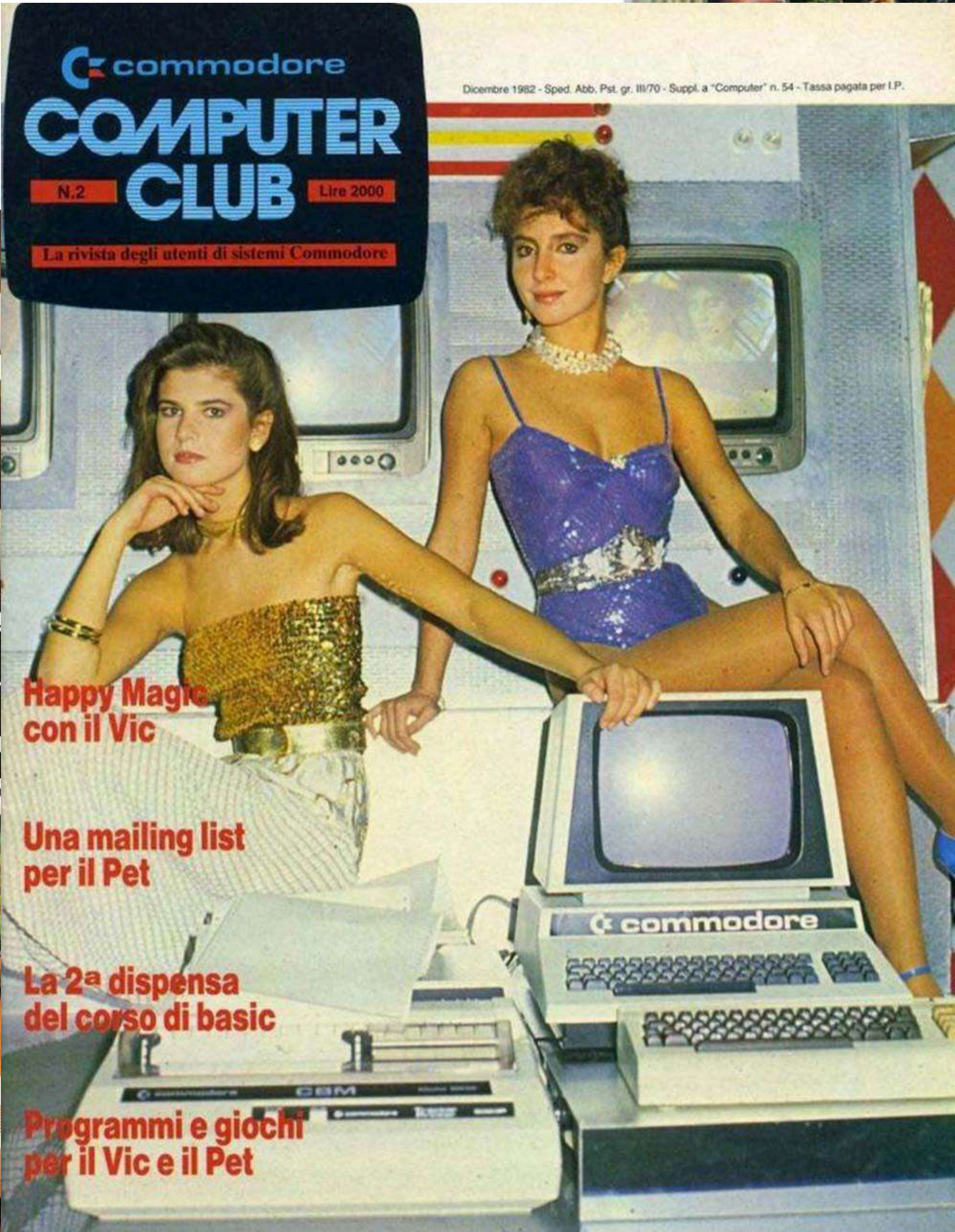
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# Karen Spärck Jones 1935 - 2007



- scientist and researcher in computer science
- She worked on the Natural Language Processing (NLP)
- She developed the TF-IDF method, still used by most search engines



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**Computing is too important to be left to men.**



# The philosophy of the hacker spirit

Only the works of hackers are judged,  
not the hackers themselves



The p



spirit



# Joanna Rutkowska

1981



- Experte in cybersecurity
- Known for her research on low-level security and stealth malware





**Melanie Rieback**   
1978



**Pattie Maes**   
1961





# Conclusion



# Conclusion

**Role model**



# Conclusion

**Aurélie Jean** 1982



**Role model**



# Conclusion

**Role model**



# Conclusion

## Role model

Narrate,  
Encourage,  
Propagate



✨ Thank you ✨