Vocational English IV (Mesleki Yabancı Dil IV) Week 4

13.04.2024

Engineering Faculty
Computeer Engineering

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INTRODUCTION

INTEL THE CPU COMPANY
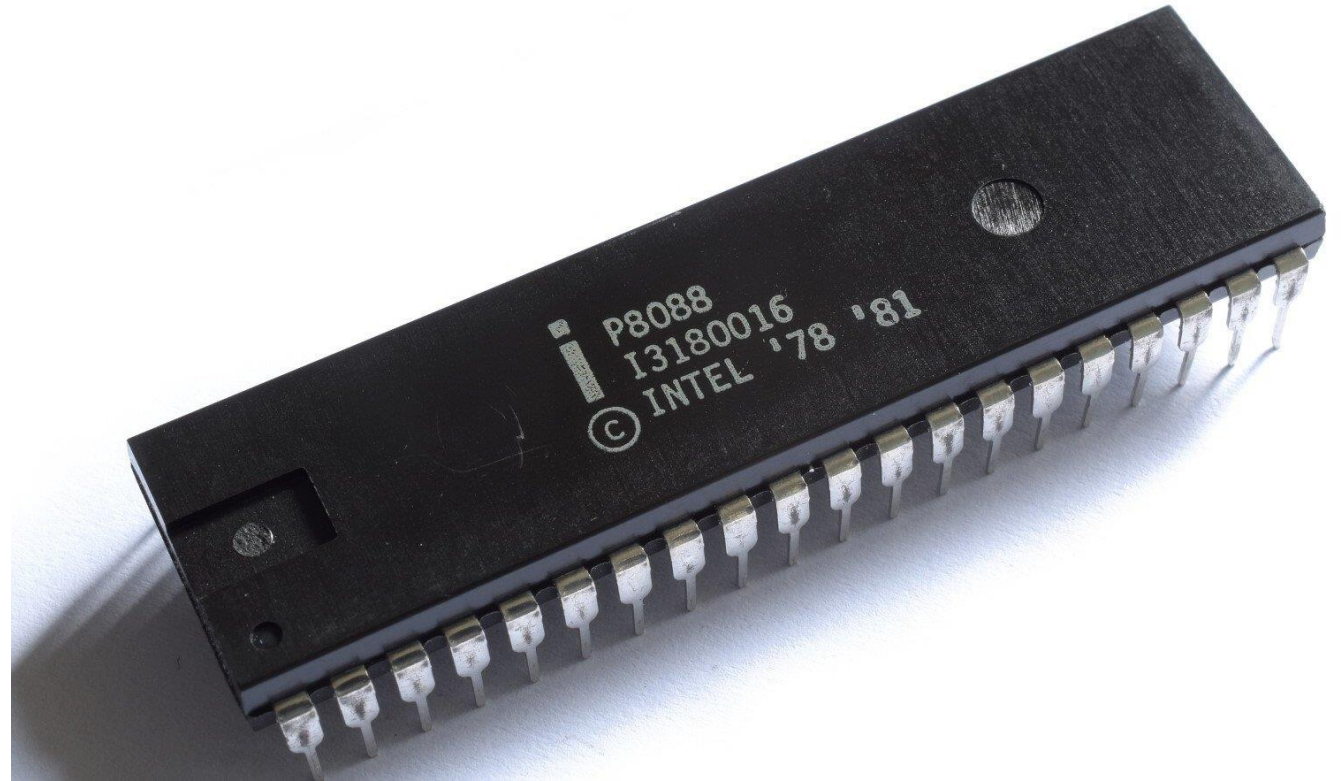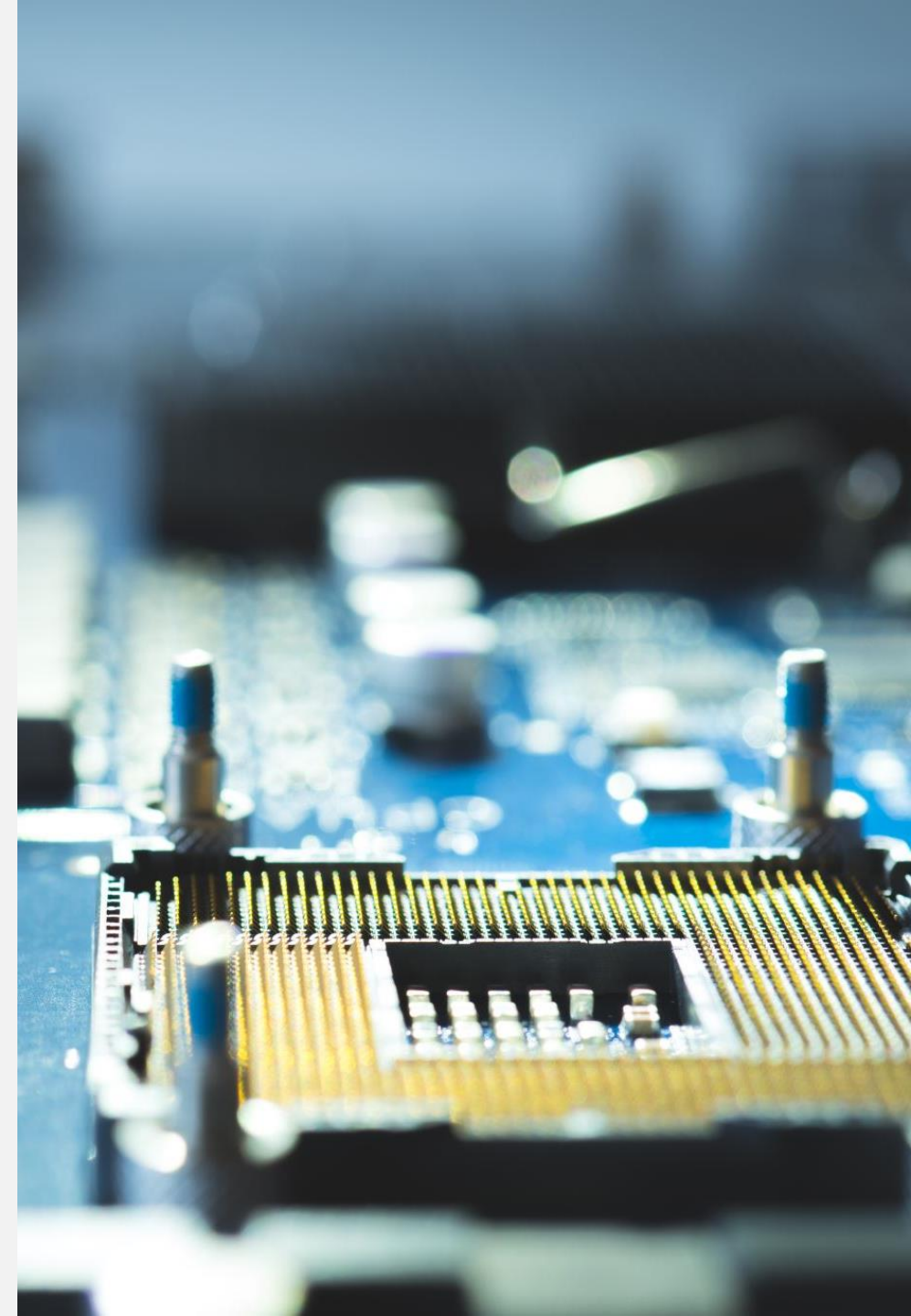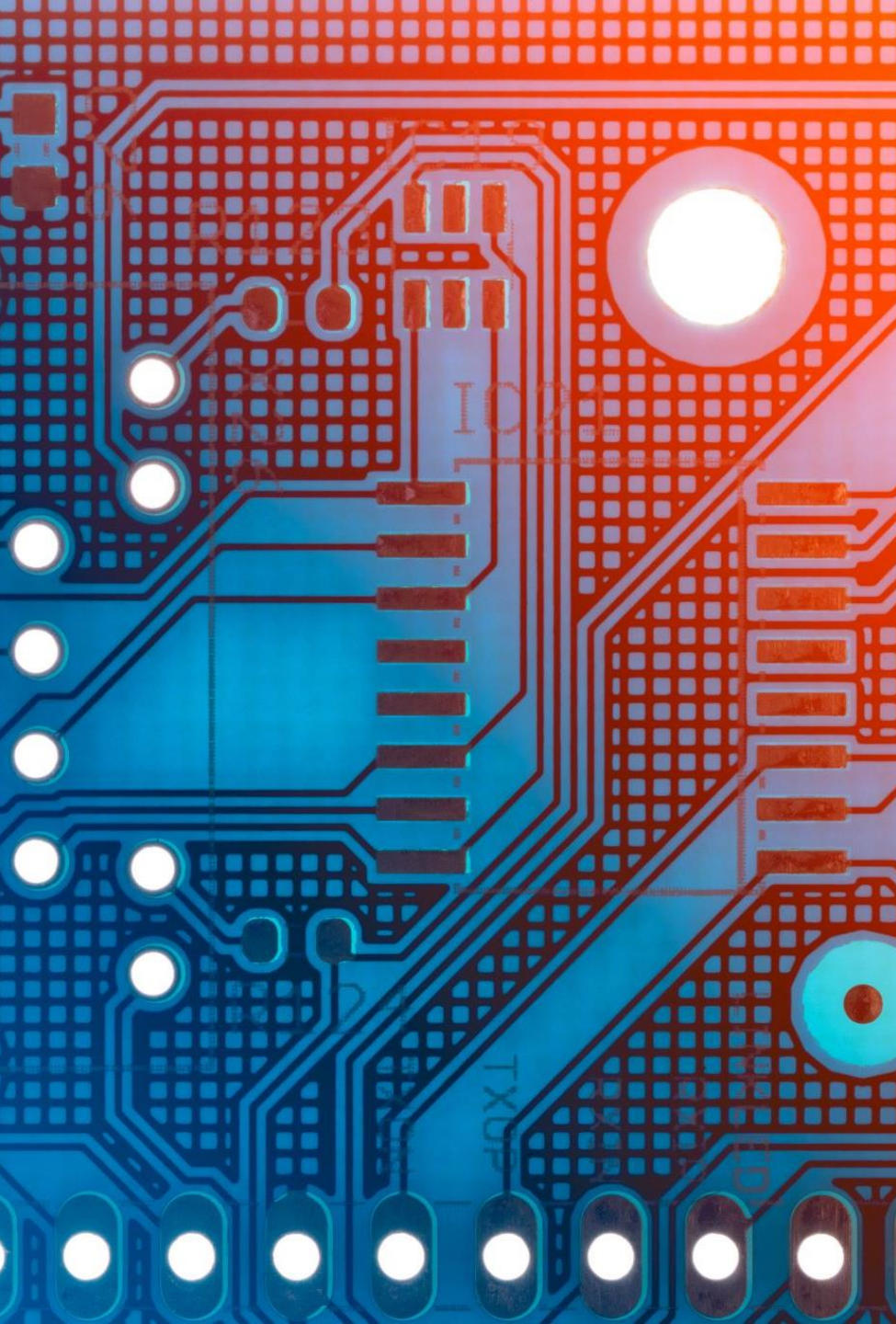
https://www.abortretry.fail/p/intel-the-cpu-company

INTEL AT THE START OF THE 1980S

- "At the start of the 1980s, Intel was in the absolute best position possible for a microprocessor manufacturer. They'd won IBM's business with 8088, and they had around another 5000 customers for the 8086/8088."

THE IAPX 432 – INTEL'S AMBITIOUS FAILURE

- "At the end of 1981, the company released what they'd intended to be the future of the microprocessor business, the iAPX 432. This was the first attempt to implement object orientation in silicon, was Intel's first attempt at a 32bit CPU, and Intel did far more than just those two things. The 432 additionally moved process scheduling, interprocess communication, garbage collection, and storage allocation into hardware."
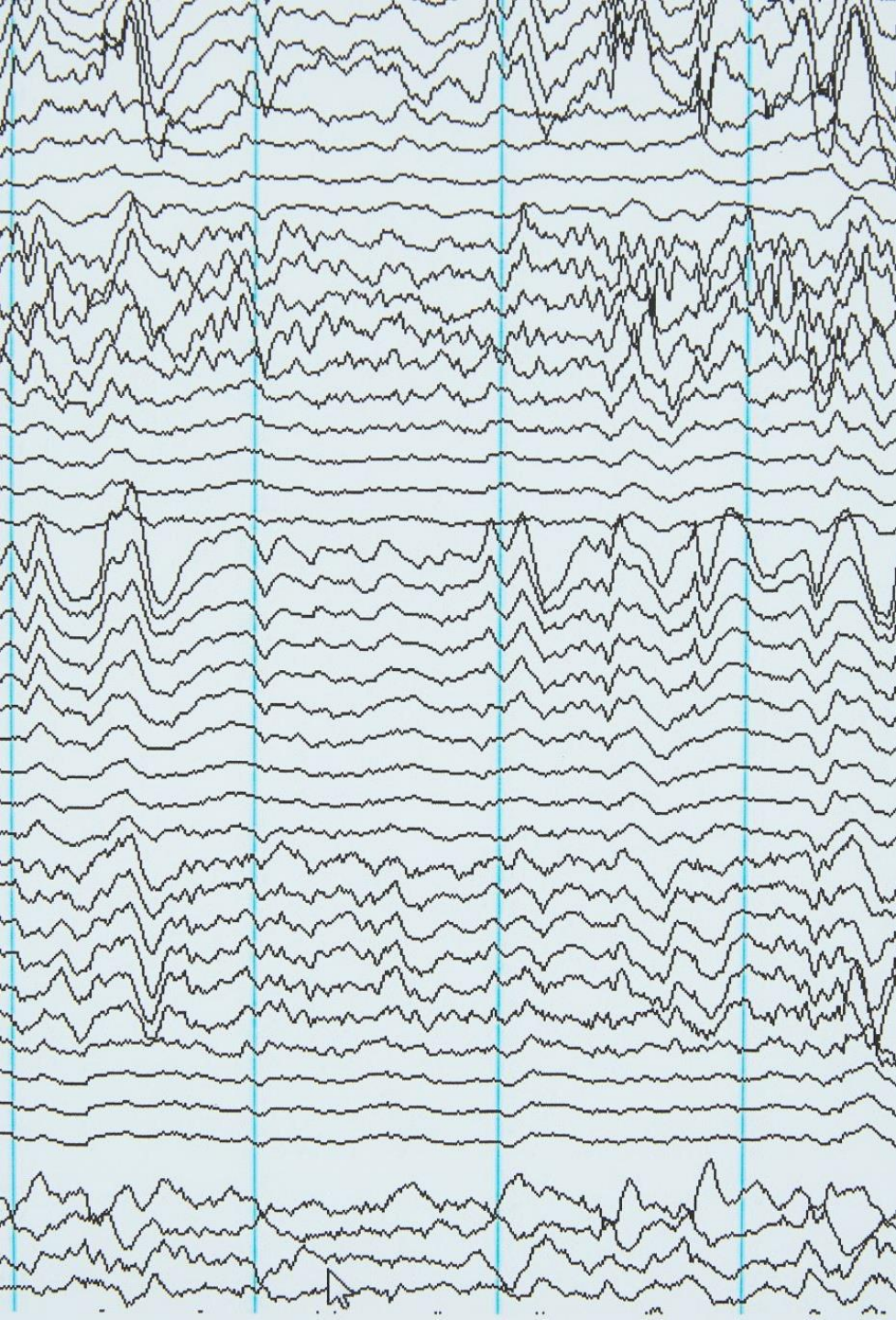
PERFORMANCE ISSUES WITH THE IAPX 432

- "If this is all sounding complicated and over-engineered, that's because it is, and when looking at the block diagrams in Intel's patents around the 432, things get far more complicated. All of this immense complexity resulted in a system that was around a quarter of the speed of the 8086 in general use."

INTEL MARCHES INTO 1982

- "With a major win and a major loss, Intel marched into 1982 as the largest manufacturer of metal oxide semiconductor ICs on Earth. The company had facilities in the San Francisco Bay area, Portland, Phoenix, Austin, Albuquerque, Puerto Rico, Malaysia, Philippines, Japan, Barbados, Israel, Belgium, and the UK. Intel's sales offices could be found in 27 countries."
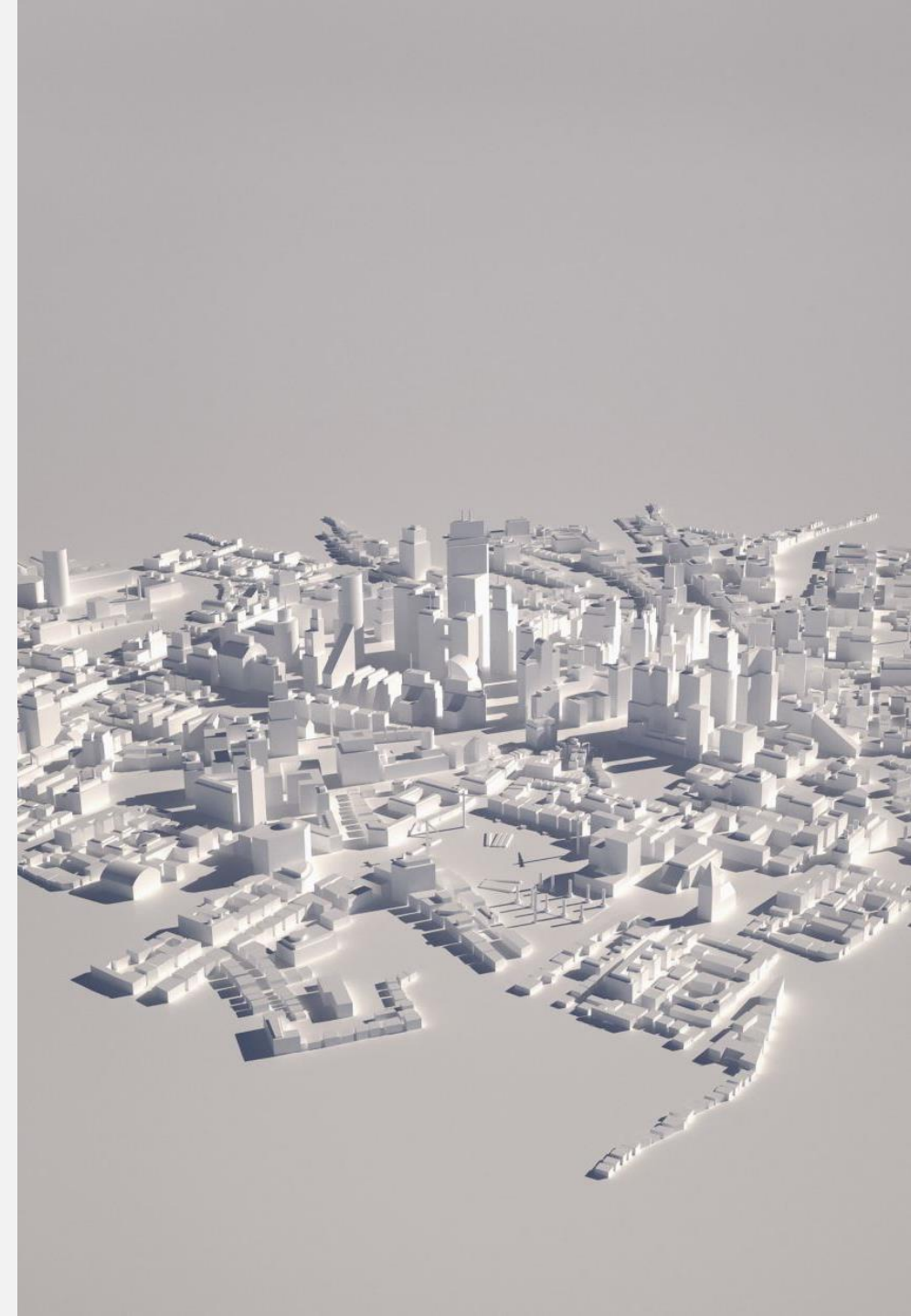
THE ARRIVAL OF THE INTEL 80286

- "Work on the Intel 80286 (or iAPX 286) had started in 1978, and the CPU was brought to the world on the 1st of February in 1982. This was a 16bit CPU with 24bit addressing allowing it to support up to 16MB of RAM. The first of these to come out of Intel could be found at clocks of 5MHz, 6MHz, or 8MHz."
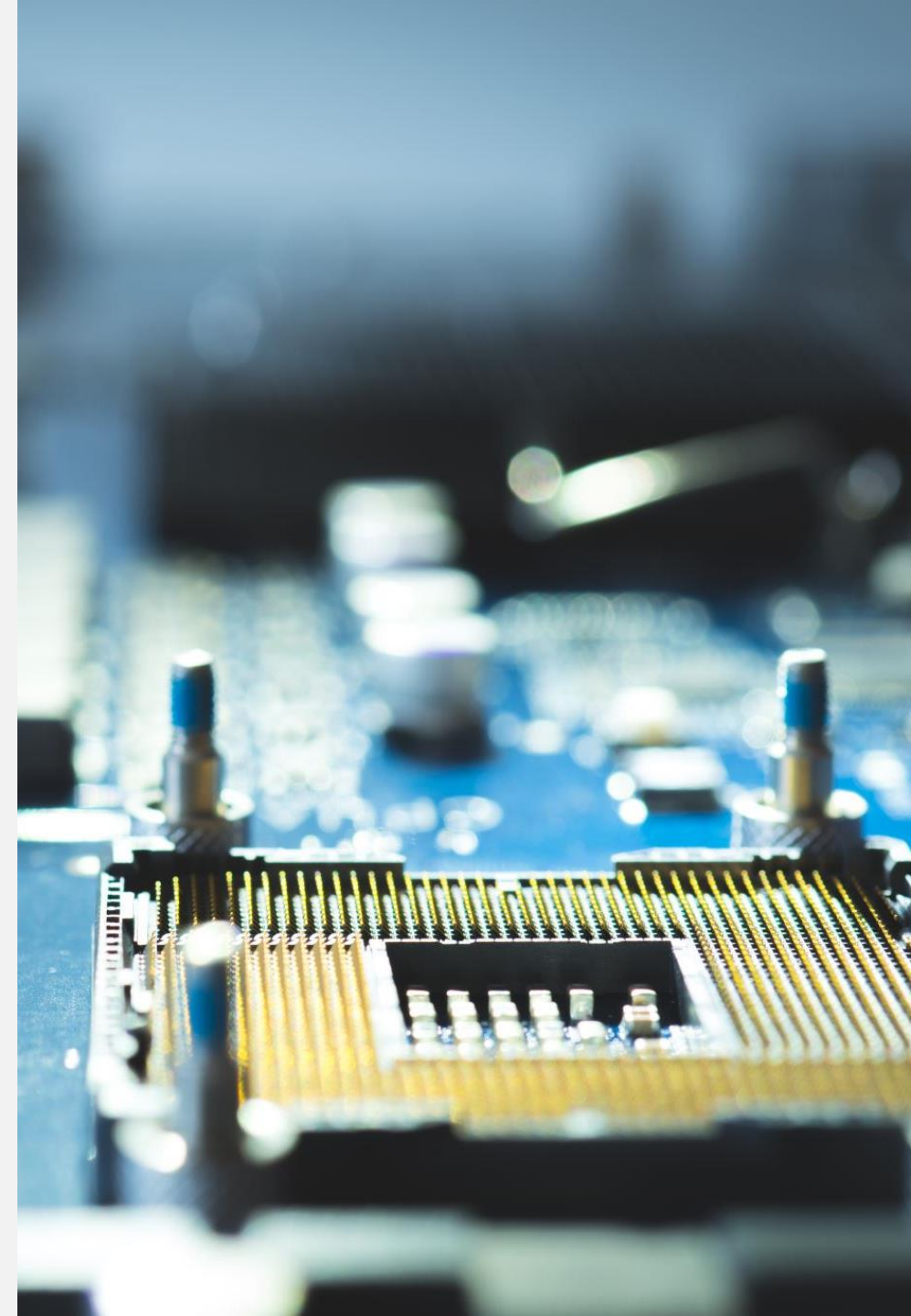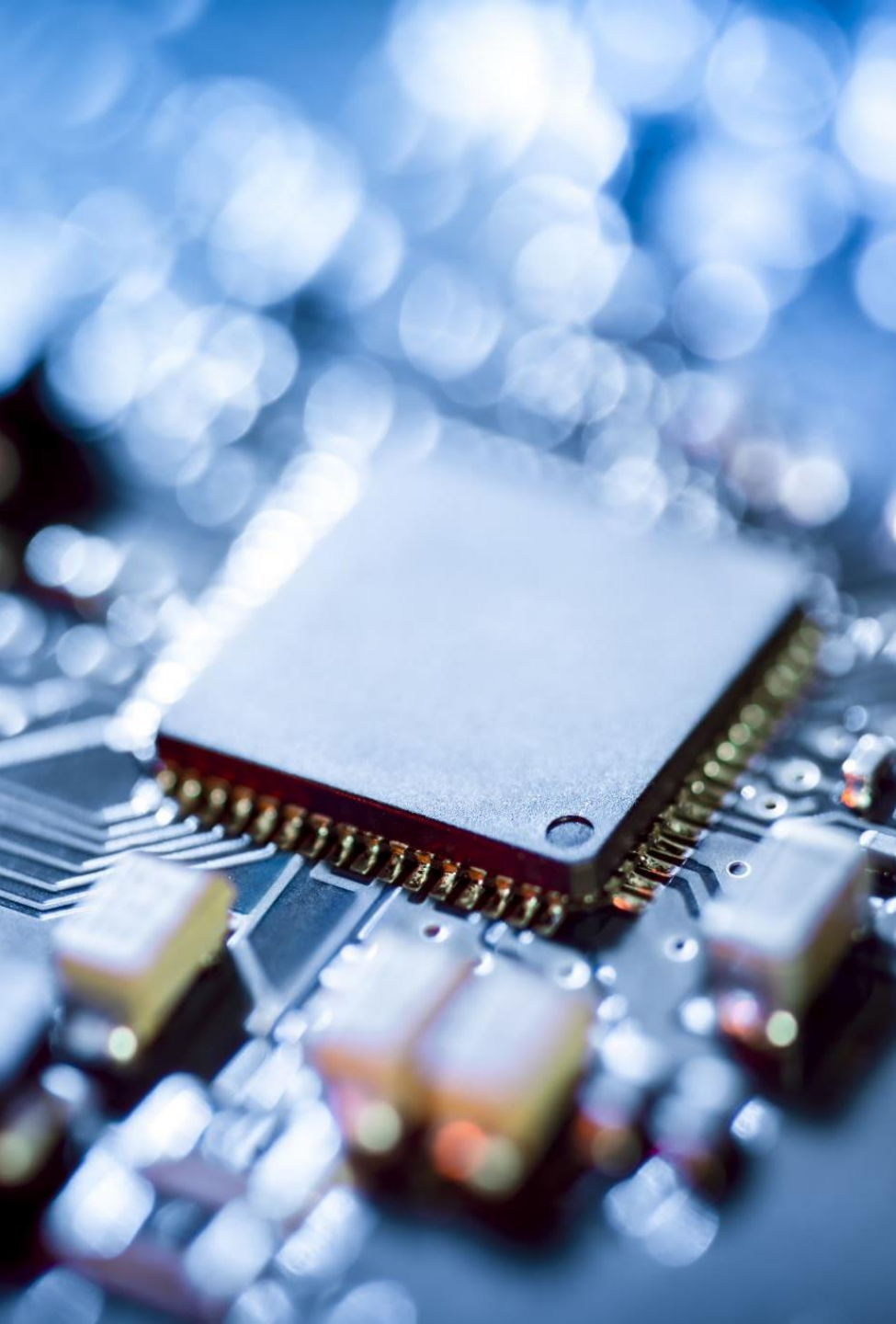
INTEL'S SHIFT TO MICROPROCESSORS

- "In a reaction to that state of affairs, President and COO Andy Grove and Chairman and CEO Gordon Moore announced that Intel was leaving the memory business. Their one remaining investment in that industry was EPROMs. From this point forward, the primary market for Intel was microprocessors."

THE INTRODUCTION OF THE INTEL 80386

- "The first CPU from the now decidedly CPU-oriented company was the Intel 80386 (or i386) in mid-October. The 386 was a 32bit processor with a 6 stage instruction pipeline, on-chip MMU, and offered real-mode, protected-mode, and virtual-mode. In protected-mode, the 386 could address 4GB of RAM."

THE IMPORTANCE OF THE INTEL 386

- "The 386 is easily among the most important CPUs ever made. While it may not have been as powerful as some rivals, it was the chip that allowed commodity microcomputers to really contend with workstations and minicomputers at a far lower price. This was also the enabler of Compaq's breaking of IBM's stranglehold on the PC platform, and it allowed Windows to become a default choice for PC-compatibles."

LISTENING

Intel Processors Explained (2025): Super Easy Guide
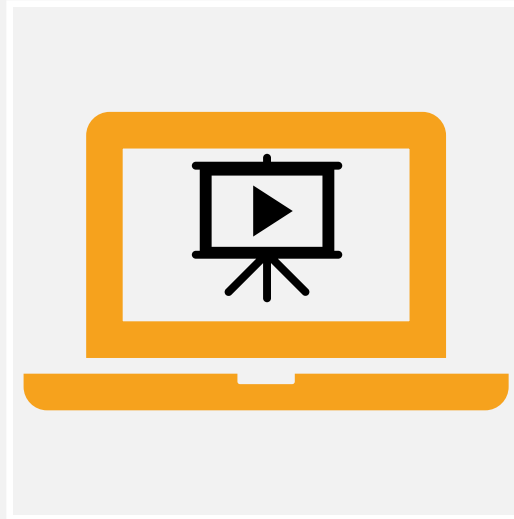
There will be quiz after the Listening Activity!

- https://www.youtube.com/watch?v=PT787d9odKk

PRESENTATION TIME!

Overall 20%

5% Introduction of self and the topic
10% Presentation content(English is favoured)
5% Presentation skills and using English

You have 5 Minutes, make it count!

WORDS OF THE WEEK

1. Microprocessor
2. Object Orientation
3. Interprocess Communication
4. Garbage Collection
5. Storage Allocation
6. Over-engineered
7. Block Diagram
8. Semiconductor
9. Instruction Pipeline
10. Metal Oxide Semiconductor
11. Clock Speed
12. Memory Management Unit (MMU)
13. Real-mode
14. Protected-mode
15. Virtual-mode
16. Addressing
17. Commodity Microcomputer
18. Stranglehold
19. Firmware
20. EPROM (Erasable Programmable Read-Only Memory)

NEXT WEEK ARTICLE

- https://www.bloomberg.com/news/articles/2025-02-28/how-ai-reasoning-models-will-change-companies-and-the-economy

AI Will Upend a Basic Assumption About How Companies Are Organized

The economy is built on the idea that expertise is scarce and expensive. AI is about to make it abundant and practically free.
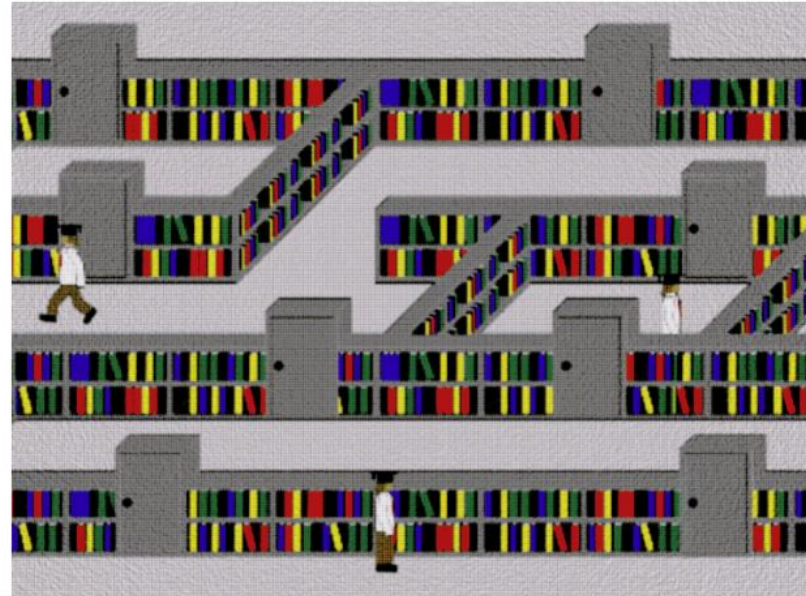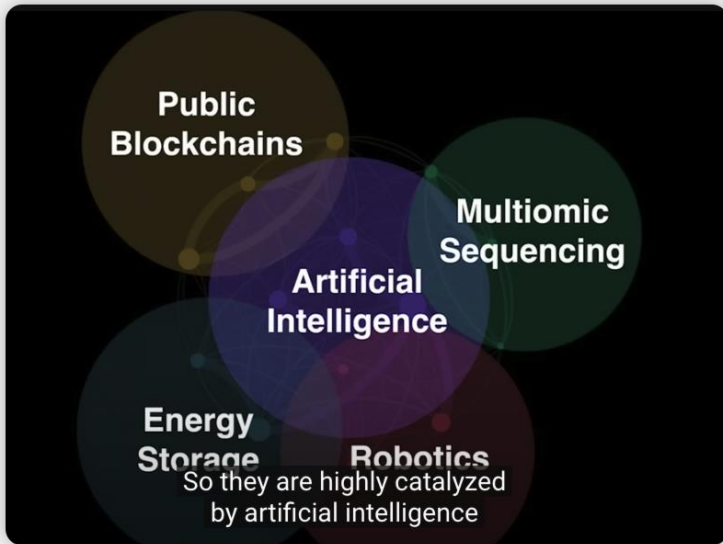
NEXT WEEK VIDEO

• https://www.youtube.com/watch?v=rQEh7d-qa38&ab_channel=TED

Why AI Will Spark Exponential Economic Growth

Cathie Wood | TED

EOF*

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