HUM 4441 Engineering Ethics

Professionalism and Codes of Ethics

Story of Intel

Intel denying the
reports

Further reports
suggested Intel
knew it all along

Intel refused to
replace

Reports of flawed
Pentium processors

Intel admits to flaws
but says it is rare

As a result of publicity,
people wanted
replacements

Intel finally
agreed to replace
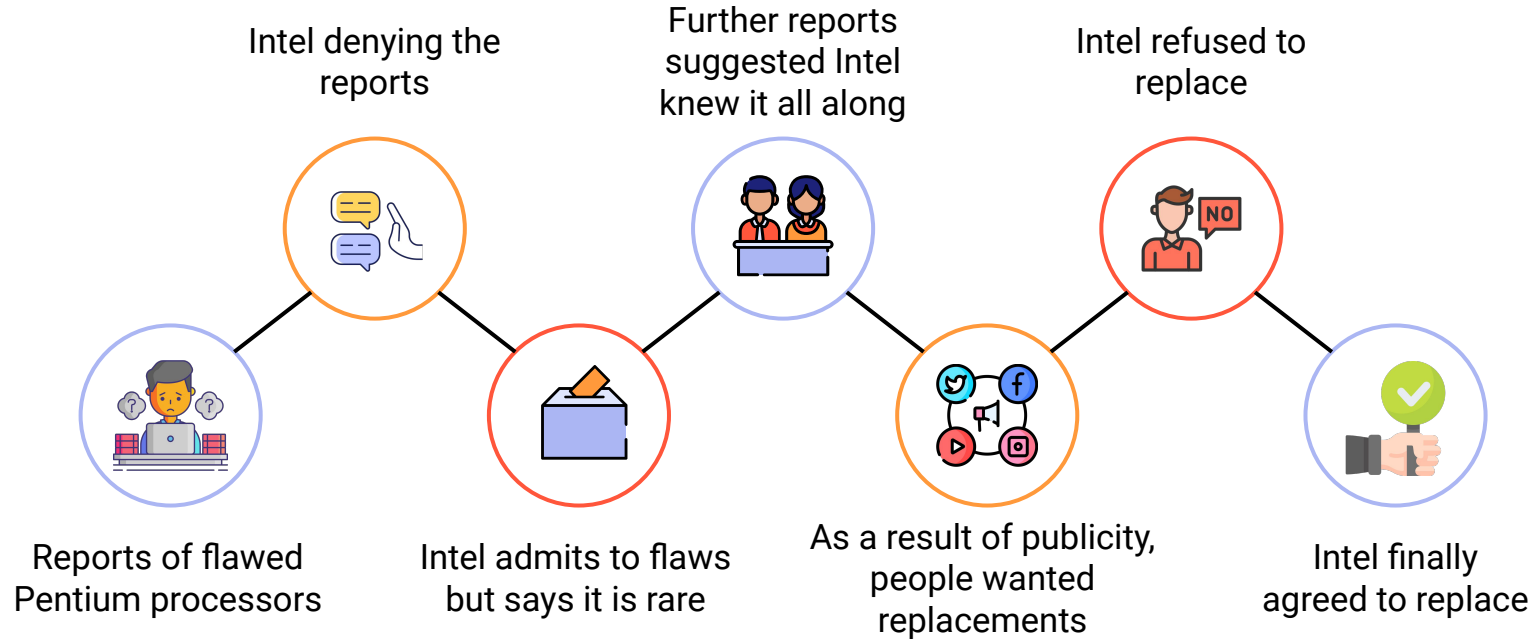
Was this ethical from Intel?

Differences between Engineering and other professions

	Engineering	Others
Practiced	Mostly in a company	Can also be done privately Example: Lawyers, Doctors
Training	Finishes within 4 years of undergraduate	Begins after 4 years of undergraduate
Licences	Most engineers do not have engineering licences	Many professions have licenses as compulsory

These are aspects which are lacking in engineering

What is code of ethics?

A code of ethics spells out the ways in which moral and ethical principles apply to professional practice

Framework
Provides a framework for ethical judgement of a professional

Decision maker
Provides a starting point for ethical decision making.

Not a legal document
Nobody can get arrested for violating the code of ethics

How code of ethics achieve the goals?

Code of ethics helps in achieving workplace success

Creates an environment

- Helps create an environment where ethical behavior is the norm

Bolster subordinate's position

- Provides backup against superiors providing unethical orders

Shows professionalism

- The individual is viewed as a strictly professional person within the organization

Objections to code

If code of ethics is so good, why doesn't every engineer follow it?

1 **Not member of professional societies**
Engineers do not feel compelled to abide by the laws.

2 **Lack of awareness**
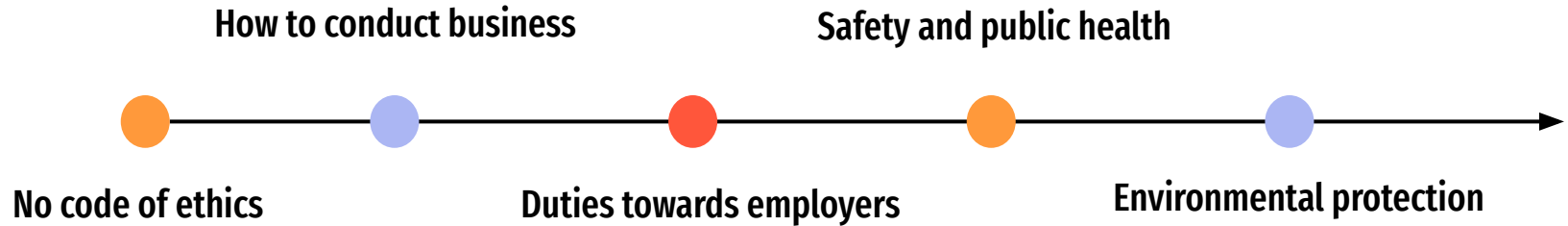Many engineers are not aware of the code. There is no consultation.

3 **Can create internal conflict**
Some codes can have internal conflict without any resolution guideline.

Evolution of code of ethics for engineers

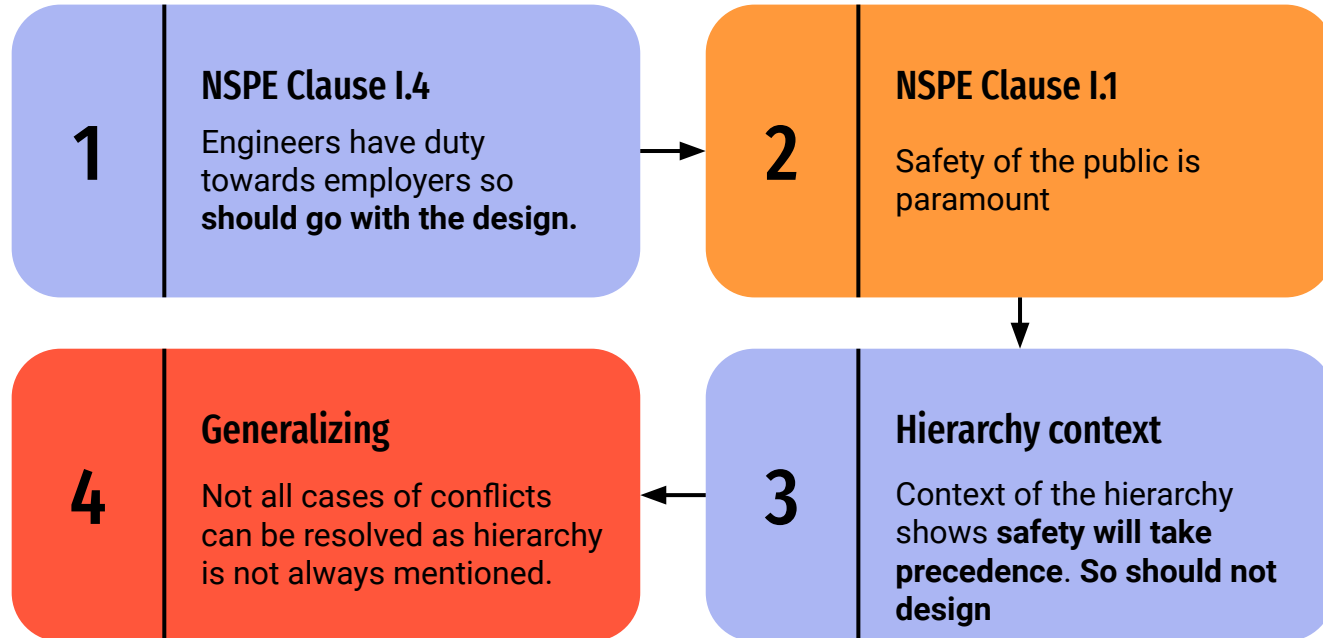**How the code of ethics have developed over the years**

How to conduct business

Safety and public health

No code of ethics

Duties towards employers

Environmental protection

The 2 codes of ethics

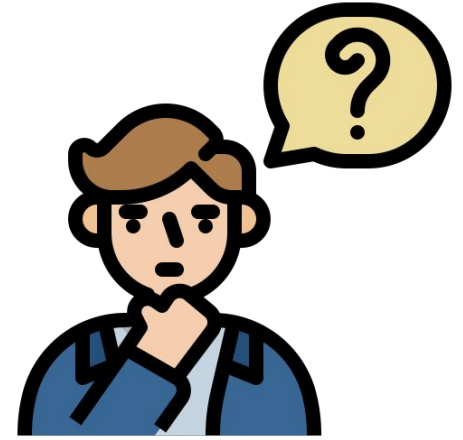|	IEEE	NSPE
Length	Short; deals with generalities	Long and detailed
Coverage	Covers only the basics	Covers all the details
Readability	Understandable	Unlikely to be thoroughly read
Example	Does not mention duty to employer	Section I.4 of NSPE mentions duty to employer

There are aspects which are lacking in engineering

Resolving internal conflicts in codes

Scenario: Employer orders an engineer to implement a design that the engineer feels will be unsafe.

1

NSPE Clause I.4

Engineers have duty towards employers so **should go with the design.**

2

NSPE Clause I.1

Safety of the public is paramount

3

Hierarchy context

Context of the hierarchy shows **safety will take precedence**. **So should not design**

4

Generalizing

Not all cases of conflicts can be resolved as hierarchy is not always mentioned.

Read the NSPE Codes of Ethics from
Engineering Ethics Concepts and Cases
(Charles E. Harris Jr) - Appendix (Page 291)

Thank you
Any Questions?