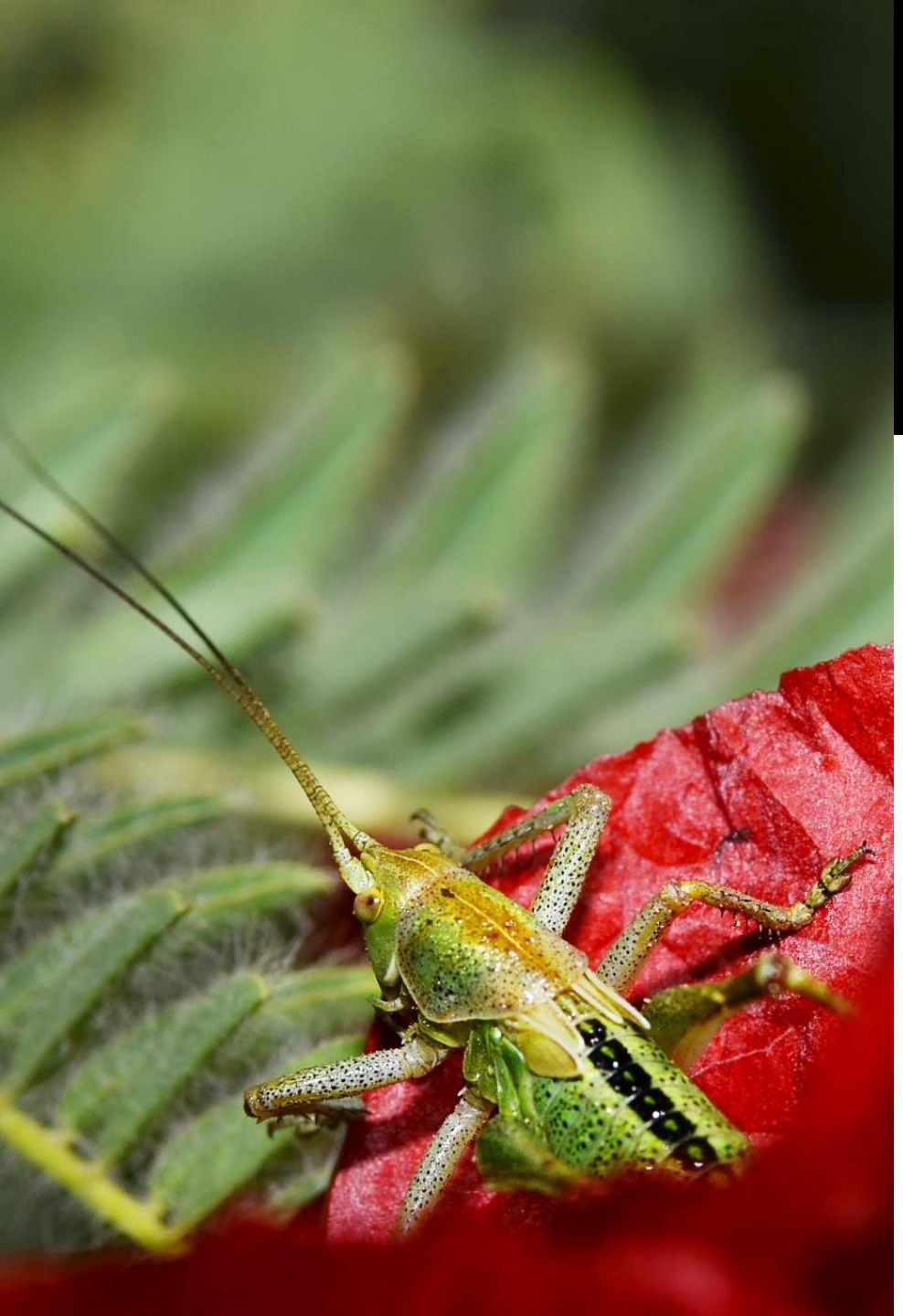
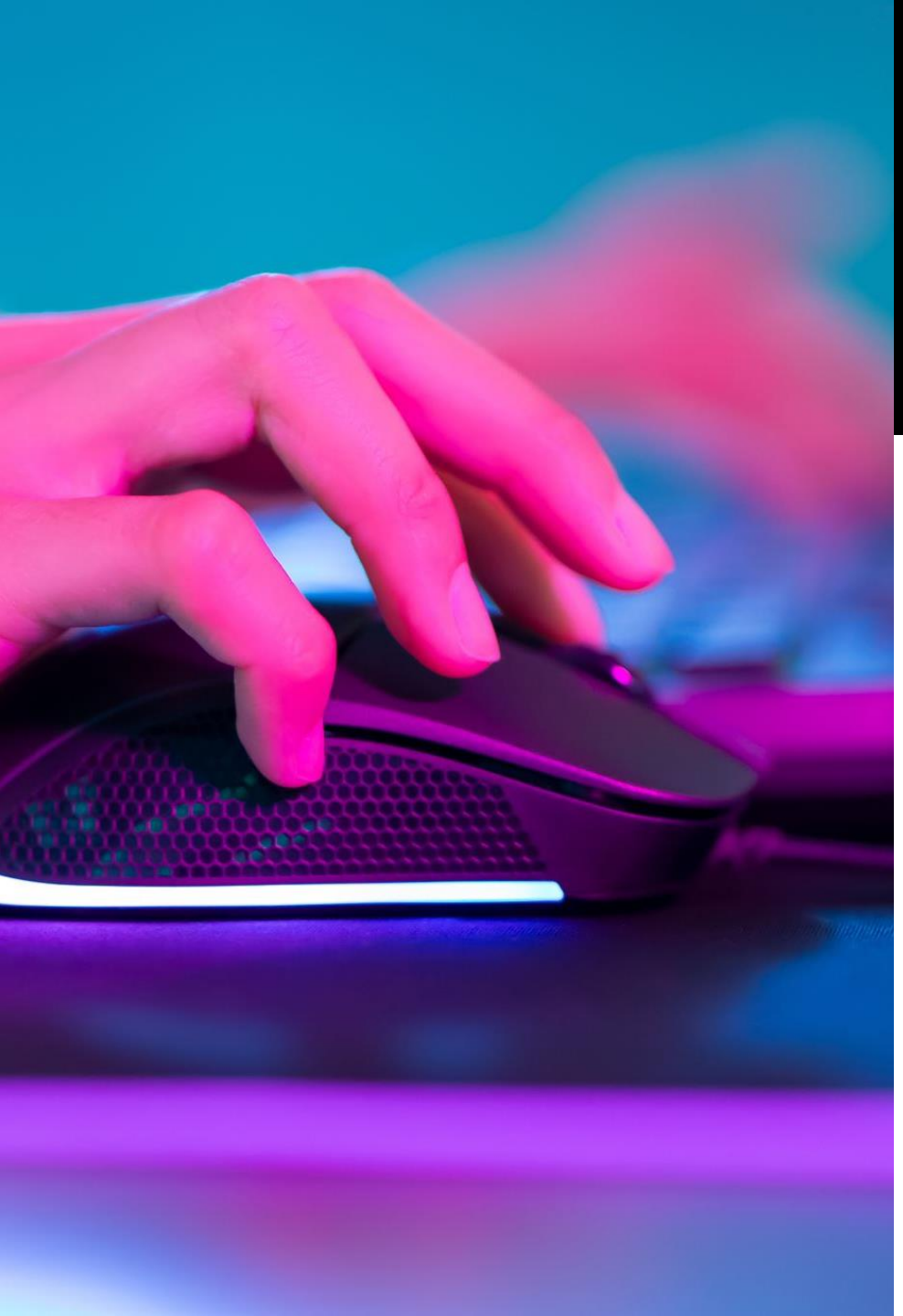
THE FIRST COMPUTER BUG

WHAT IS BUG?



How does Bug affects?

1. Feeding Damage
2. Transmission of Diseases
3. Weakening of Plants



Computer Bug

A computer bug refers to an error, flaw, glitch, or unintended problem in computer software or hardware that causes it to behave unexpectedly or produce incorrect results.

The First Computer Bug

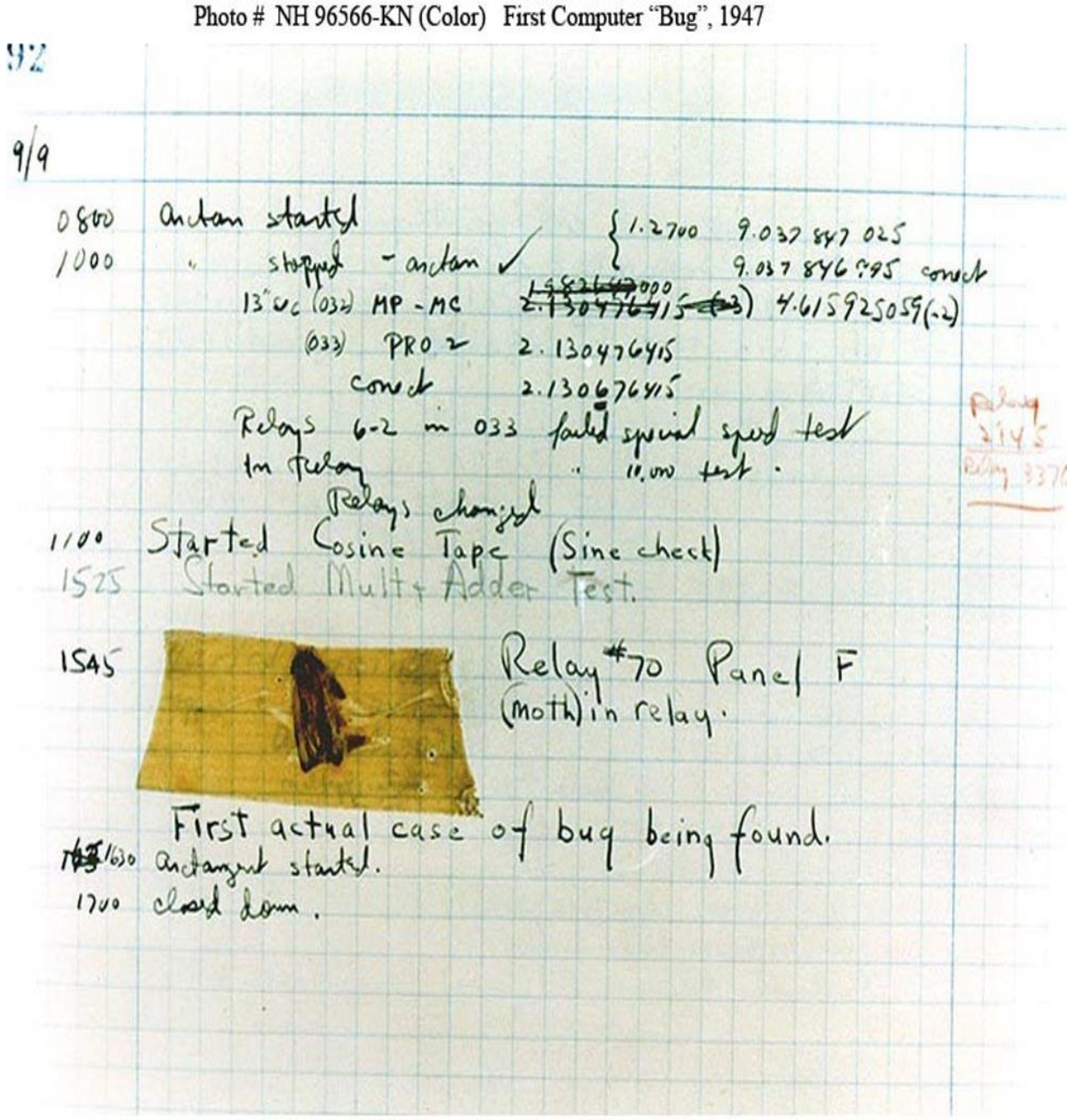
1. The term "bug" in the context of computers originated in 1947 with Grace Hopper and the Mark II computer at Harvard University.
2. Grace Hopper, a computer scientist and United States Navy rear admiral.

The Story Of Finding The First Bug

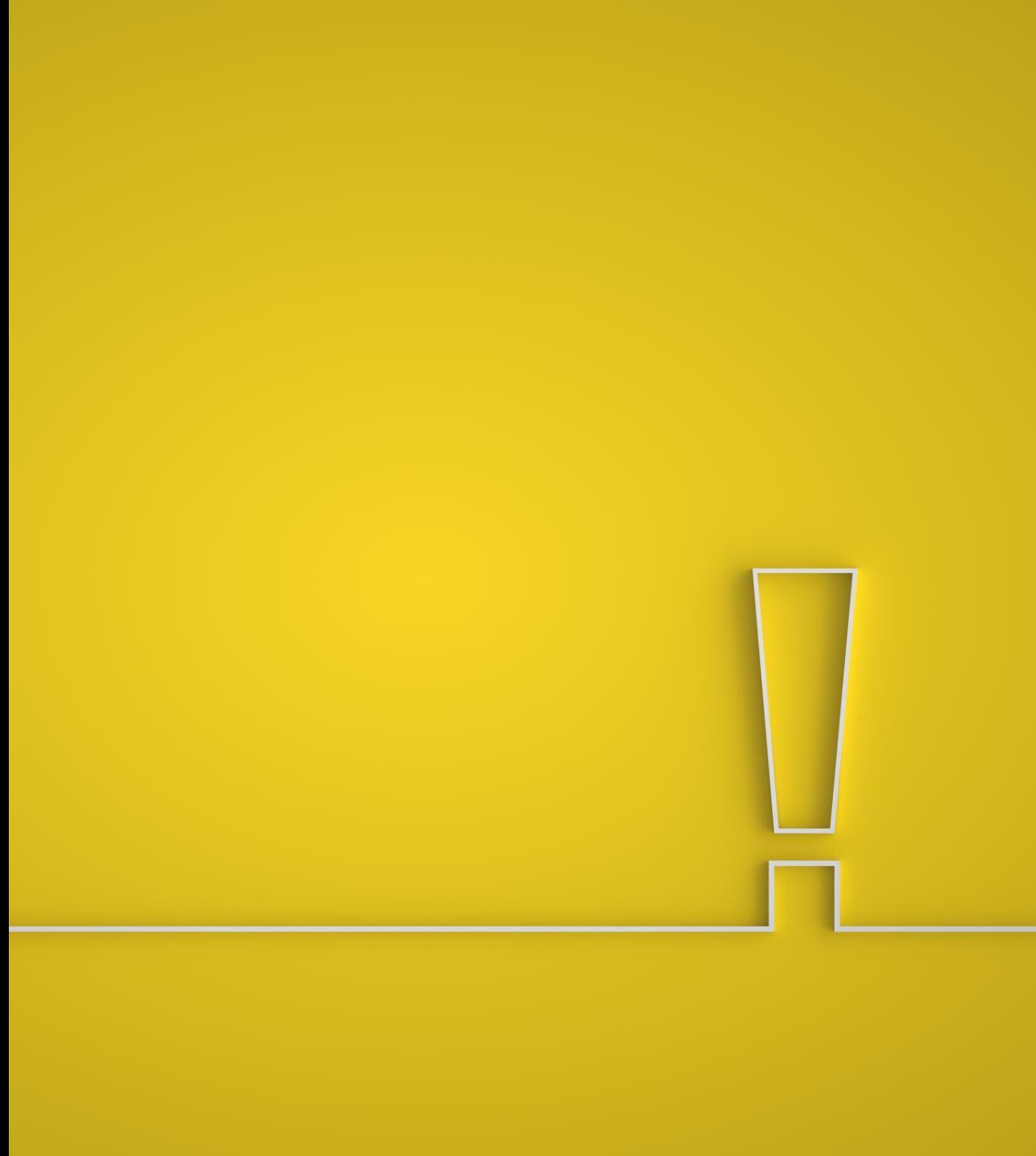
The Mark II computer, an electromechanical computer developed at Harvard University, was having some issues, and a team led by Grace Hopper was tasked with finding and fixing the problem. On September 9, 1947, the team discovered an actual insect, a moth, causing a malfunction in the computer.

The moth was found stuck between relay contacts, preventing the computer from functioning correctly.

Grace Hopper documented the discovery by taping the moth to the computer's logbook and noting it as the "First actual case of bug being found."



1. It's important to note that while the term "bug" became popularized through this incident, the practice of debugging existed before the discovery of the moth in the Mark II computer.
2. The term "bug" was already used in engineering to describe glitches in mechanical systems before this incident.



Hardware Bugs

1. These are problems or flaws in the physical components of a computer or electronic device.
2. A malfunctioning keyboard key, a defective memory chip, or a problem with the central processing unit (CPU).
3. Hardware bugs can directly affect the performance or functionality of the device, and they often require physical repair or replacement of the faulty component.

Software Bugs

1. These are issues or errors in the programs and instructions that run on a computer or electronic device.
2. A software bug might cause a program to crash, display incorrect information, or behave unexpectedly. It could be a coding error, logic mistake, or a problem with how different software components interact.
3. Software bugs can lead to operational issues, data corruption, or security vulnerabilities. They are typically addressed through software updates, patches, or fixes provided by developers.

DEBUGGING

DEBUGGING IS THE PROCESS OF FINDING AND FIXING PROBLEMS OR "BUGS" IN COMPUTER PROGRAMS.

Past Bugs	Present Bugs
Predominantly, Hardware related issues.	A mix of hardware and software issues, with software bugs more prevalent.
Often involved physical defects or malfunctions, such as loose wires, insects or faulty components.	Primarily software-related, including coding errors and logic flaws.
Limited debugging tools and techniques.	Advanced debugging tools and methodologies, including integrated development environments (IDEs) and debugging software.


THANK YOU