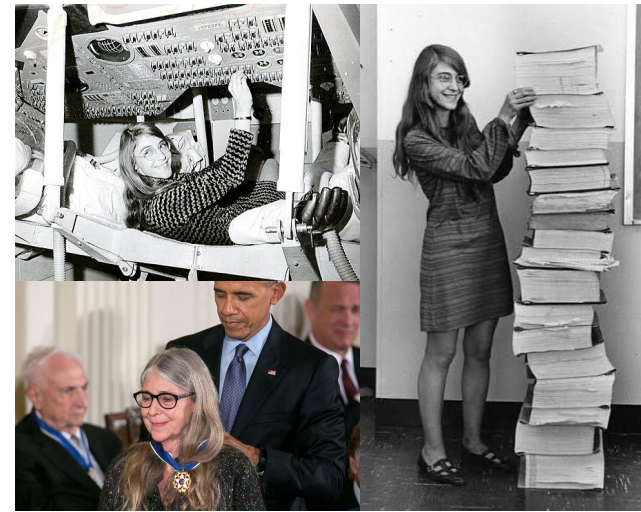


TUESDAY 13TH OCTOBER

When Neil Armstrong & Buzz Aldrin were descending to the surface of the moon in 1969 the lunar lander computer alarms began sounding. They were running too many systems and had forgotten to turn off others such as radar. They had just moments to decide whether to abort the mission or continue. Fortunately, the **software** was designed to recognise that it may be overloaded and discard unimportant tasks and keep the landing systems running. The team that wrote that software was led by 32-year old Margaret Hamilton (pictured, right, with the printed code) who had anticipated that the astronauts may make this very mistake.

Born in Indiana, Hamilton studied mathematics and began programming computers at MIT when the discipline was still in its infancy. She joined the NASA Apollo project as a programmer, but quickly rose to be Director of **Software Engineering**, indeed she is credited with inventing the term.

In 2016, President Obama awarded her the Presidential Medal of Freedom for her contribution to space exploration. Her approach to anticipating mistakes still influences the software used in aircraft, hospitals and other systems where failure could cost lives. Her death was announced last week at the age of 90.



- Should engineers design technology assuming people will make mistakes, however well trained they are?
- Where else do we depend on computers making the right decisions when something goes wrong?
- Would you like to work in programming or software engineering?

TUESDAY 13TH OCTOBER

When Neil Armstrong & Buzz Aldrin were descending to the moon surface, the alarms in their lander sounded. They were running too many systems, having forgotten to turn off others. The **software** was designed to recognise it may be overloaded and keep key landing systems running, because 32-year-old Linda Hamilton, NASA Director of Software Engineering had anticipated this mistake.

In 2016 President Obama awarded her the Presidential Medal of Freedom for her contribution to space exploration. Her death was announced last week at the age of 90.

- Should **software engineers** design technology assuming people will make mistakes, however well trained they are?

