

07-120
**Introduction to
Software
Construction**

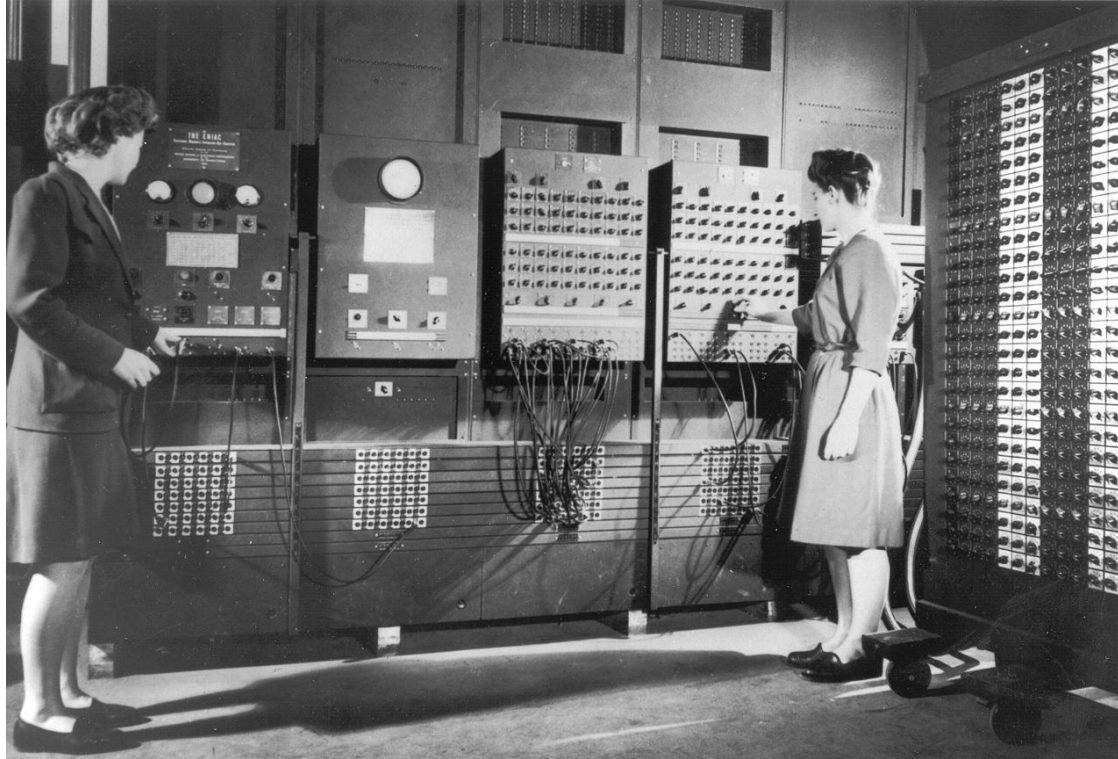
Fall 2023
Michael Hilton and Mayank Goel

Administrivia

HW4 Due Date: Today, November 17, 2023 at 11:59 pm.

Software Design

WWII Computer Programmer(s)



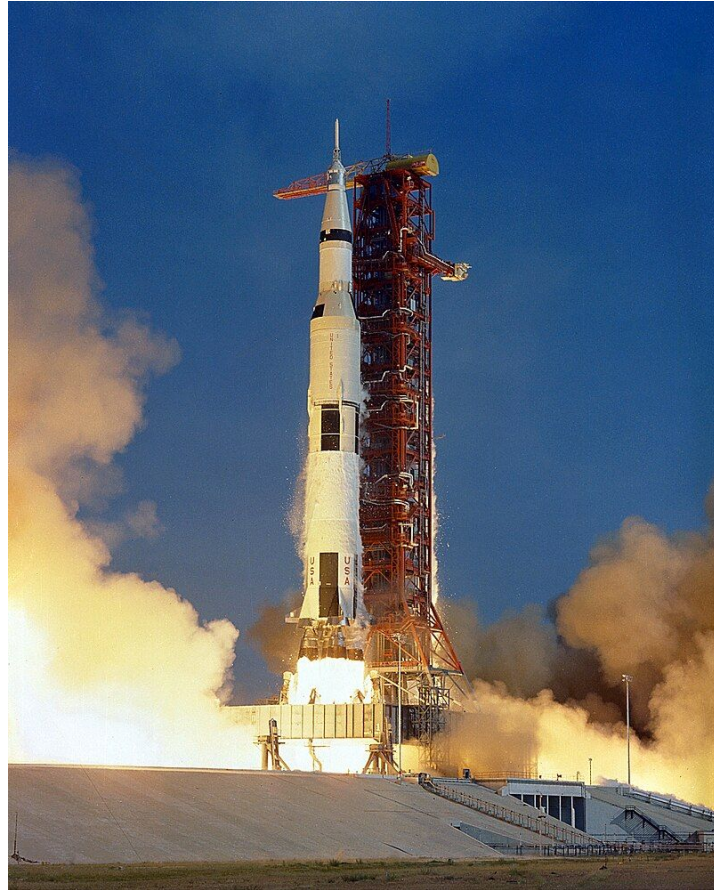
NASA Computers (Dorothy Vaughan, Lessie Hunter, Vivian Adair)



Apollo 11

Liftoff:

9:32 a.m. EDT July 16, 1969



Margaret Hamilton



Software Engineering as a Discipline c. 1969

- Software was very inefficient
- Software was of low quality
- Software often did not meet requirements
- Projects were unmanageable and code difficult to maintain
- Software was never delivered



SOFTWARE ENGINEERING

Report on a conference sponsored by the
NATO SCIENCE COMMITTEE
Garmisch, Germany, 7th to 11th October 1968

Chairman: Professor Dr. F. L. Bauer
Co-chairmen: Professor L. Bolliet, Dr. H. J. Helms


Editors: Peter Naur and Brian Randell

January 1969





What makes a good Software
Design?





Design wttr.in





```
michaelhilton@macbook-pro-260 ~ % curl wttr.in
Weather report: Pittsburgh, Pennsylvania, United States
```



Sunny
+41(39) °F
↑ **8** mph
9 mi
0.0 in

Wed 15 Nov			
Morning	Noon	Evening	Night
 <p>Sunny +41(28) °F ↑ 8 mph 9 mi 0.0 in 0%</p>	 <p>Sunny +55(53) °F ↑ 6-8 mph 6 mi 0.0 in 0%</p>	 <p>Clear 62 °F ↗ 4-9 mph 6 mi 0.0 in 0%</p>	 <p>Clear +53(50) °F ↘ 4-9 mph 6 mi 0.0 in 0%</p>

Thu 16 Nov			
Morning	Noon	Evening	Night
 <p>Sunny +42(41) °F ↑ 3-6 mph 6 mi 0.0 in 0%</p>	 <p>Sunny 55 °F ↑ 4-5 mph 6 mi 0.0 in 0%</p>	 <p>Clear 55 °F ↘ 3-6 mph 6 mi 0.0 in 0%</p>	 <p>Clear 50 °F ↘ 3-7 mph 6 mi 0.0 in 0%</p>

Fri 17 Nov			
Morning	Noon	Evening	Night
 <p>Partly cloudy +50(46) °F ↑ 7-13 mph 6 mi 0.0 in 0%</p>	 <p>Patched rain po... +57(55) °F ↑ 8-11 mph 6 mi 0.0 in 68%</p>	 <p>Light rain +55(51) °F ↑ 8-12 mph 5 mi 0.1 in 74%</p>	 <p>Light drizzle +53(51) °F ↘ 6-9 mph 1 mi 0.0 in 72%</p>

```
Follow @igor_chubin for wttr.in updates
michaelhilton@macbook-pro-260 ~ %
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