



1ST GENERATION OF COMPUTERS: VACUUM TUBE ERA (1940s-1950s)



MAJOR CHARACTERISTICS



VACUUM TUBE TECHNOLOGY



- 💡 PRIMARY ELECTRONIC COMPONENTS
- ⚙️ THOUSANDS USED PER SYSTEM
- 🔥 GENERATED IMMENSE HEAT

SIZE & ROOM-SIZED SYSTEMS



FAMOUS VINTAGE COMPUTERS

ENIAC (Electronic Numerical Integrator and Computer) (1946)



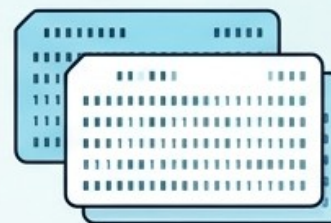
- ⚙️ MASSIVE SIZE (1,800 sq ft)
- ⚡ HIGH SPEED FOR ITS TIME

UNIVAC I (Universal Automatic Computer) (1951)



- ✅ FIRST COMMERCIAL COMPUTER
- 🇺🇸 PREDICTED 1952 PRESIDENTIAL ELECTION

DATA & PROGRAMMING



- 🔵 INPUT: PUNCH CARDS
- 🖨️ OUTPUT: PRINTED REPORTS

PROGRAMMING LANGUAGE



- ① MACHINE CODE (BINARY)
- ② FIRST-LEVEL LANGUAGES (Low Level)

KEY CHALLENGES & FEATURES

HIGH ELECTRICITY USAGE



- ⚡ CONSUMED VAST POWER
- ⚙️ REQUIREMENT FOR COOLING

MAGNETIC DRUM MEMORY



- 📦 SECONDARY STORAGE
- 🏠 HEAVY & BULKY

RELIABILITY ISSUES

- ⊗ TUBES FAILED FREQUENTLY
- ⚠️ FREQUENT MAINTENANCE NEEDED

