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| Computer Systems 9 Electric control | |  | Computer Systems 10 - Logic Gates |
| Integrated Chip/Circuit An **integrated circuit** or monolithic **integrated circuit** is a set of electronic circuits on one small flat piece (or "chip") of semiconductor material Transistors Tiny electronic switch capable of controlling large currents. Small change causes a big change (multiplier effect) Resistors A resistor reduces current flow. The bands on the resistor tell you how much they slow the electric current by. They are important, too much flow can blow a circuit, too little and it won’t work so this needs to be tightly controlled. Capacitors Store electric charge for a short period of time (think the red button after you turn a tv off). They eventually discharge. These are usually used in volatile memory like RAM  They are also used in touchscreens. When you touch the screen your finger is a weak electrical conductor and the charge in the capacitor changes. | | **Transistors** control the electrical signals in the CPU. There are lots of transistors and we call them logic gates to understand how they control the computer.  **Logic Gates** allow the computer to carry out **Boolean operations**  *(What does Boolean mean?)* Logic Gates and Truth Tables   Truth table  Symbol |
|  | | *These symbols are in the log tables* |
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| Computer Systems 11 - Definitions | |  | Computer Systems 12 - Logic Gates 2 |
| Binary |  |  |  |
| Electric Current |  |
| Voltage |  |
| Integrated Circuit |  |
| Volatile Memory |  |
| Transistor |  |
| Resistor |  |

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