→ semi-conductor diode

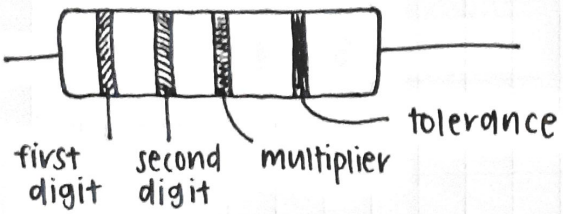
- allow current to flow in one direction but not the other
- symbol : 

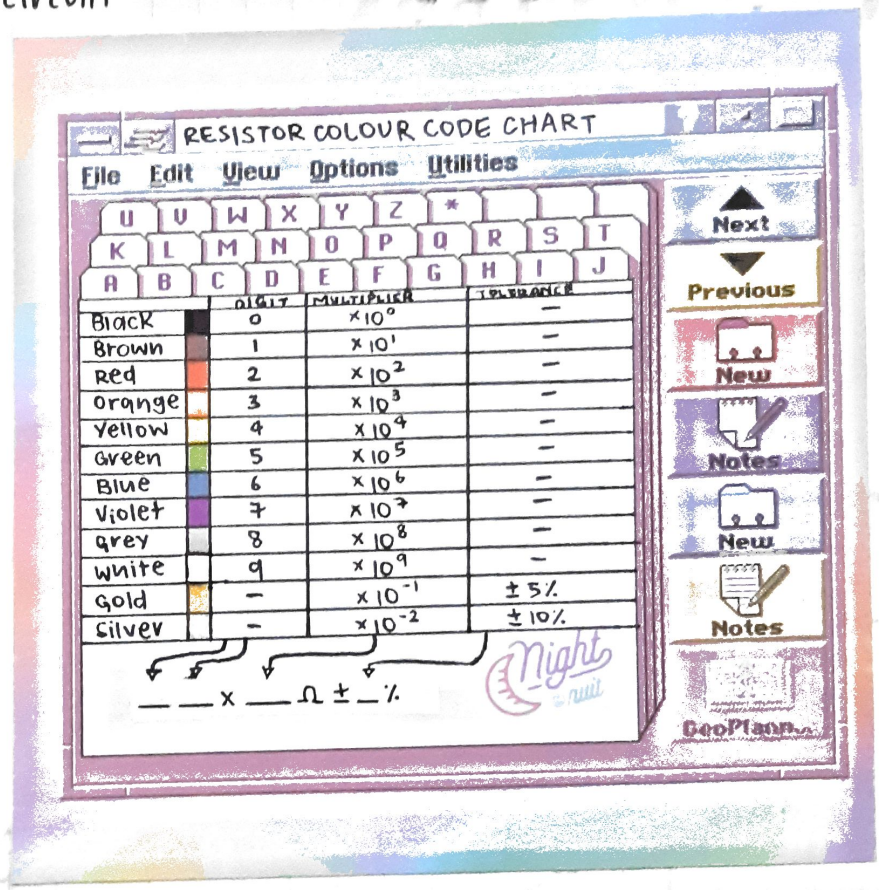
RESISTORS

→ protect other components from being damaged by reducing excessively high currents in the circuit

→ symbol: 

→ tolerance bands (colour-coded)





→ calculating resistance

- series: $R_{total} = R_1 + R_2$
- parallel: $\frac{1}{R_{total}} = \frac{1}{R_1} + \frac{1}{R_2}$

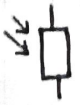
TRANSISTORS

→ automatic switch

→ symbol: 

→ usually connected to base to prevent it from being damaged by too much current

→ sensing circuits

- moisture: 2 metal rods 
- light: light-dependent resistor 
- temperature: thermistor 

→ can use potentiometer / variable resistor to adjust sensitivity

⇩ ⇩ ↳ only has 2 contacts

- symbol: