



BYTE SIZED TECH

BY COREY CROOKS

Levels of Programming Languages

High-level program

```
class Triangle {  
    ...  
    float surface()  
    return b*h/2;  
}
```

Low-level program

```
LOAD r1,b  
LOAD r2,h  
MUL r1,r2  
DIV r1,#2  
RET
```

Executable Machine code

```
0001001001000101  
0010010011101100  
10101101001...
```

BINARY LANGUAGE

- Computers understand either 1 or 0, but no words.
- This is called "Machine Code"
- All computers run off of this machine code.

BYTES

Bytes (B)



KiloBytes (KB)



MegaBytes (MB)



Gigabytes (GB)



TeraBytes (TB)



PetaBytes (PB)

	Approx. Bytes	Actual Bytes	Approx. Bits	Typical file/media
1B	1	1	8	Text email, SMS
1KB	$1000\text{B} = 10^3$	$1024\text{B} = 2^{10}$	8×10^3	Word document
1MB	$1000\text{KB} = 10^6$	$1024\text{KB} = 2^{20}$	8×10^6	Digital photo
1GB	$1000\text{MB} = 10^9$	$1024\text{MB} = 2^{30}$	8×10^9	DVD
1TB	$1000\text{GB} = 10^{12}$	$1024\text{GB} = 2^{40}$	8×10^{12}	Hard disk
1PB	$1000\text{TB} = 10^{15}$	$1024\text{TB} = 2^{50}$	8×10^{15}	Cloud?

COMPUTER TYPES

- There are many shapes and sizes
- Serve many different purposes
- Cost can vary widely

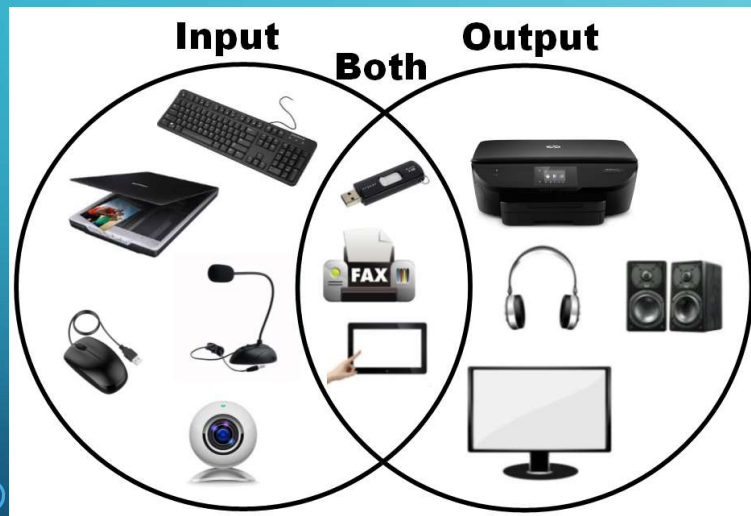


INPUT DEVICES

- The primary way of interacting with your computer.
- Highly customizable.
- Not many 'required'.



OUTPUT DEVICES



- Extremely similar to input.
- Computers will come with Output.
- Many use special ports for various results.

MOTHERBOARD

- THE NERVOUS SYSTEM OF THE COMPUTER
- CONTROLS COMMUNICATION
- PROVIDES PORTS FOR ALL HARDWARE



MEMORY

- RAM
- Different amounts for different applications
- Important to keep computer running smoothly



PROCESSOR

- The Brain of the computer
- Heavy computational lifting
- Specific Motherboard compatibility



STORAGE

- Comes in all shapes and sizes
- Different connectivity
- Different speeds



COMPUTER PORTS



- Controls communication
- Input and Output
- Internal connections
- Provides flexibility

ERGONOMICS

- Comes in nearly every tactile aspect of your device
- Improves the haptic experience
- Increases accessibility and customization

