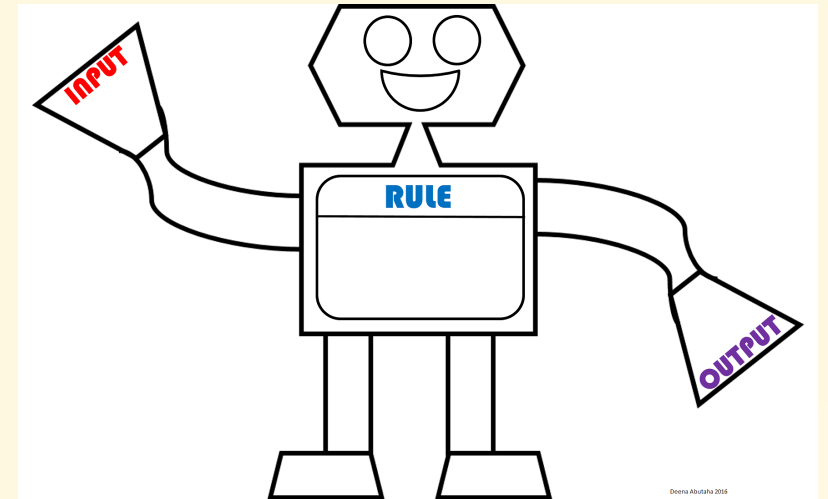# Picturing Programming

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Model

- A tirelessly robot (i.e., your computer) who

  - follows your orders (i.e., your program)

  - eats data (i.e., input)

  - displays data (i.e., output)

- What, when, and how data is eatten or displayed are decided by your orders

Robots

Robots speak different languages as we do for English, Chinese, Spanish, and etc.,

- Python

- C/C++

- Javascript

- ......

And your program has to speak its language **correctly** so that the robot can understand.

Inputs

Inputs are taken from

- Terminal

- Keyboard/Mouse

- Camera

- Microphone

- ......

Outputs

Outputs are given through

- Terminal as text/words
- Speakers
- Photos
- Animations
- ....

Put Them Together Again

Put Them Into The Context of Our Programming Env

A Few Examples

```
print("Hello World!")
```

A Few Examples

```
input("Write Something Here:")
```

A Few Examples

```
msg = input("Write Something Here:")
print(msg)
```

A Few Questions

- Does a robot has to read something from the input?

- Does a robot has to deliver something to the output?

- Does a robot has to read something first, process it, and then deliver the output?

One More Thing Before We Proceed

Can anyone tell me what is this symbol, "=" for?

One More Thing Before We Proceed

Can anyone tell me what is this symbol, "**=**" for?

- In programming, "**=**" is for **assign**, not for **equal**
- Copy the data from the right side to the left side

So please get yourself comfortable with something like `x=x+1`

Questions?