CSPE 102

Overview of Intelligent Systems

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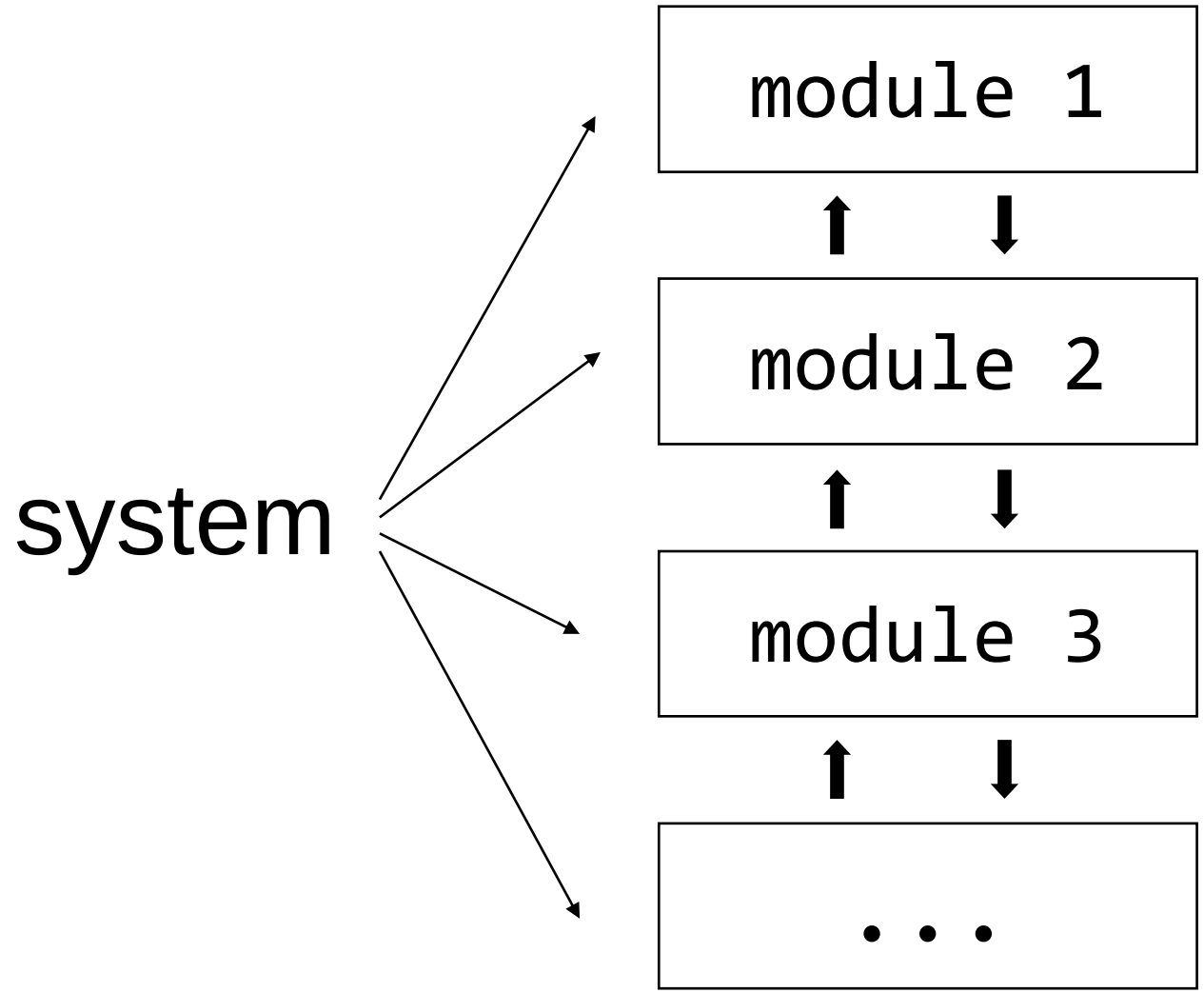
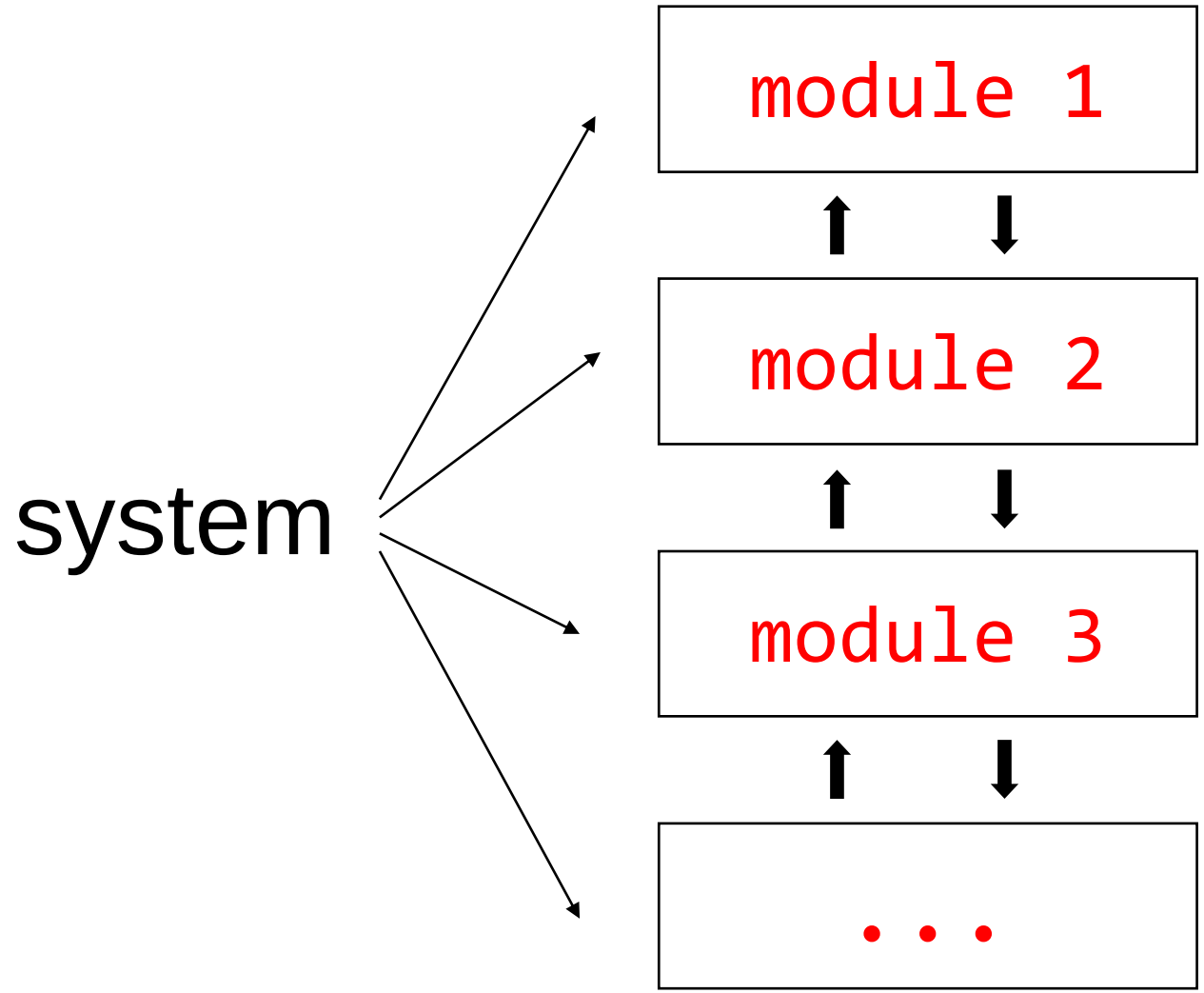
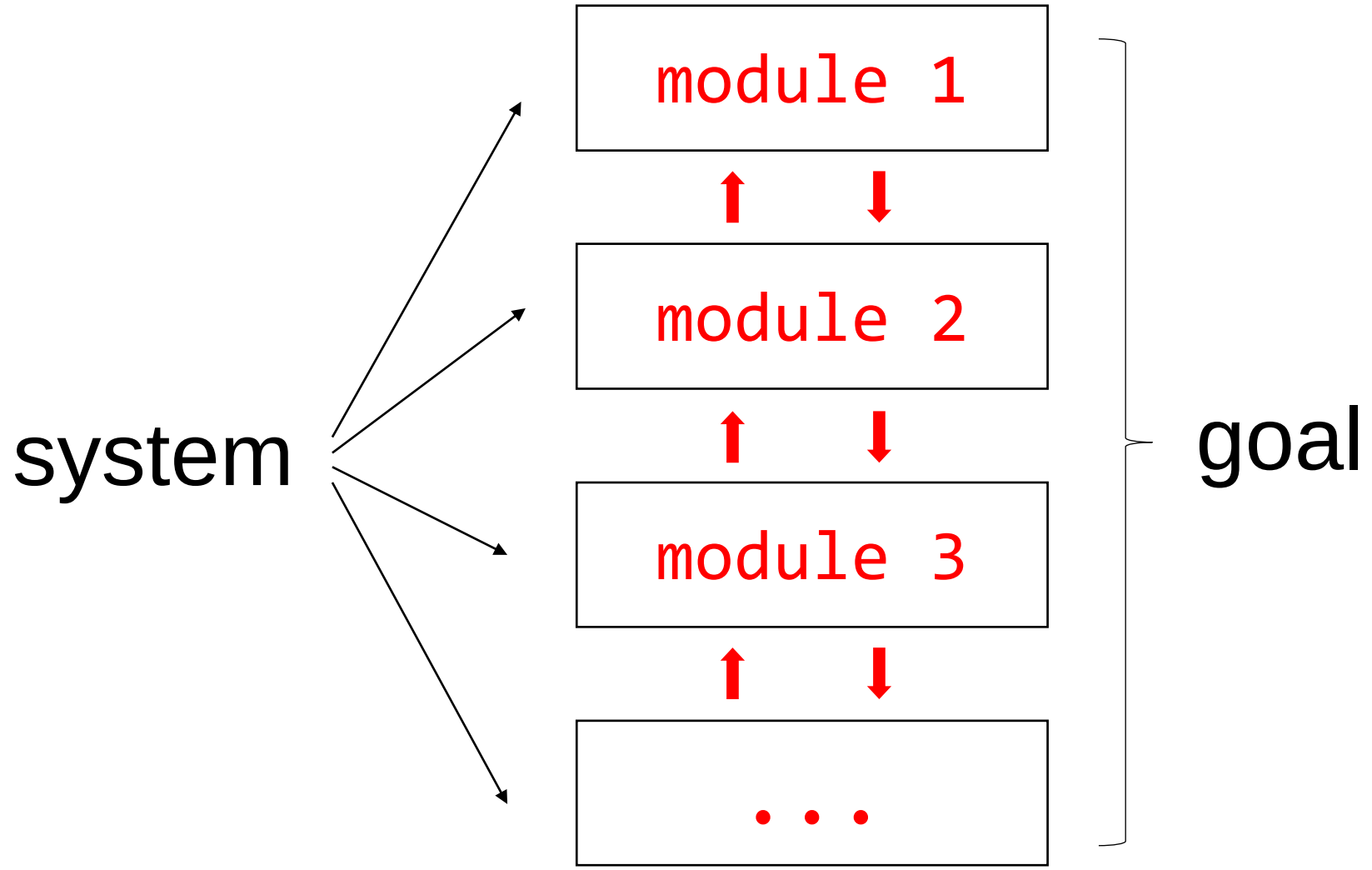
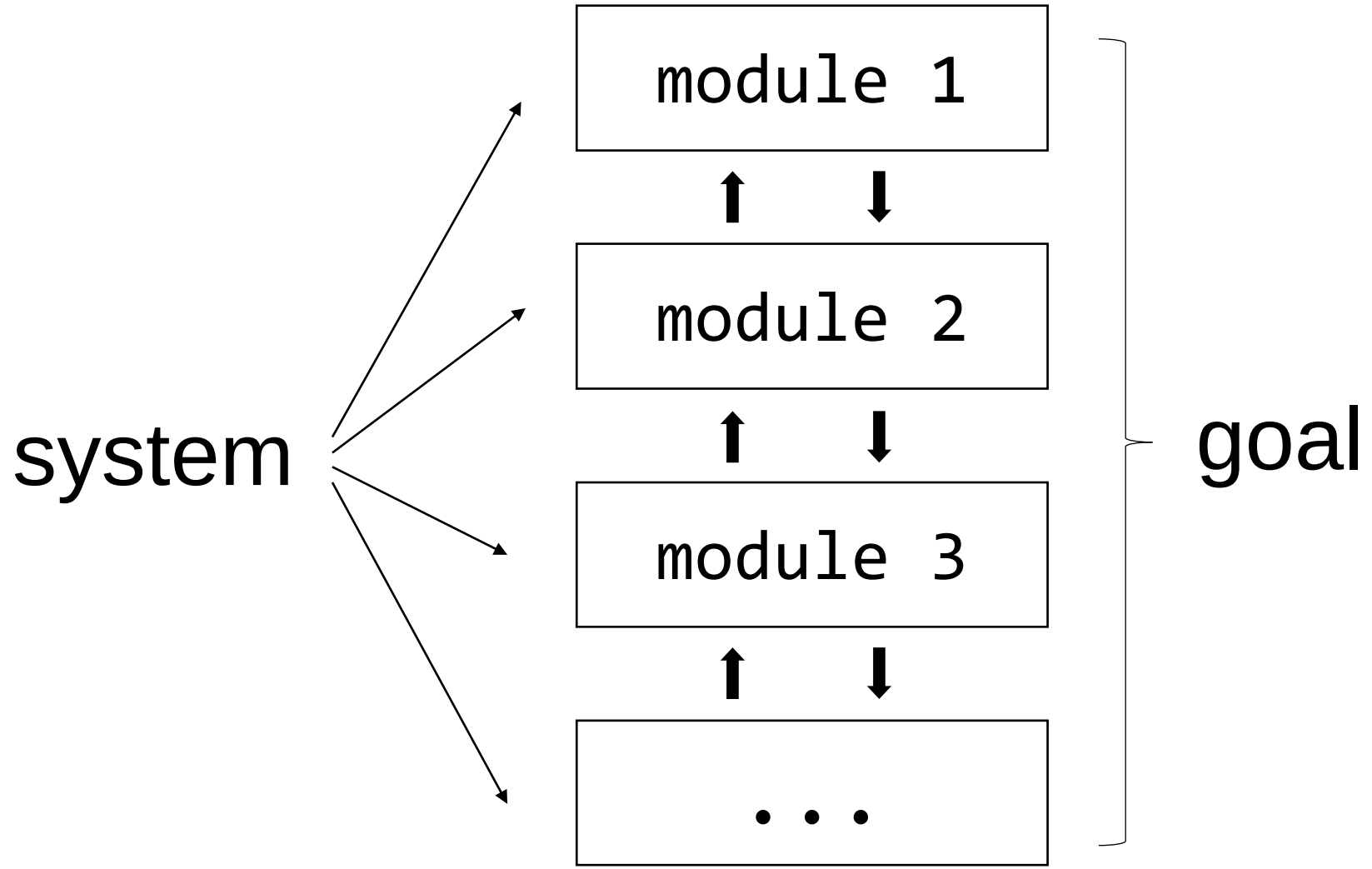
system

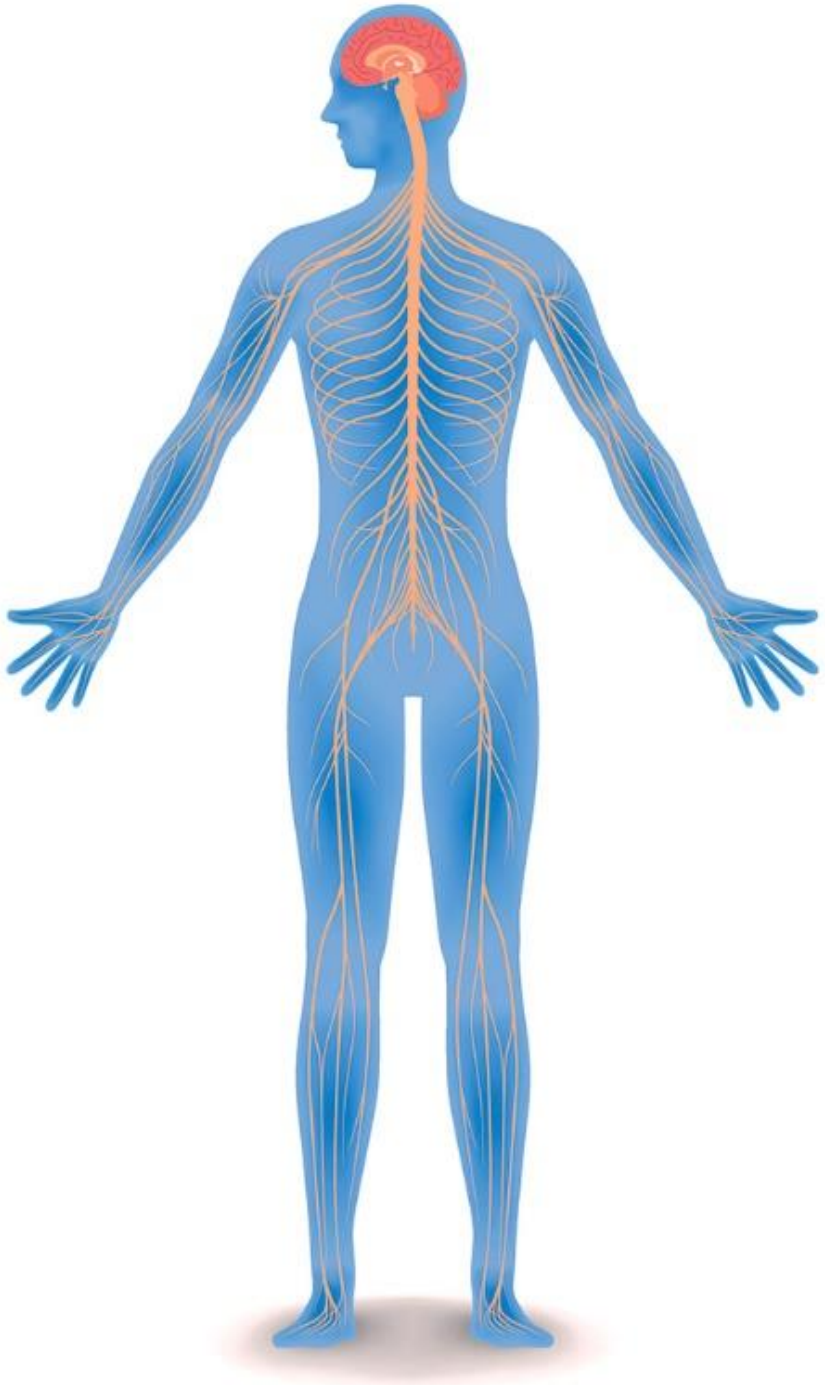

system
module 1
module 2
module 3
...


system
module 1
module 2
module 3
. . .


system
module 1
module 2
module 3
. . .
goal


system
module 1
module 2
module 3
. . .
goal

nervous system



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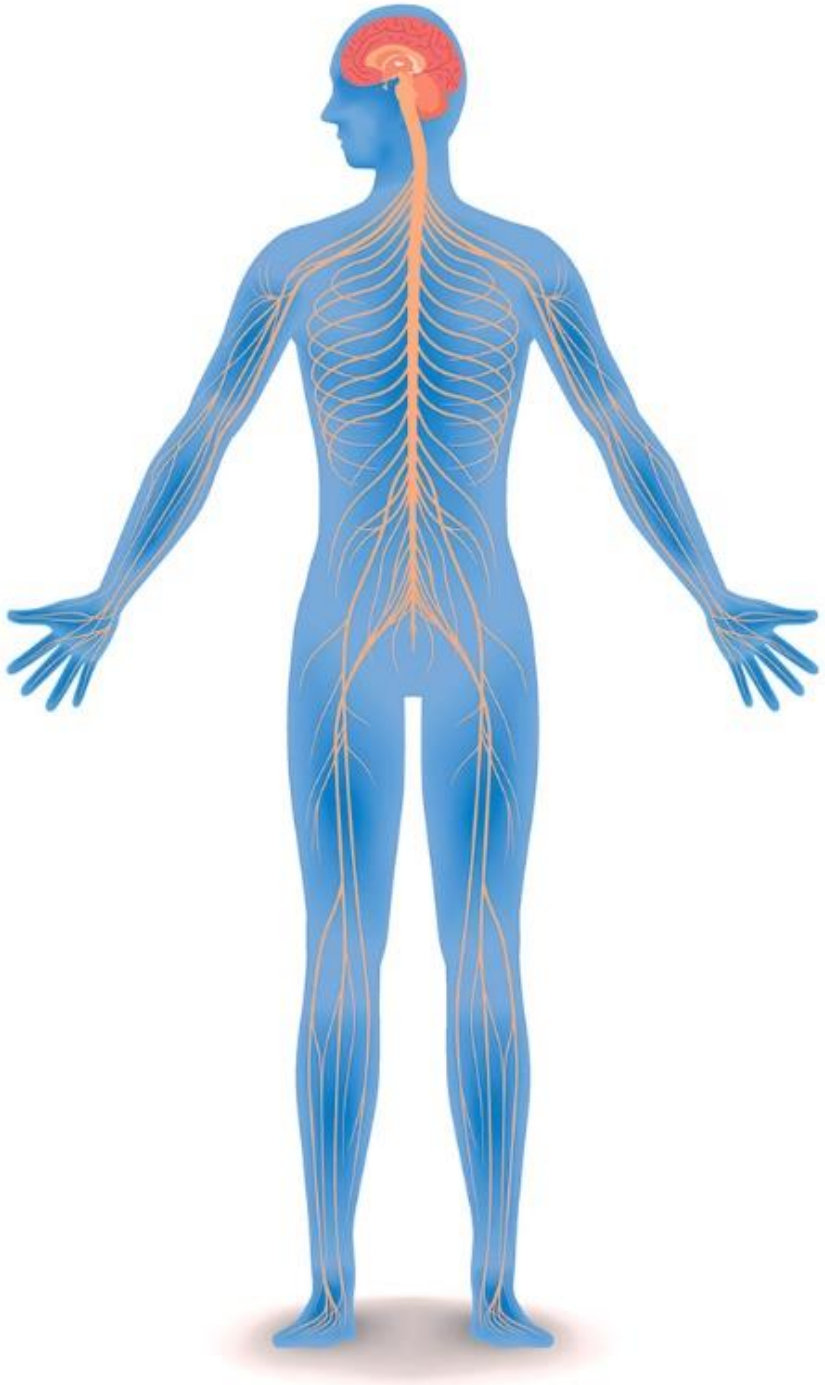
??

??

...

nervous system

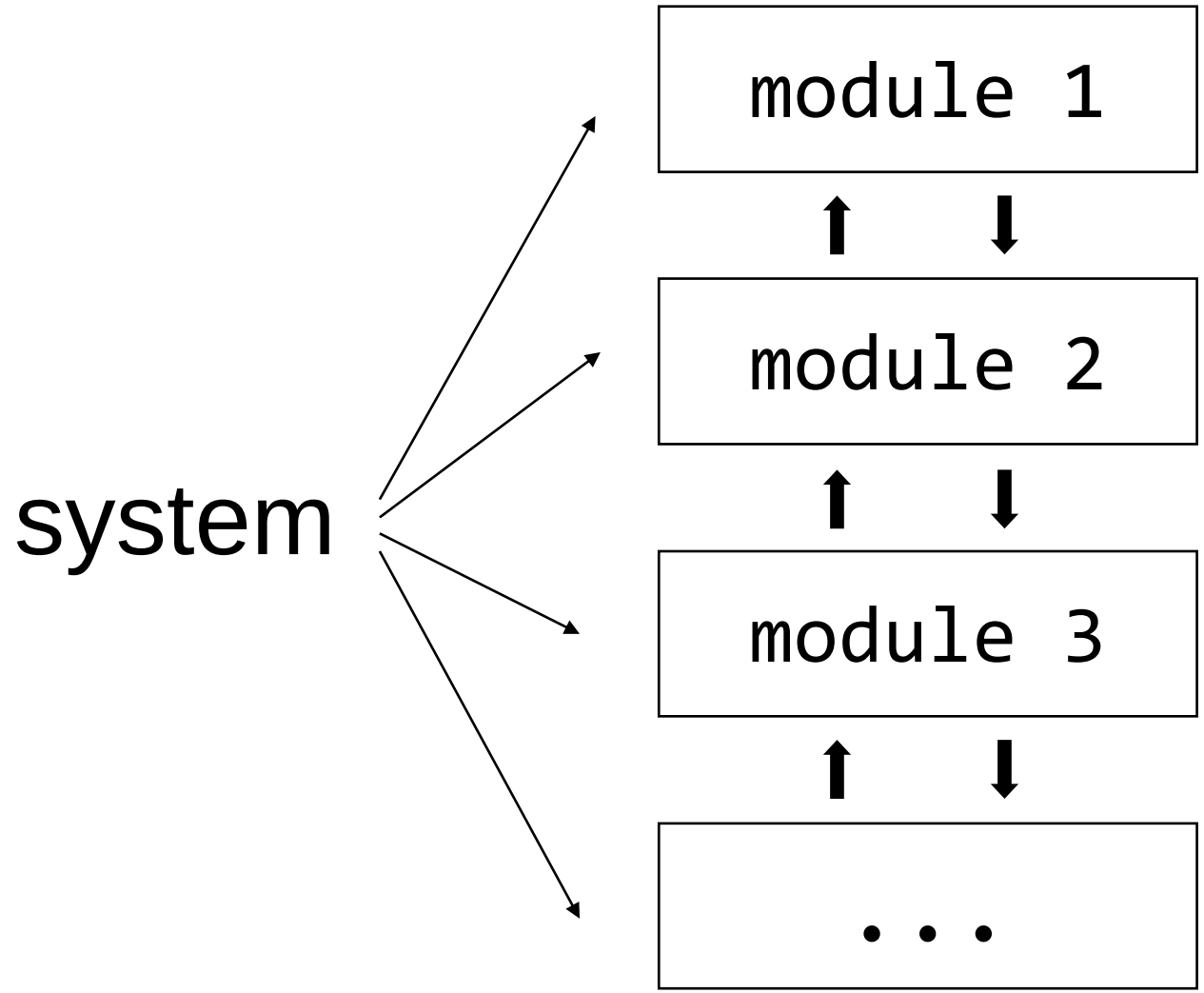


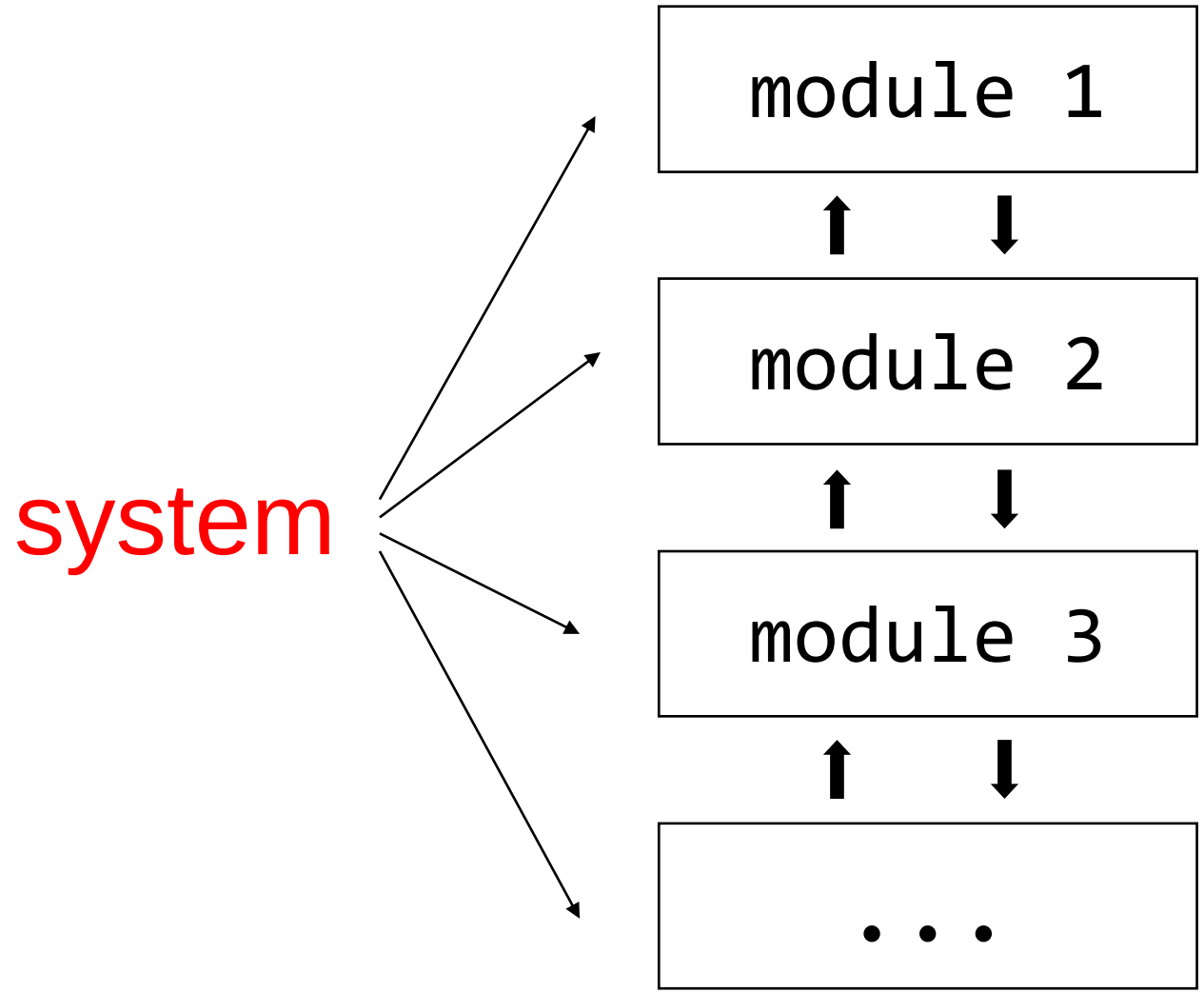
brain

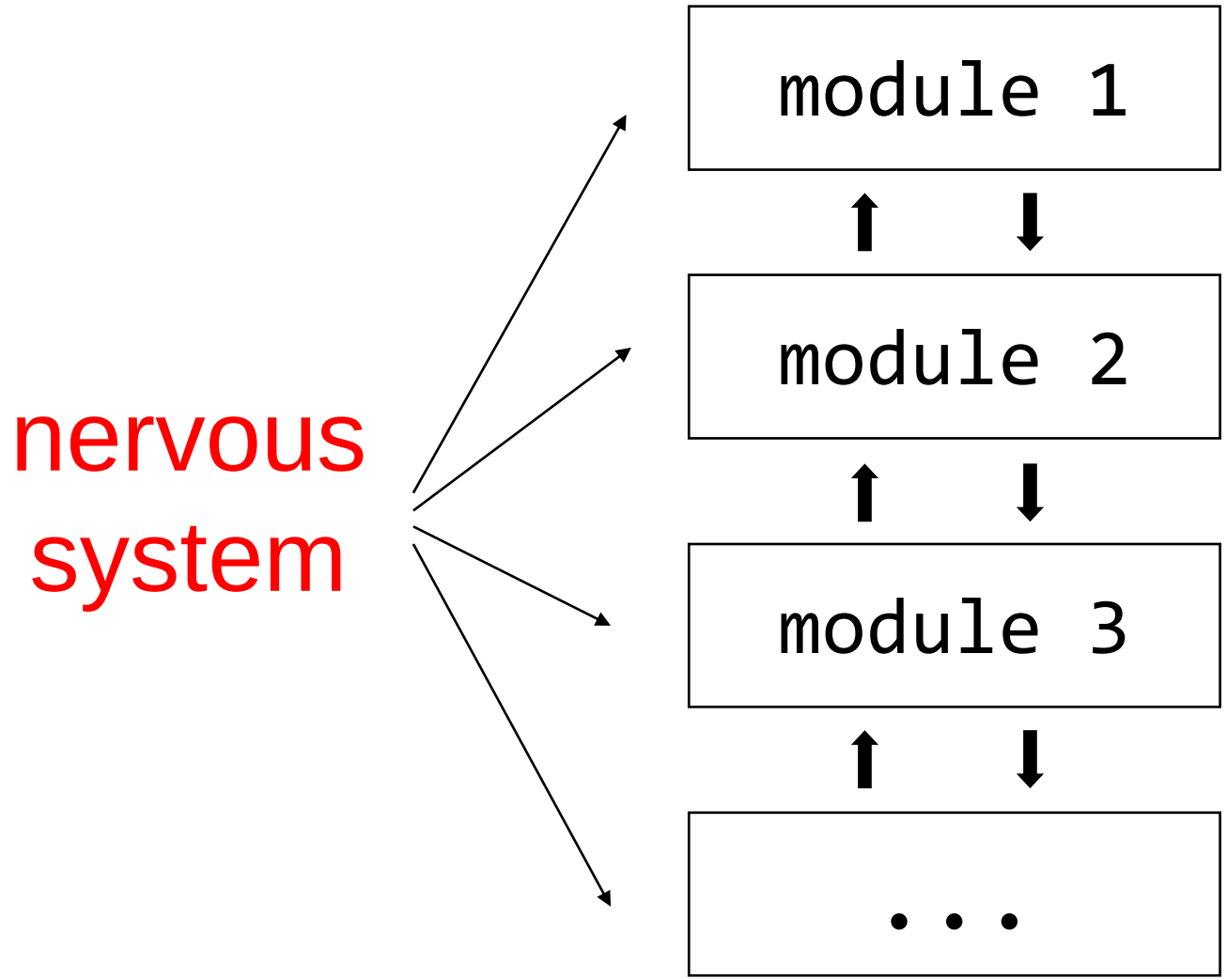
nerves

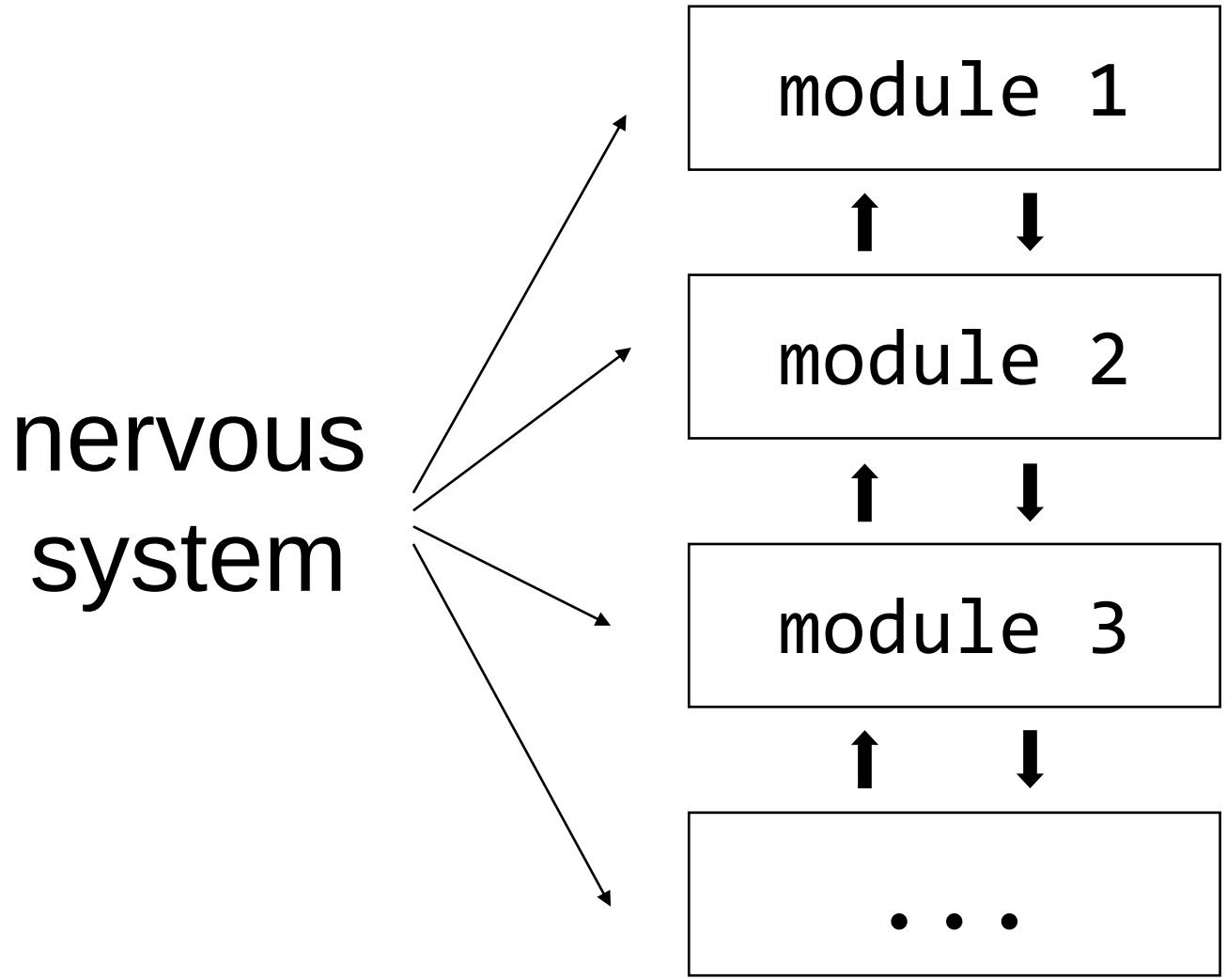
spinal cord

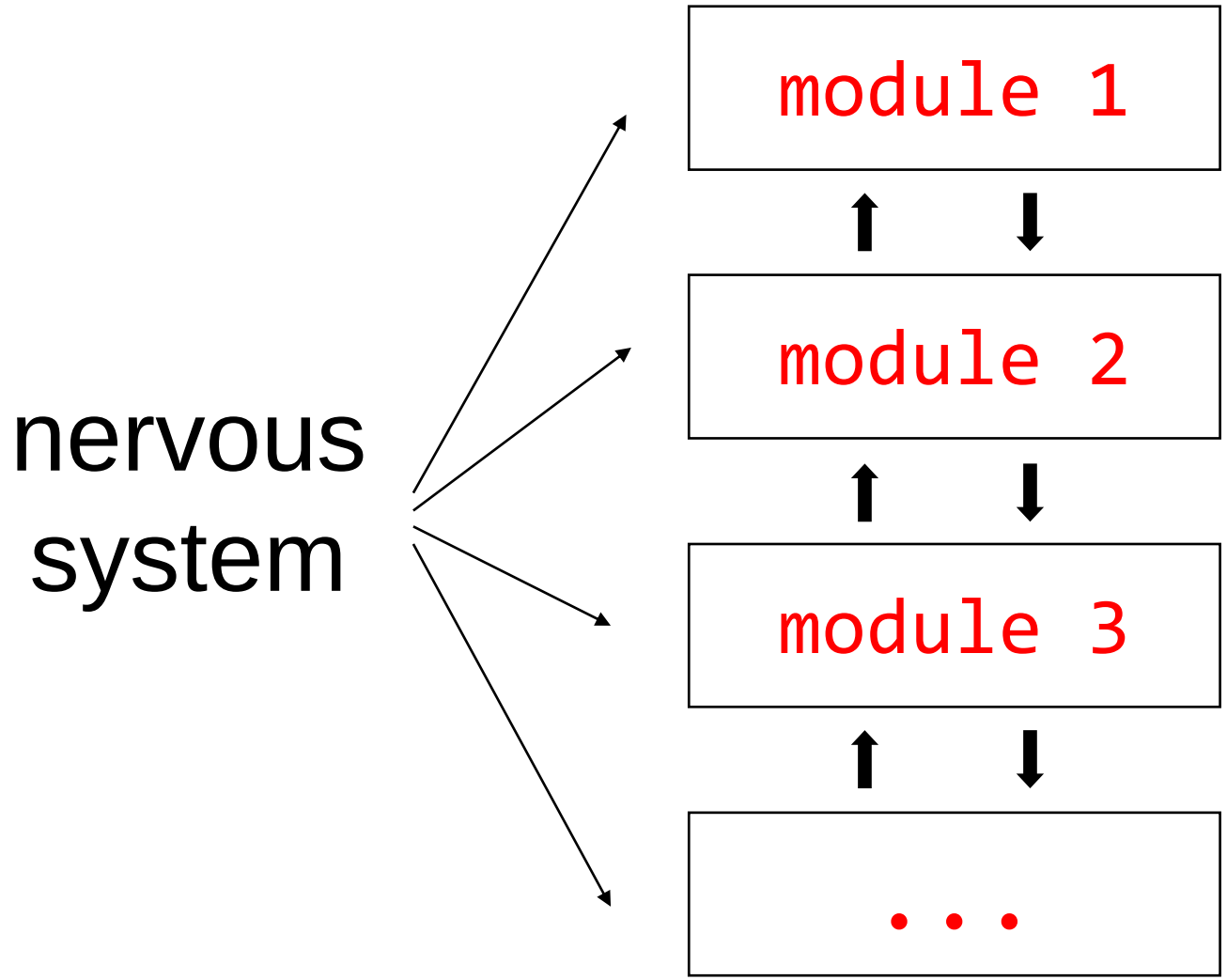
…

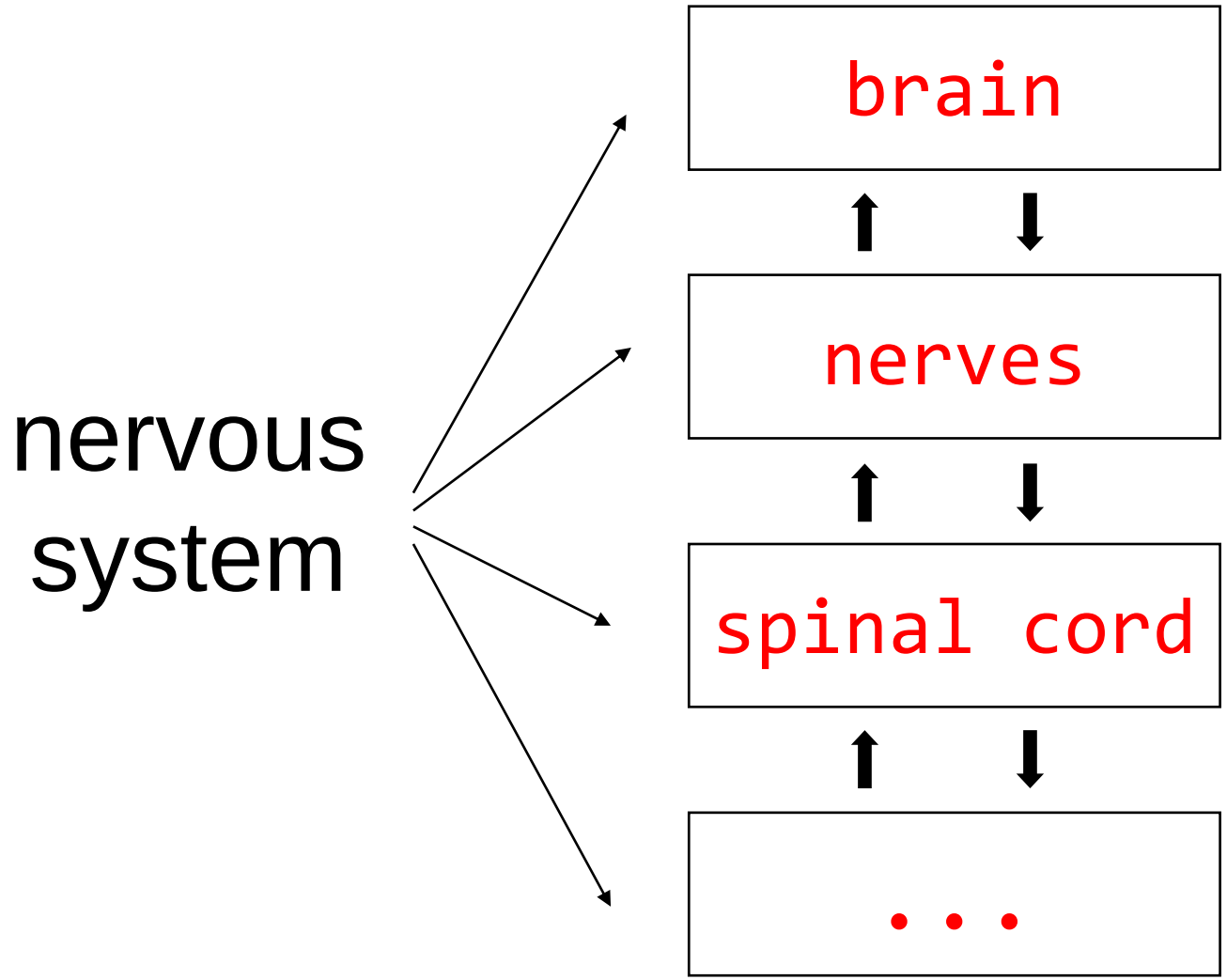

system
module 1
module 2
module 3
...

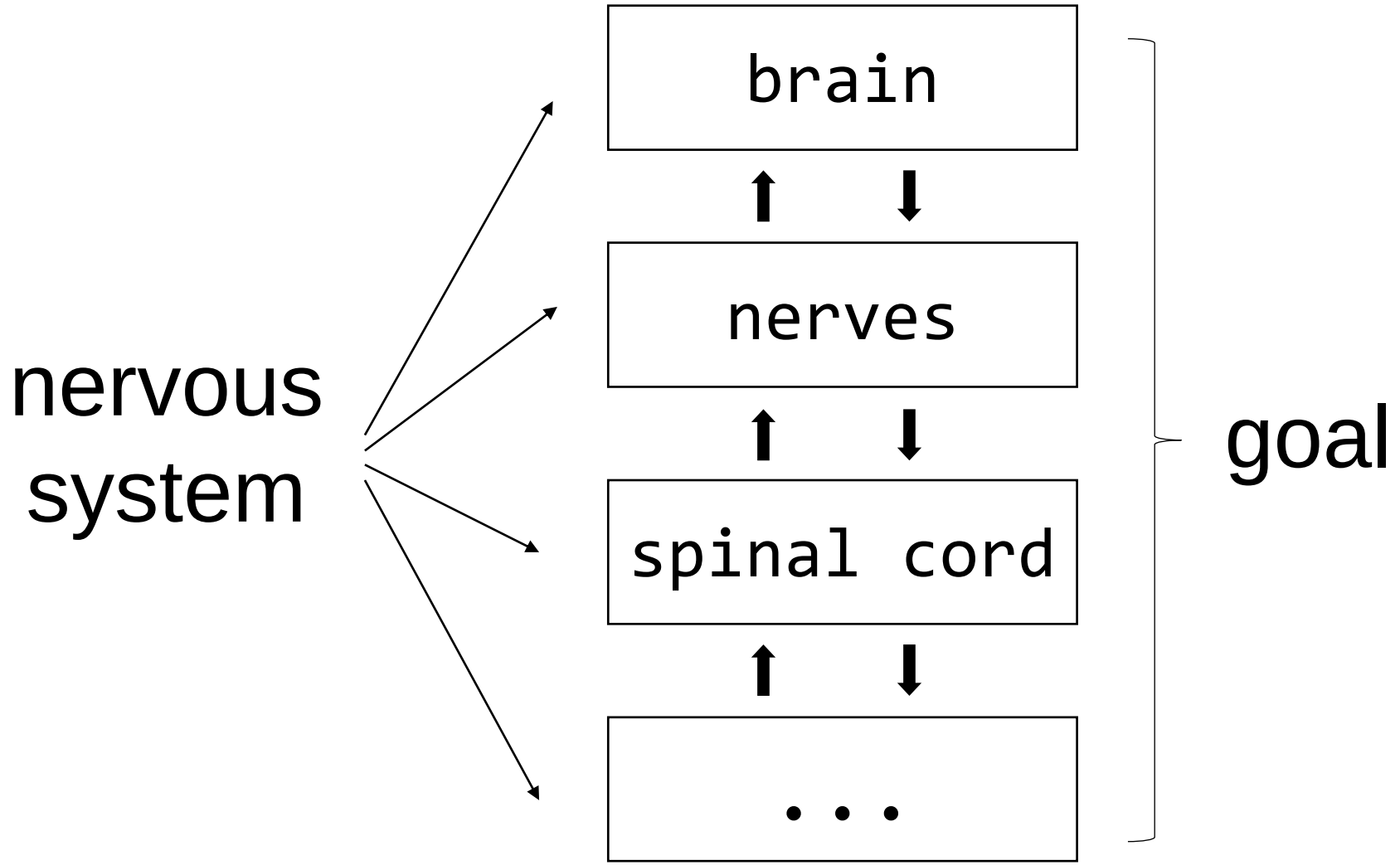

system
module 1
module 2
module 3
. . .


nervous system
module 1
module 2
module 3
. . .

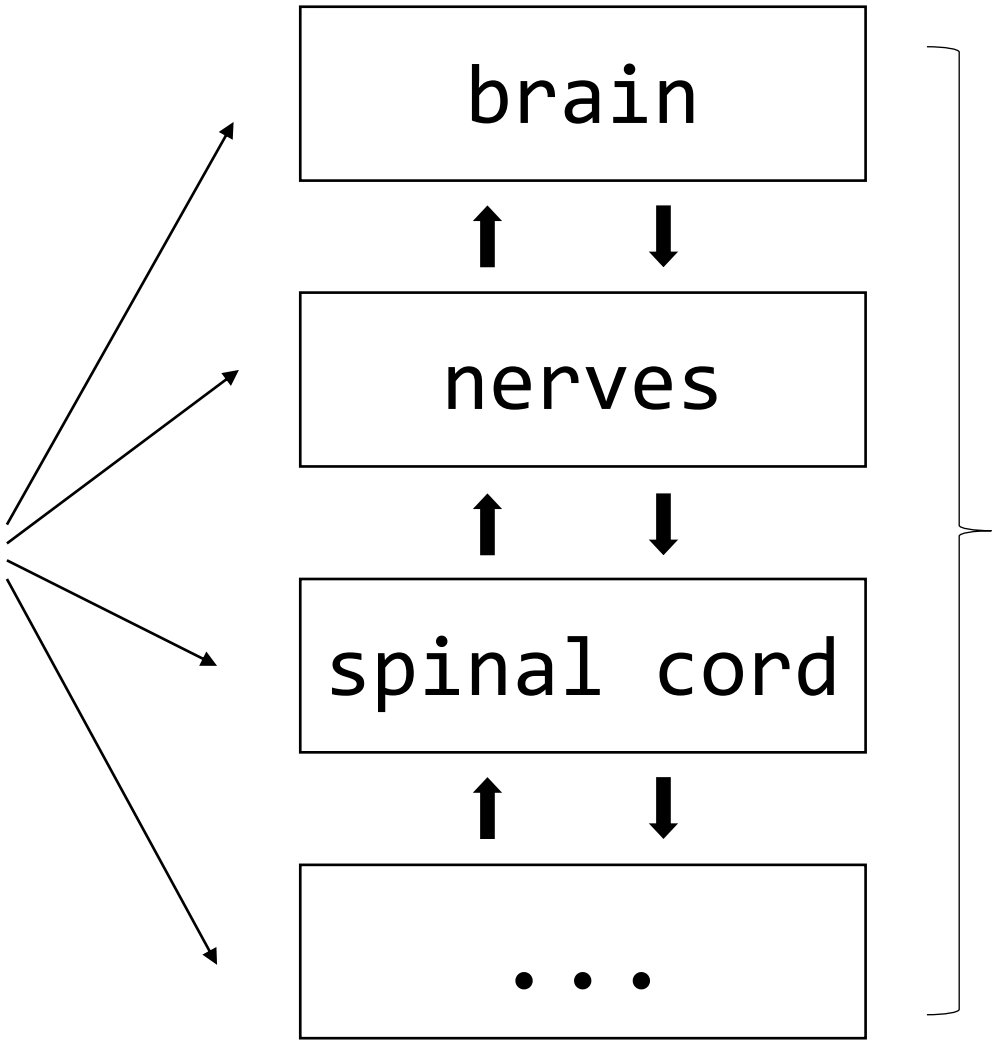

nervous system
module 1
module 2
module 3
...


nervous system
module 1
module 2
module 3
. . .


nervous system
brain
nerves
spinal cord
. . .

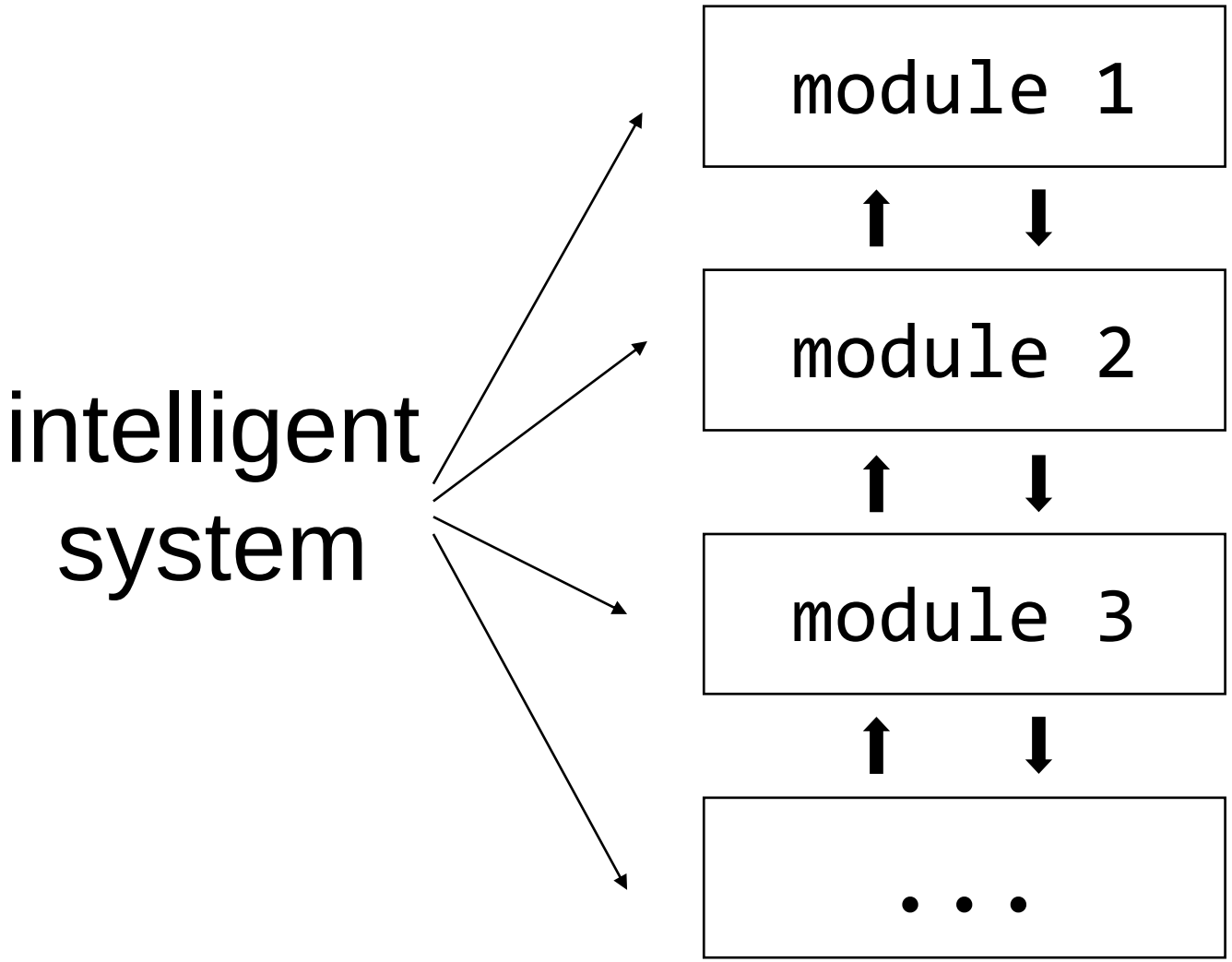

nervous system
brain
nerves
spinal cord
...
goal

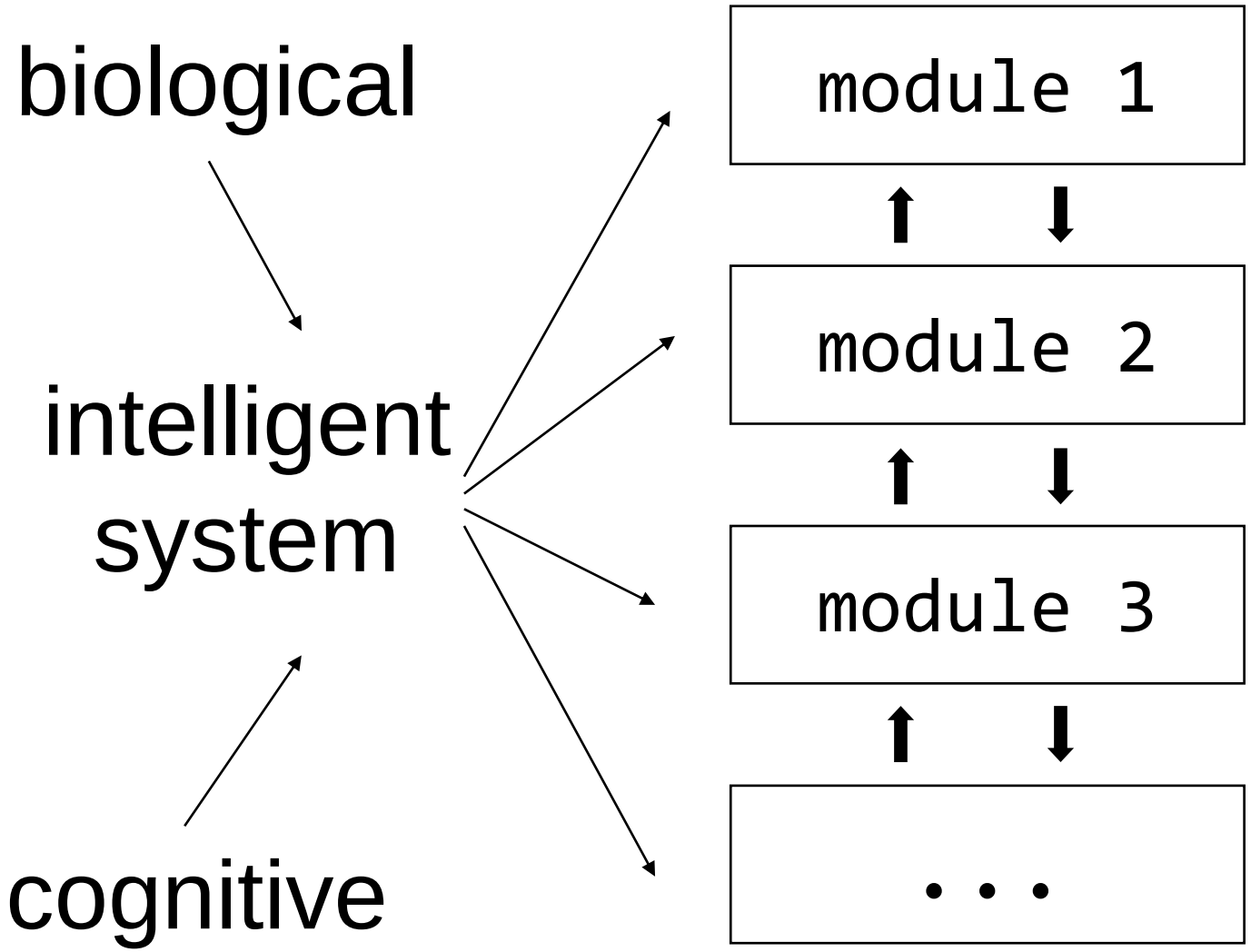
nervous system

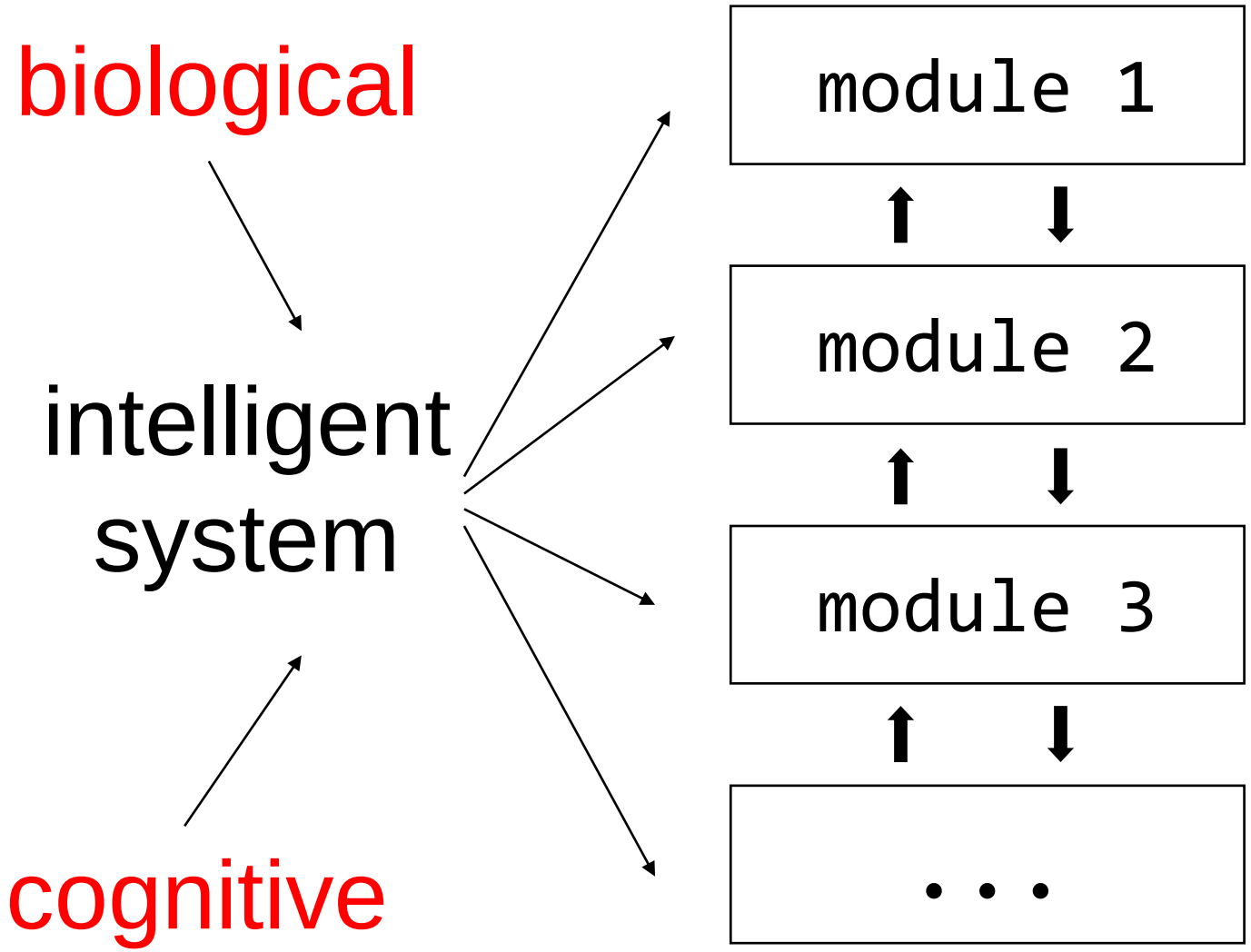


helps all the parts of the body to communicate with each other

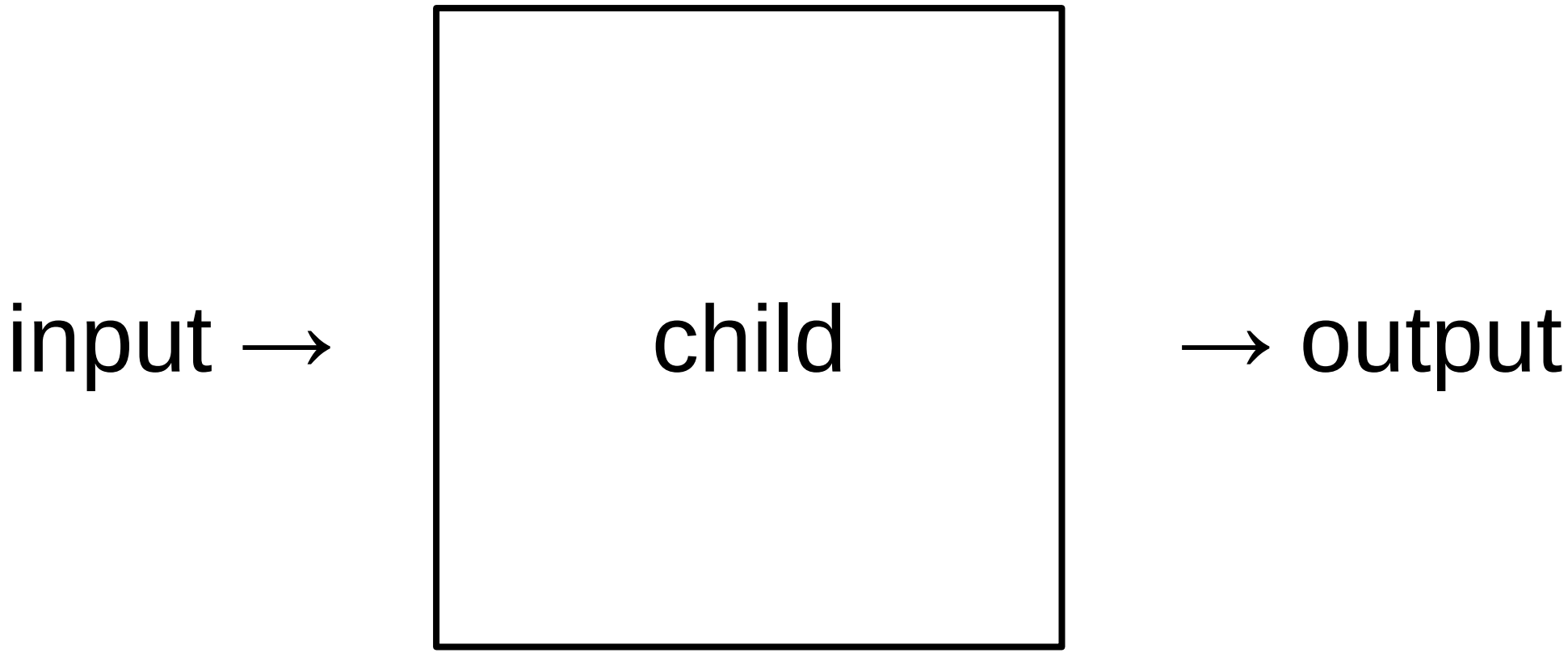
intelligent system

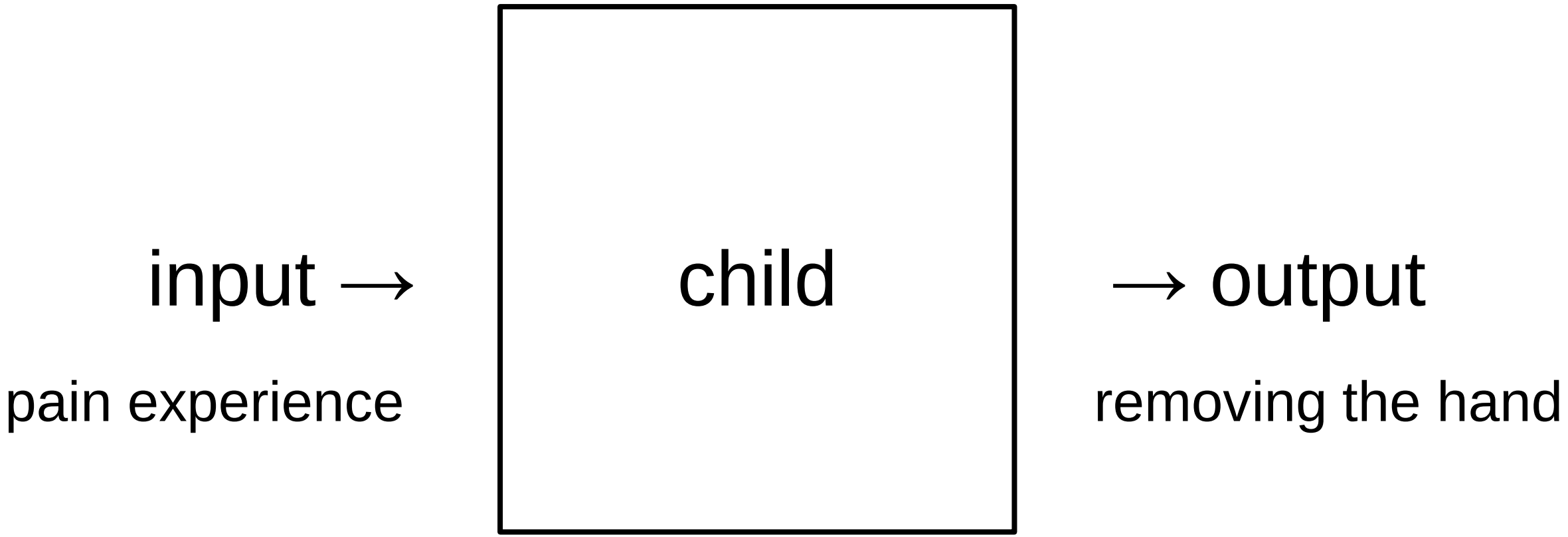

intelligent system
module 1
module 2
module 3
. . .

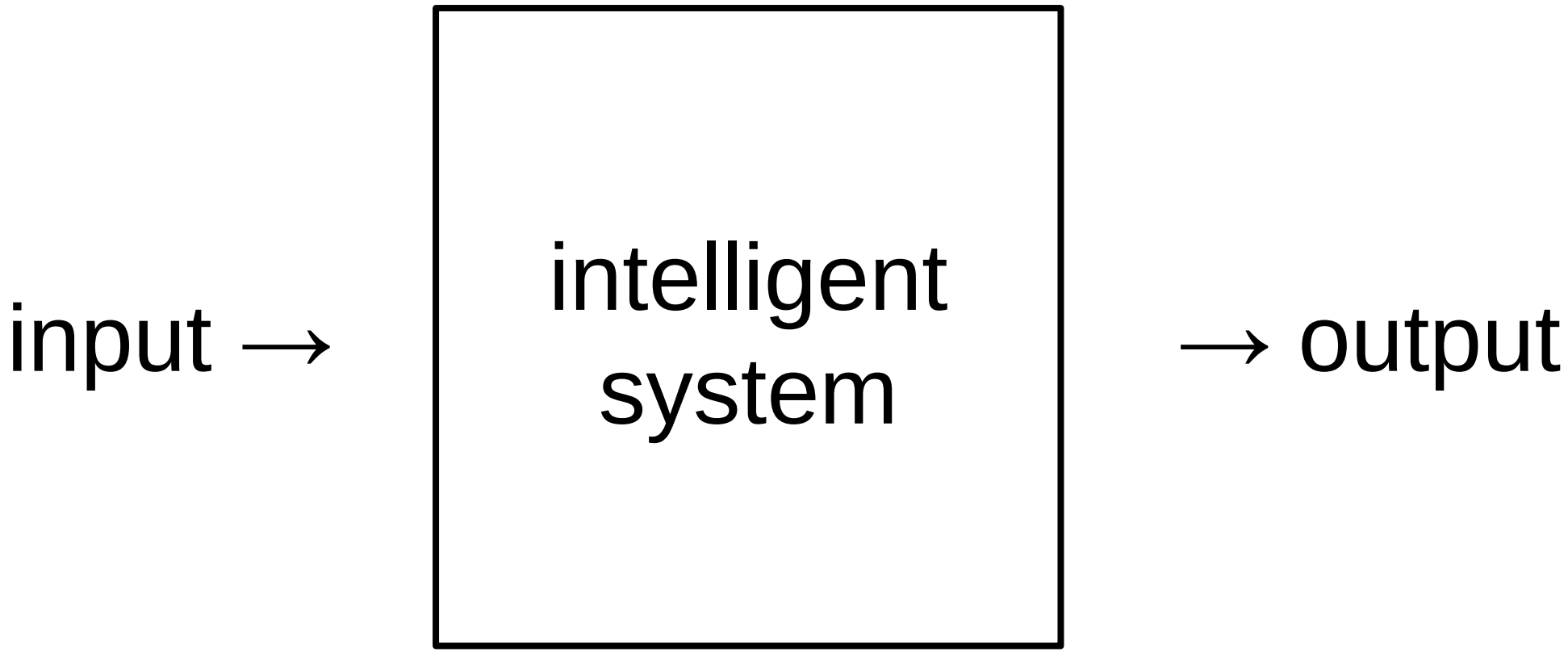

biological
intelligent system
cognitive
module 1
module 2
module 3
...

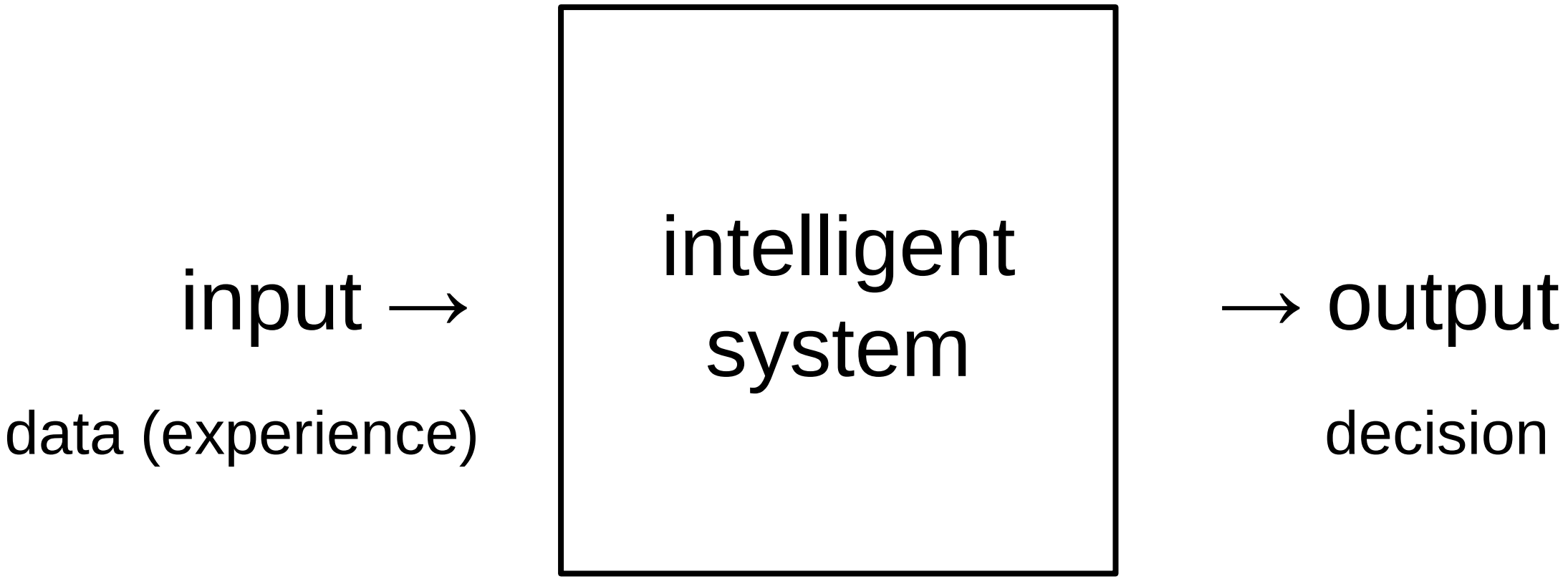

biological
intelligent system
cognitive
module 1
module 2
module 3
. . .

biological and cognitive processes


input →
child
→ output


input →
pain experience
child
→ output
removing the hand


input →
intelligent system
→ output


input →
data (experience)
intelligent system
→ output
decision

Lazada

Facebook

YouTube

Lazada

Facebook

YouTube

input →
lazada's
intelligent
system
→ output

input →

you, clicking/liking that **item**

lazada's intelligent system

→ output

input →

you, clicking/liking that **item**

lazada's intelligent system

→ output

recommend similar **item**

Lazada

Facebook

YouTube

input →
facebook's
intelligent
system
→ output

input →

you, reacting that **post**

→ output

input →

you, reacting that **post**

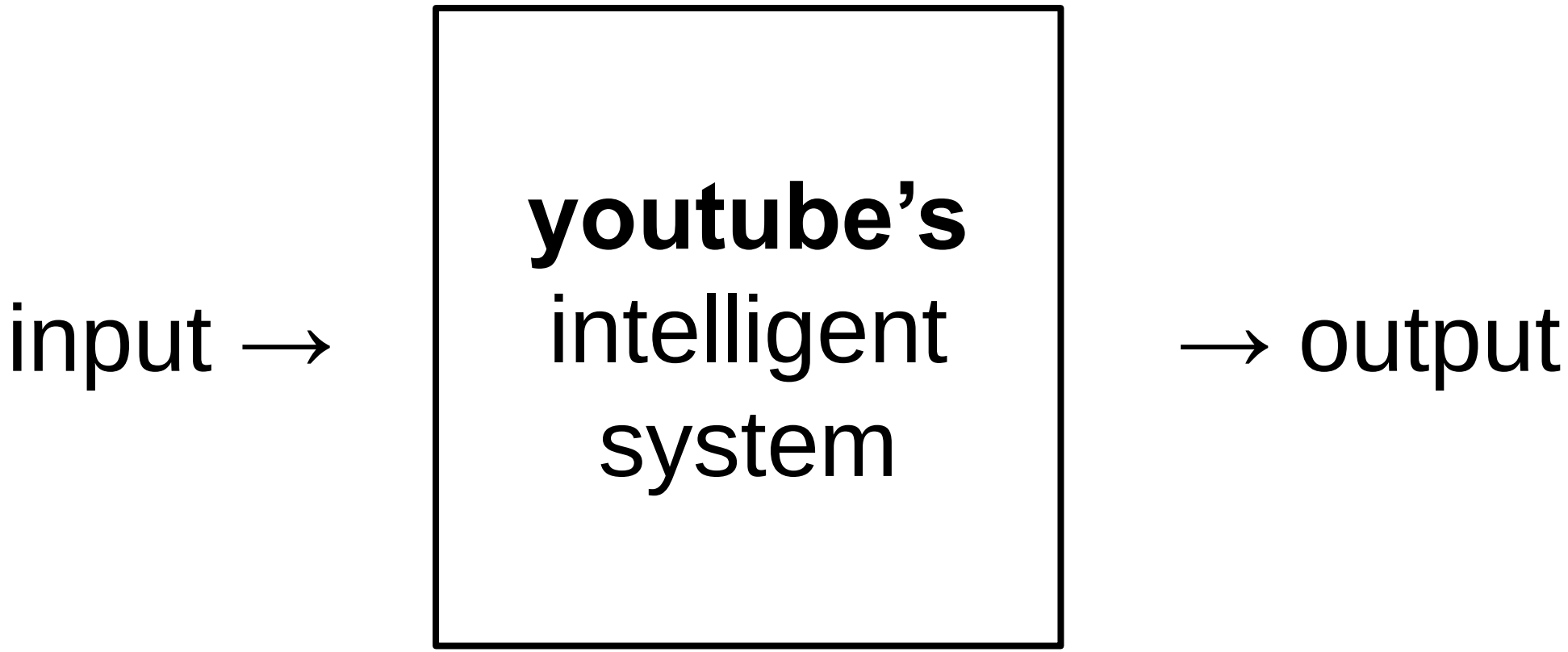
→ output

recommend similar **post**

Lazada

Facebook

YouTube


input →
youtube's
intelligent
system
→ output

input →

you, watching that **video**

→ output

input →

you, watching that **video**

→ output

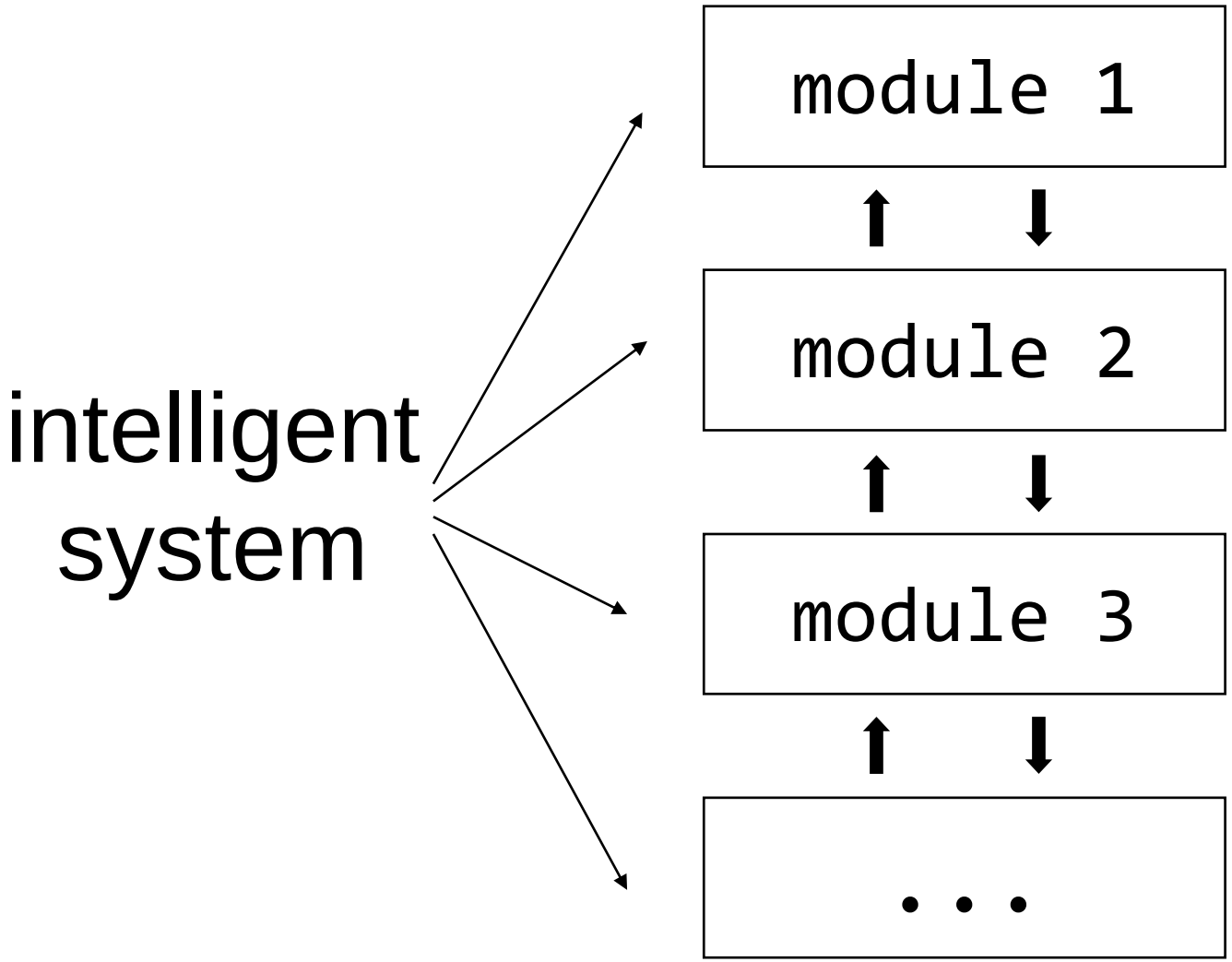
recommend similar **video**

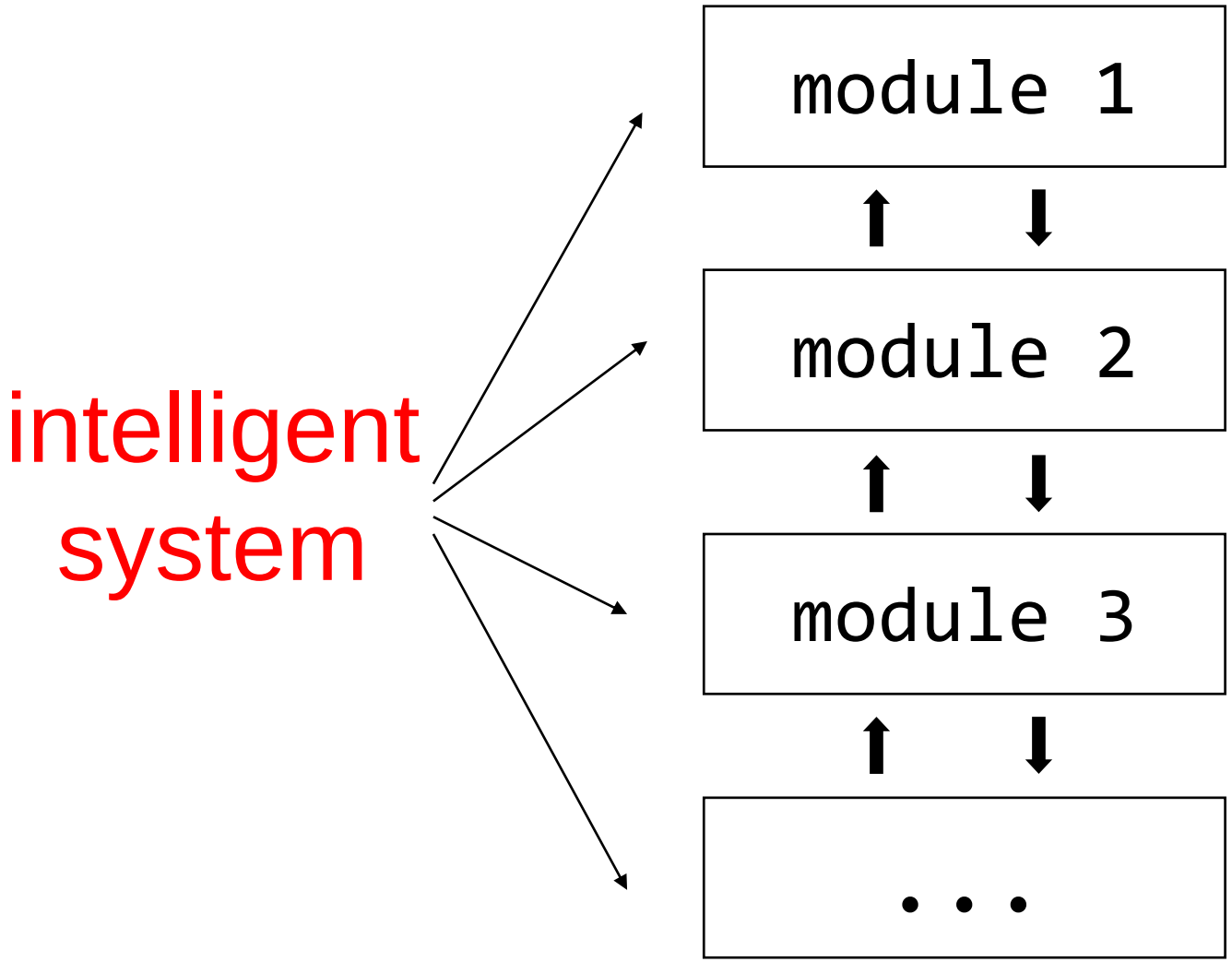
Lazada

Facebook

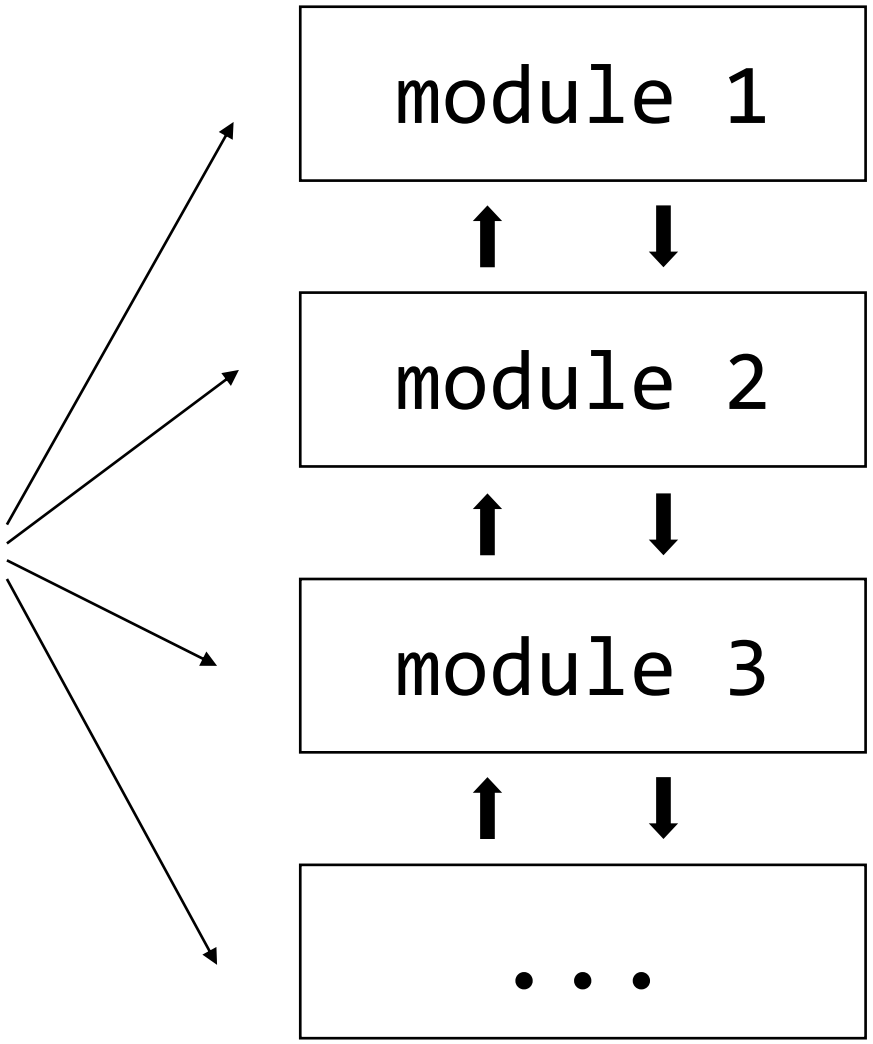
YouTube

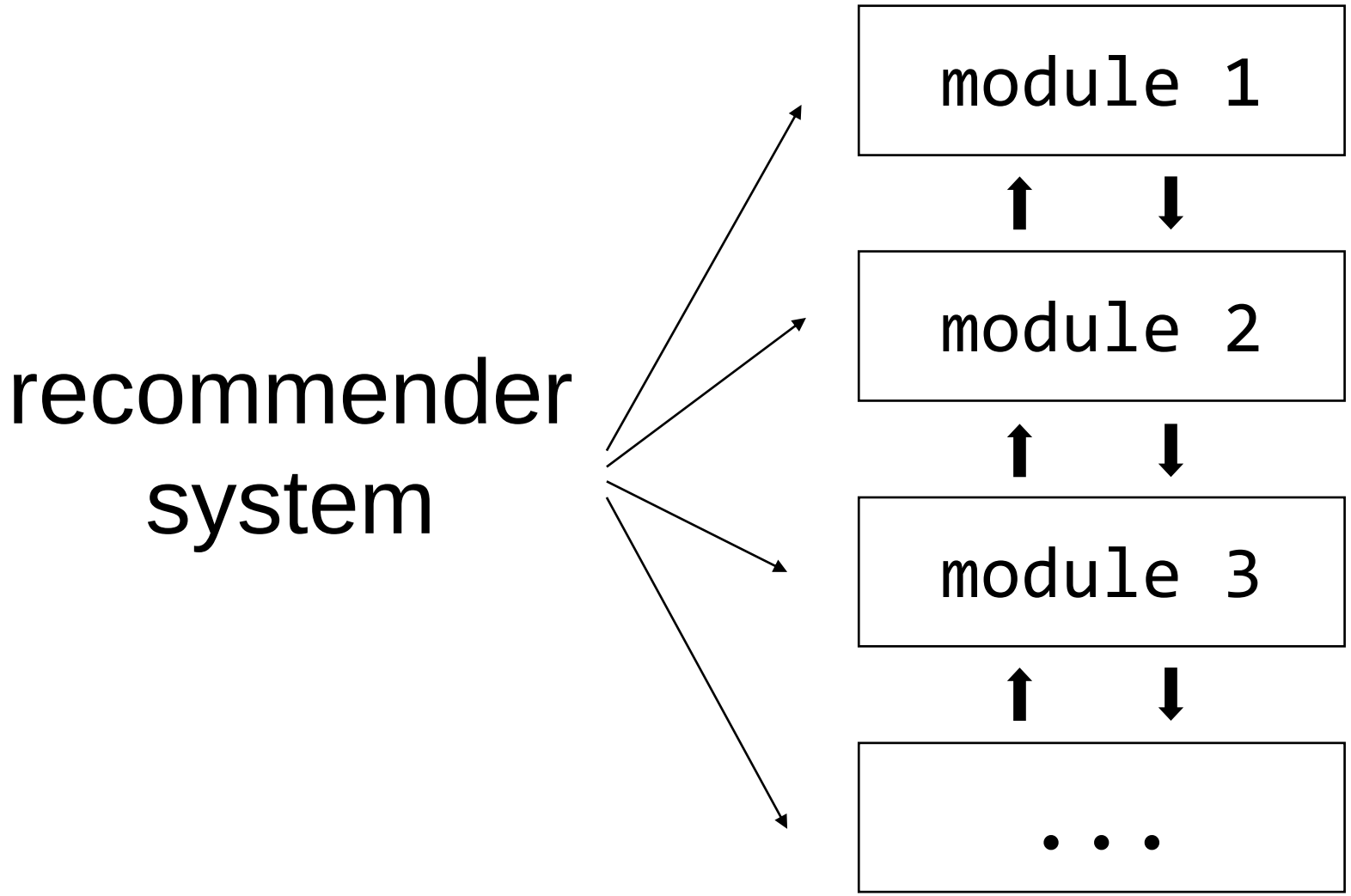
recommender
systems


intelligent system
module 1
module 2
module 3
. . .

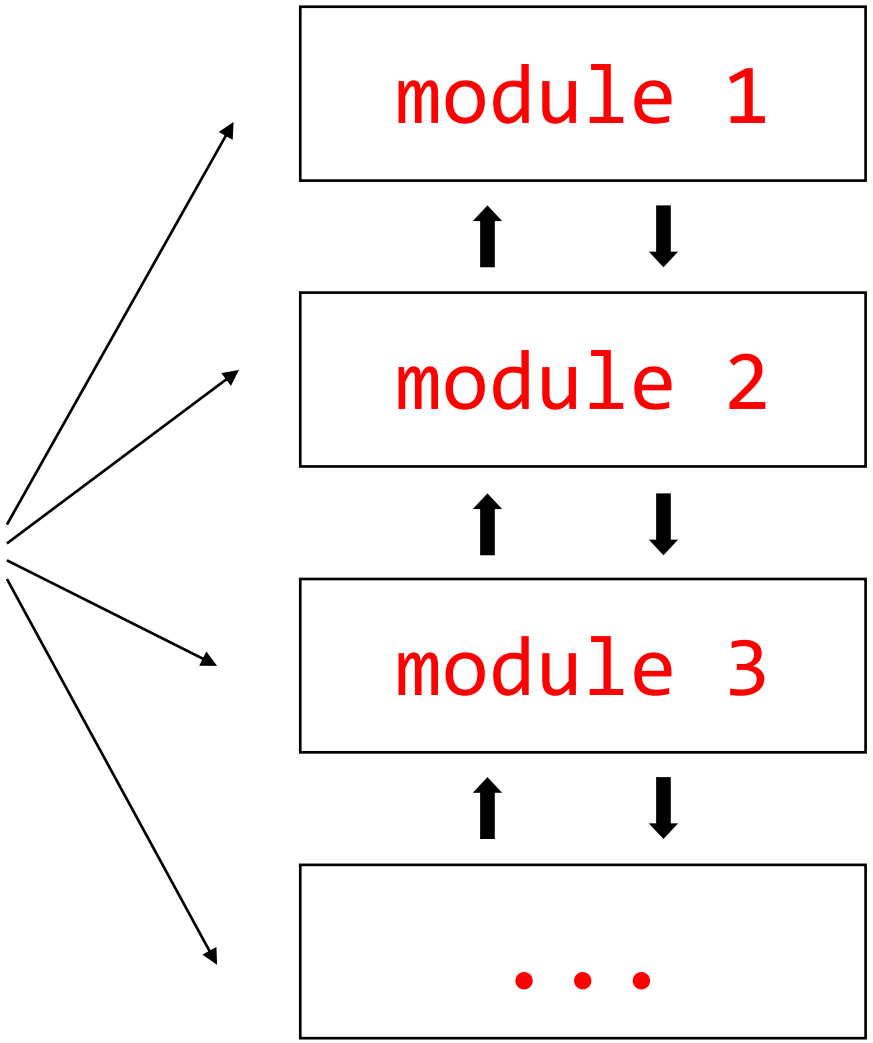

intelligent system
module 1
module 2
module 3
. . .

recommender system

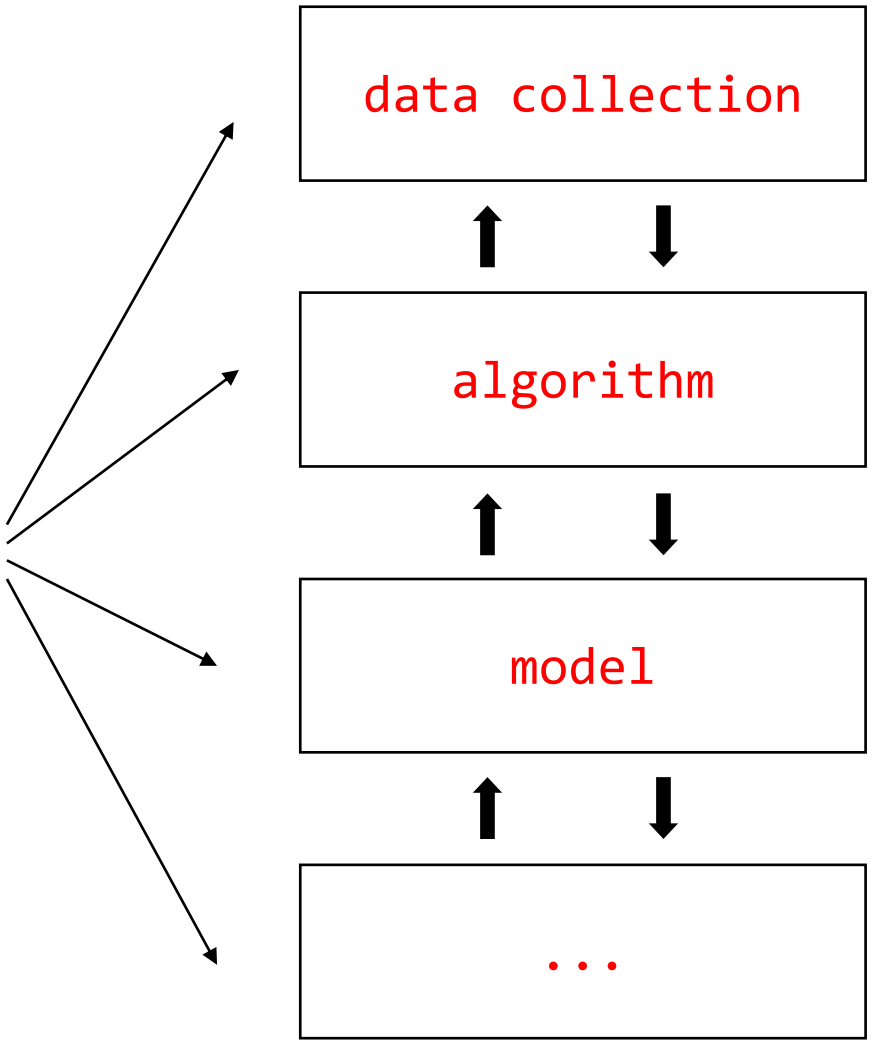



recommender system
module 1
module 2
module 3
. . .

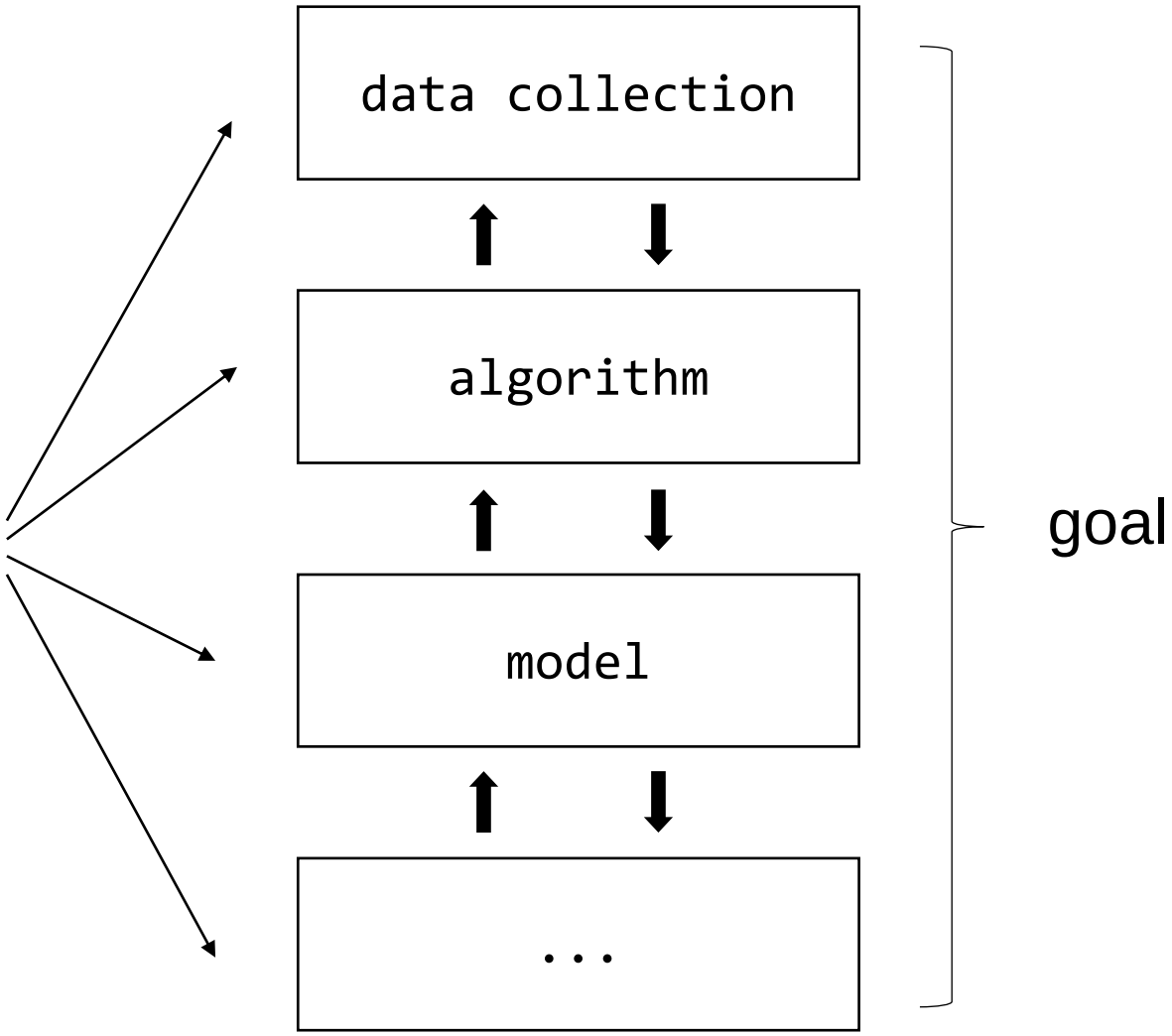
recommender system



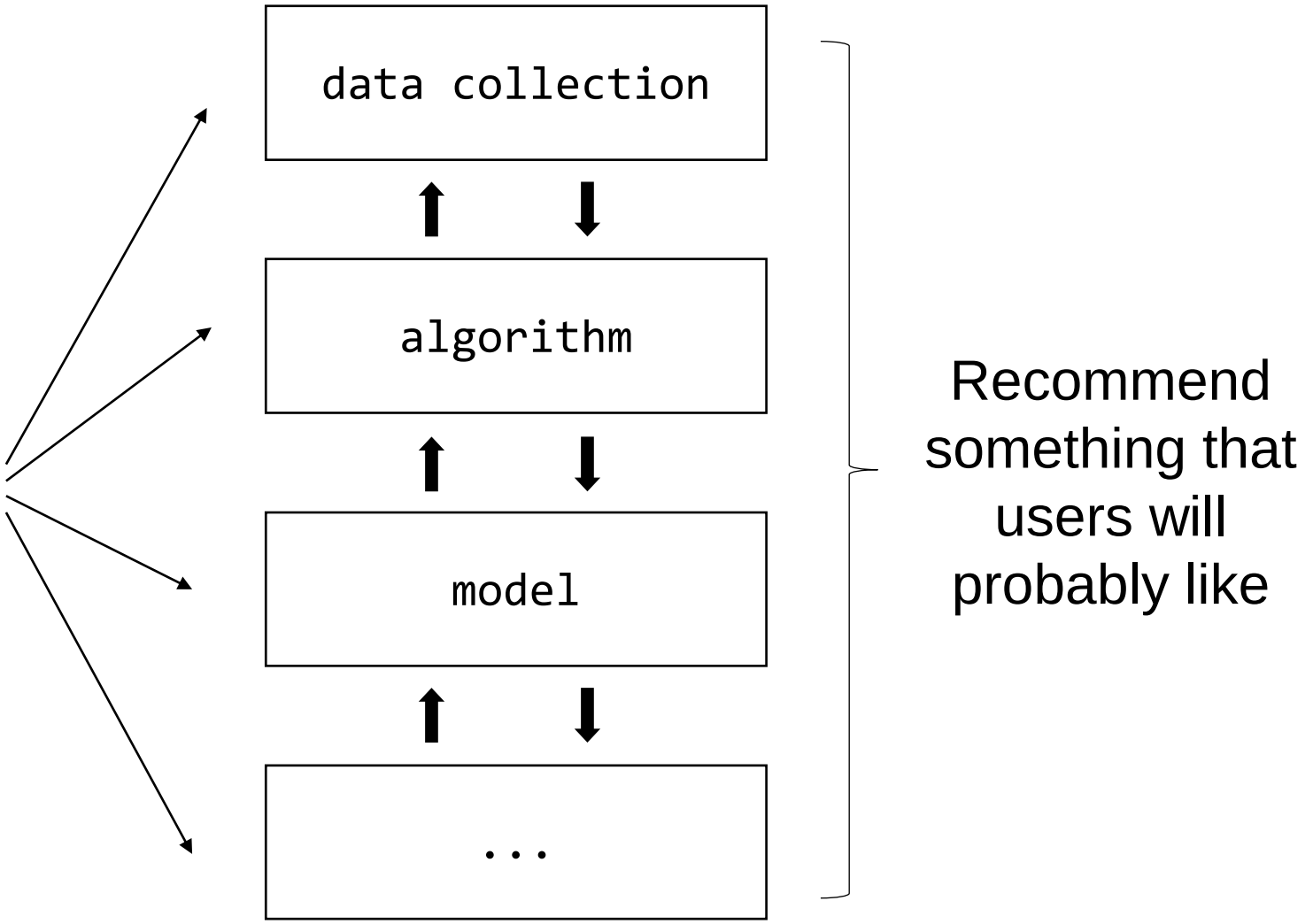
recommender system



recommender system



recommender system



Recommend something that users will probably like

challenges

uncertainty

dynamic world

time-consuming computation

mapping

uncertainty

dynamic world

time-consuming computation

mapping

reality
actual

uncertainty

dynamic world

time-consuming computation

mapping

uncertainty

dynamic world

time-consuming computation

mapping

uncertainty

dynamic world

time-consuming computation

mapping

Questions?

Slide/lectures and modules/notes will be uploaded here:

https://github.com/louisfacun/teaching/tree/master/cspe102/2022