2018
THE DESIGN OF EVERYDAY
APIS
Design APIs like everyday things
ARNAUD LAURET
@APIHANDYMAN

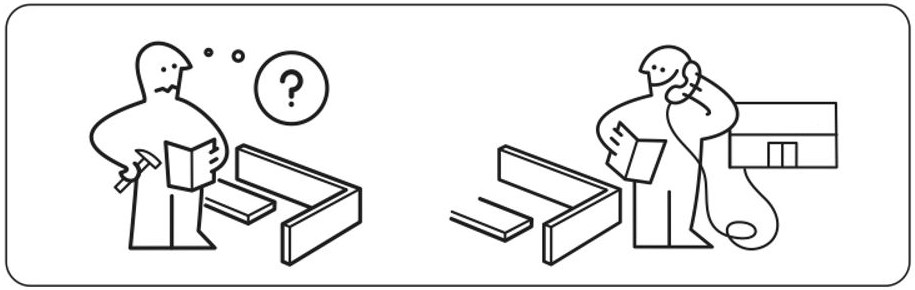
Blog
apihandyman.io

Arnaud Lauret
@apihandyman

Styleguides collection
apistylebook.com

Book
The Design Of Everyday APIs

ÄPI DEJSIGN



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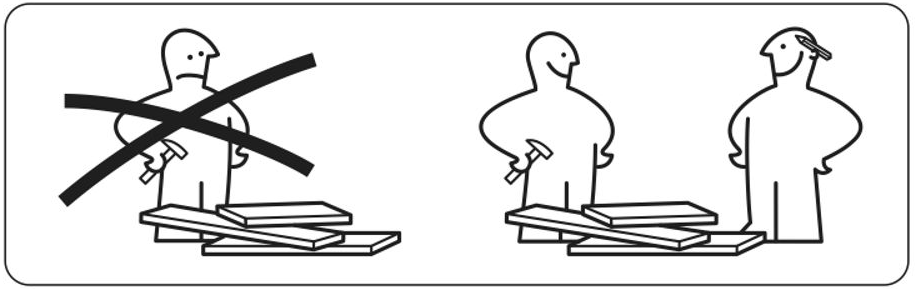
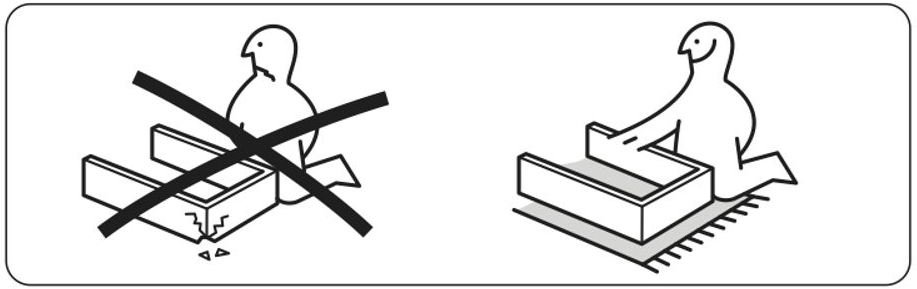


2.USABILITY

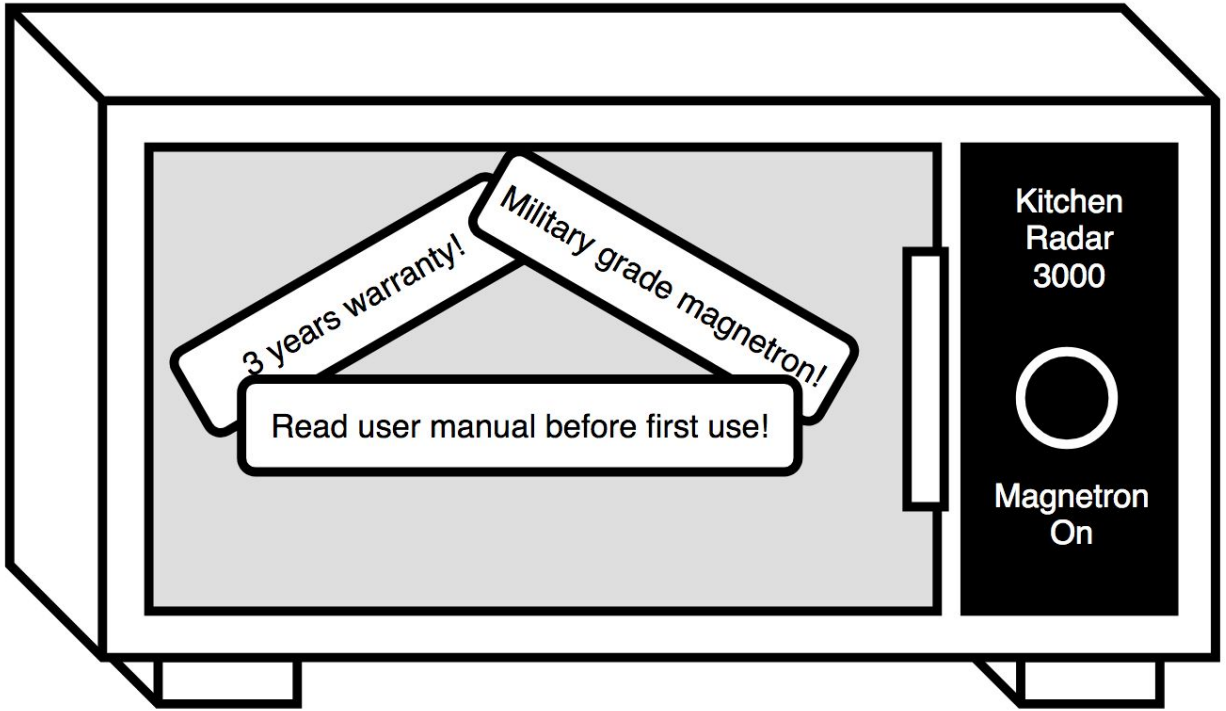


3.CONSTRAINTS

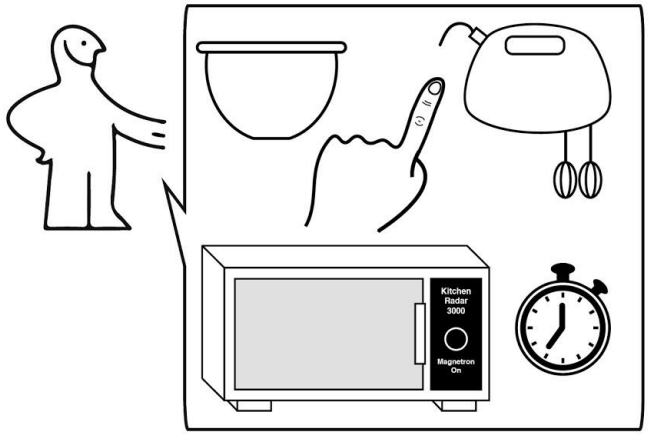
1.

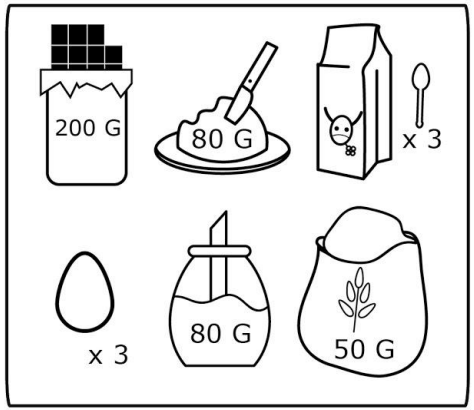
WHAT IS AN API'S PURPOSE?

KITCHEN RADAR 3000



CHÖKLATE KÄKE





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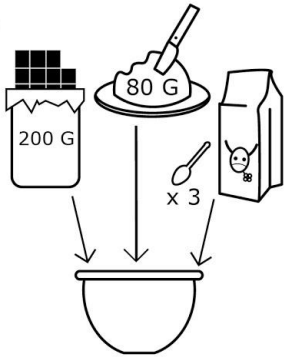

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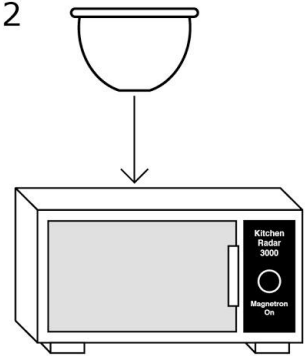

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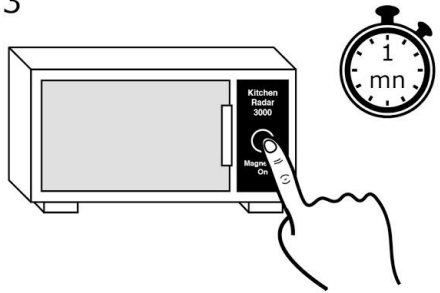

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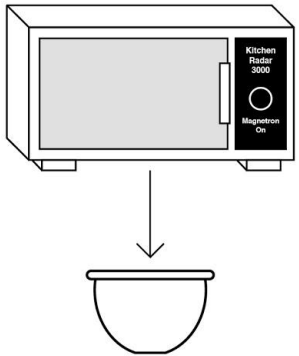

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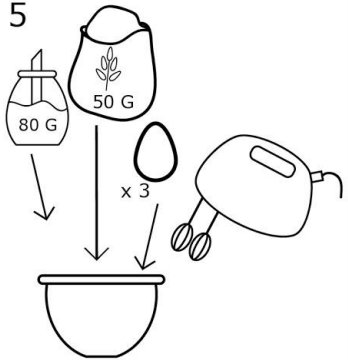

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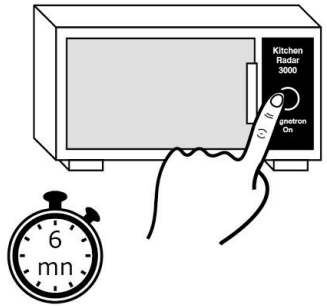
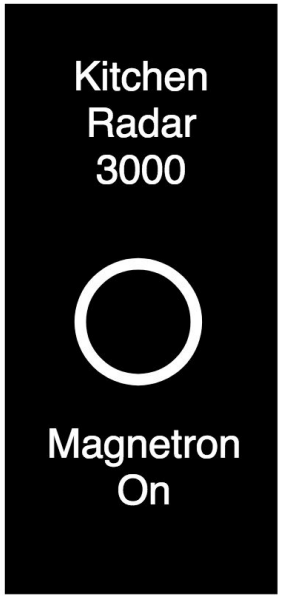
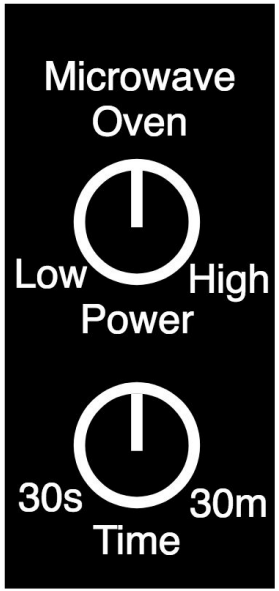


DEFRÖST

Heating power Cheat sheet	
Full	Hold
Medium	7s
Low	11s
Defrost	13s

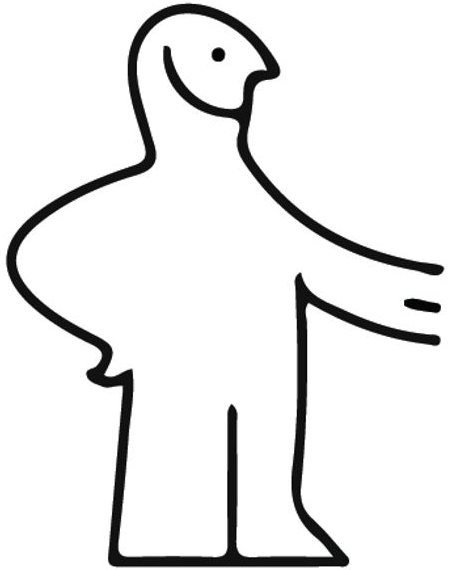
WRÖNG PURPOSE





TERRIBLE INTERFACE

API



INTERFACE FOR PEOPLE

WRÖNG PURPOSE

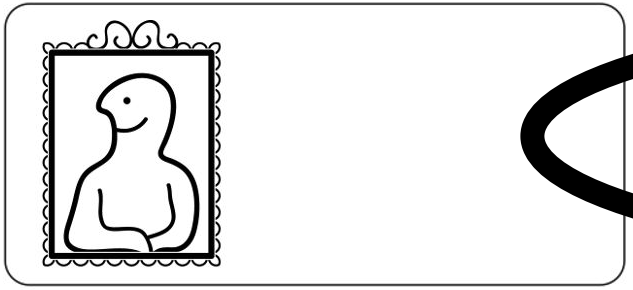
```
if <power> is high
  turn magnetron on
  wait for <duration>
  turn magnetron off
else
  if <power> is medium
    cycle = 7s
  else if <power> is low
    cycle = 11s
  else if <power> is thaw
    cycle = 13s
  end if
  for <duration>
    turn magnetron on
    wait for <cycle>
    turn magnetron off
    wait for <cycle>
  end for
end if
```

```
heat food at <power> for <duration>
```

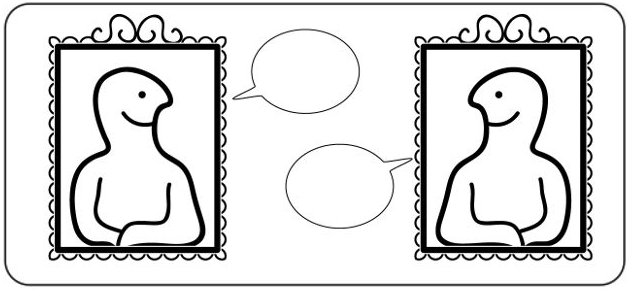
TERRIBLE API

2.
HOW TO
DESIGN
USABLE APIS?

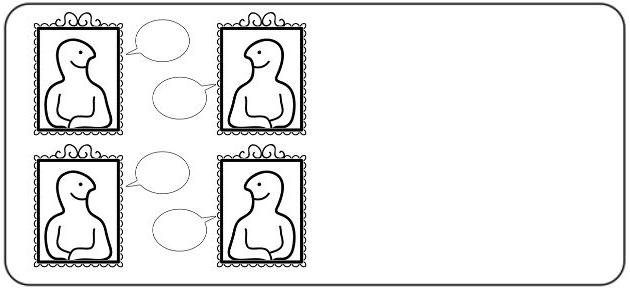
STRAIGHTFORWARD ÄPI



1.REPRESENTATIONS

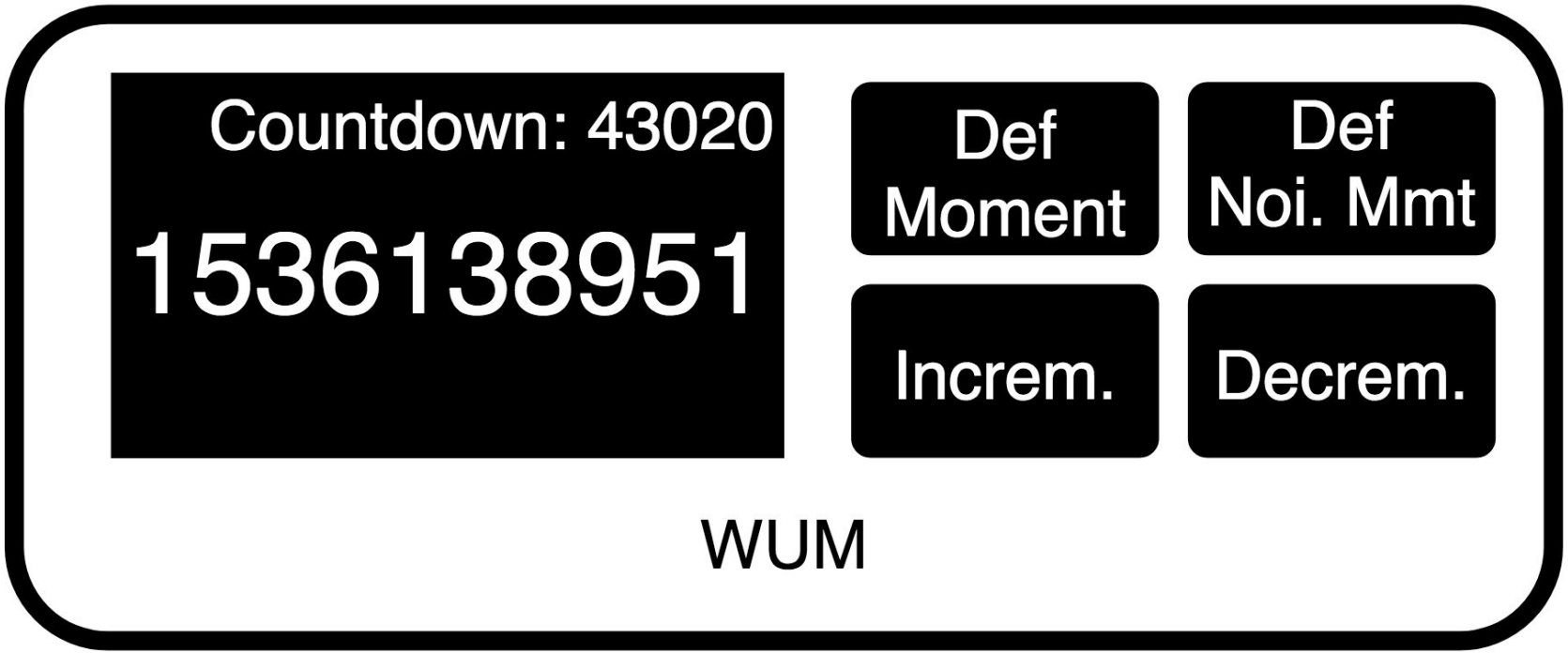


2.INTERACTIONS

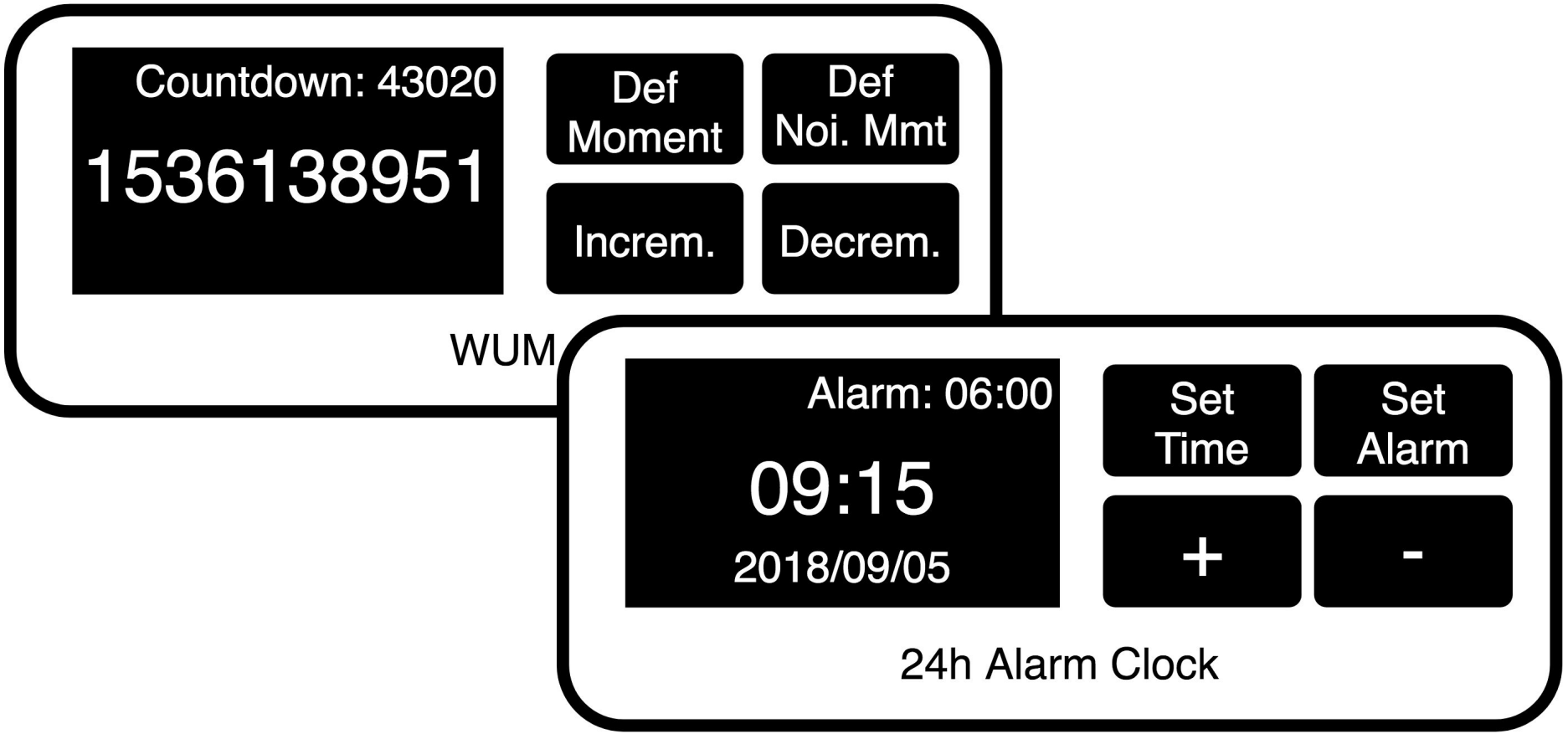


3.FLOWS

REPRESENTATIÖNS



REPRESENTATIÖNS



REPRESENTATIÖNS

GET ~~/wdm~~

GET /alarm-clock

NAMES

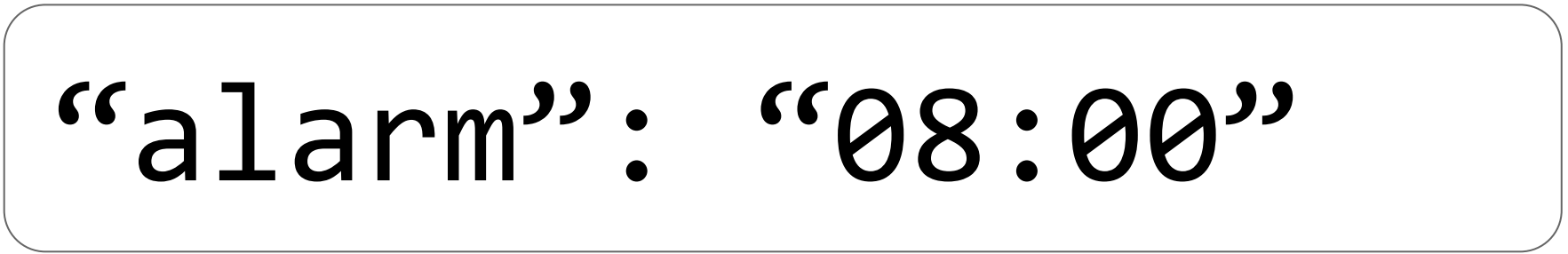
REPRESENTATIÖNS

1536138951

2018-05-09T09:15:51

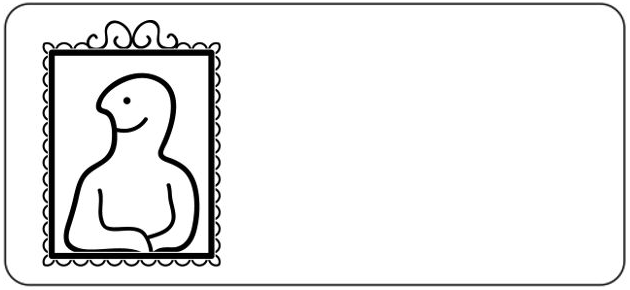
DATA FORMATS

REPRESENTATIÖNS

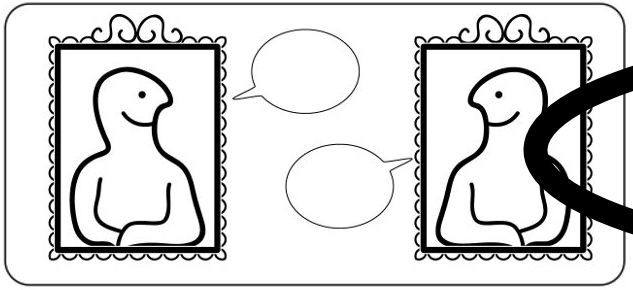


DATA

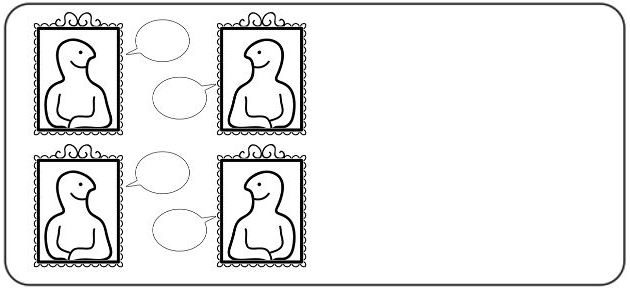
STRAIGHTFORWARD ÄPI



1.REPRESENTATIONS

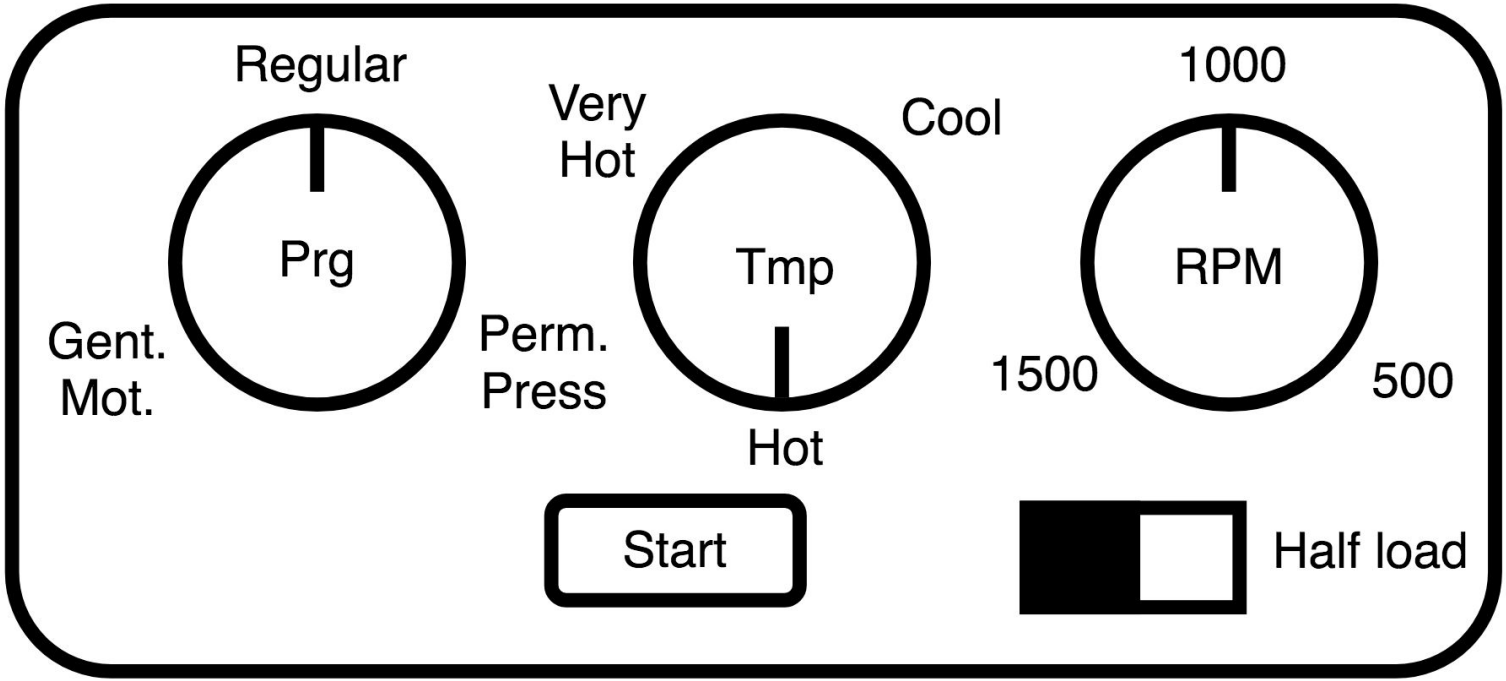


2.INTERACTIONS



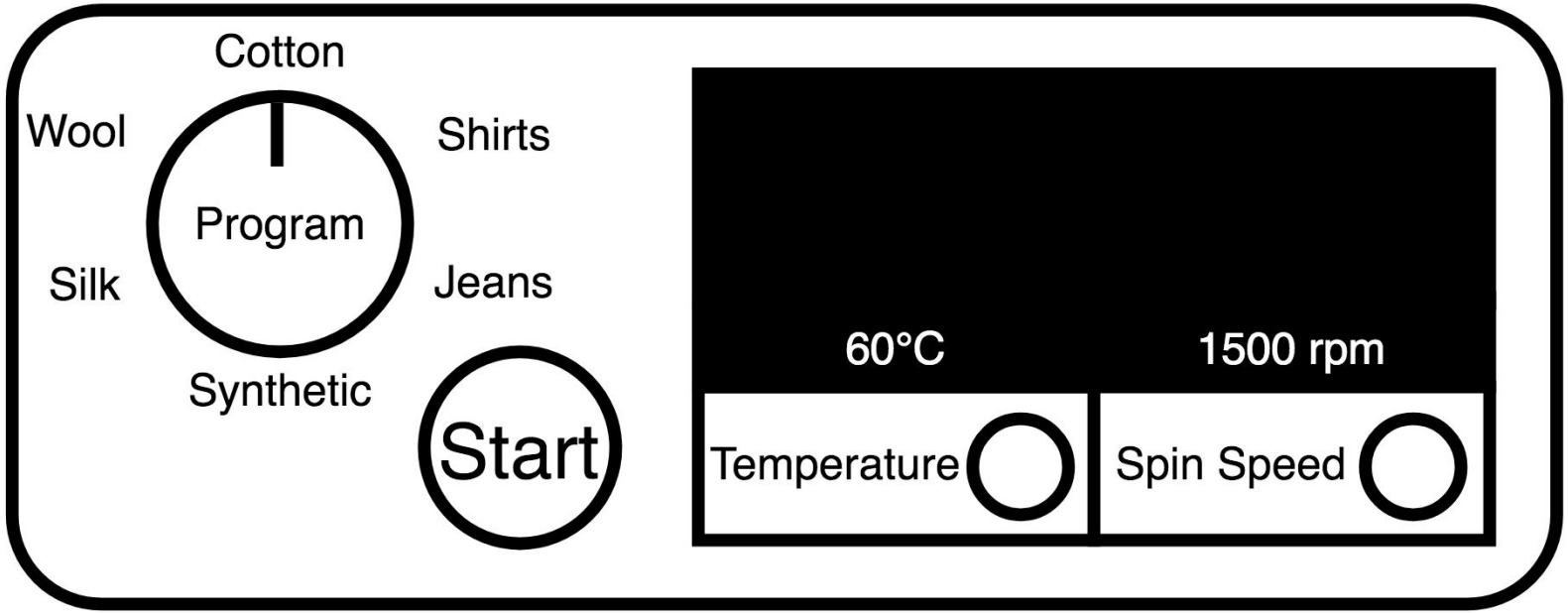
3.FLOWS

INTERACTIÖNS

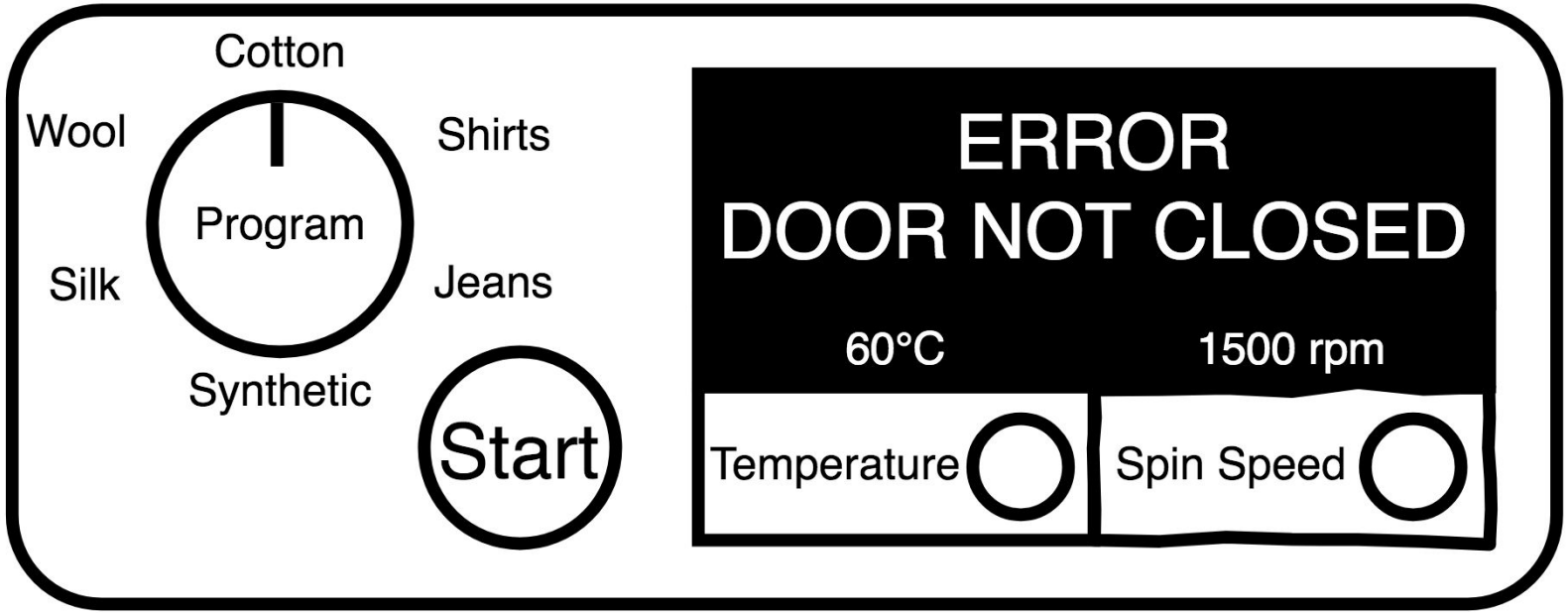


INTERACTIÖNS

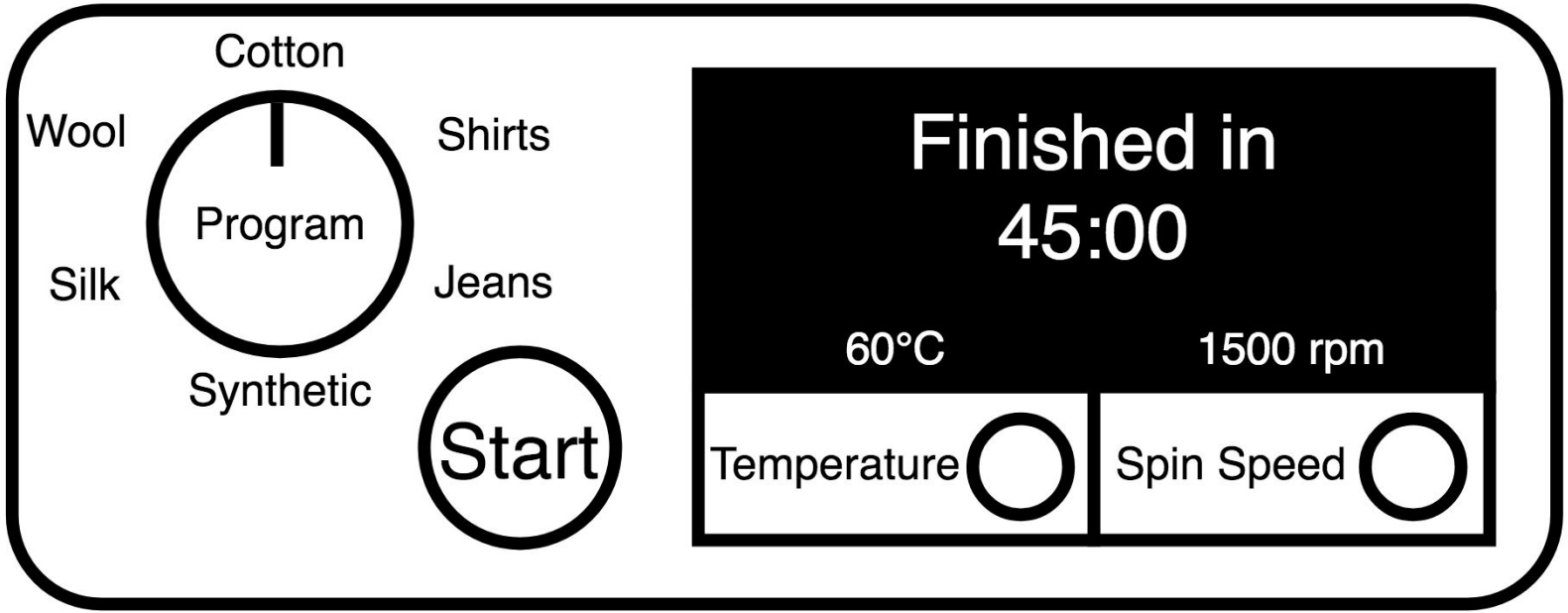
INTERACTIÖNS



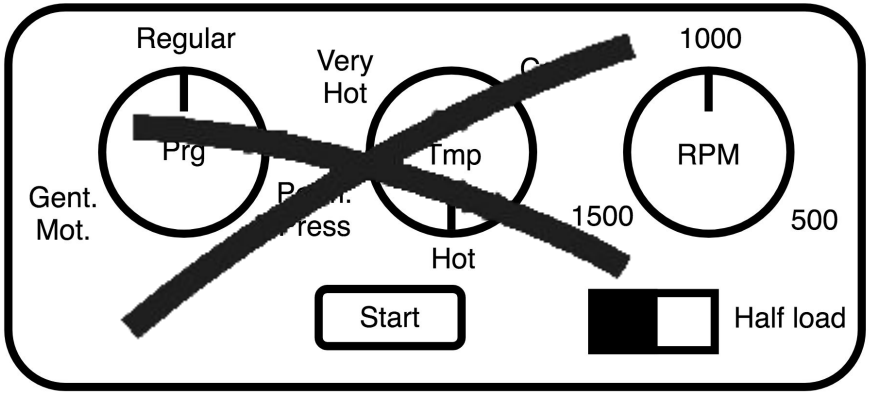
INTERACTIÖNS

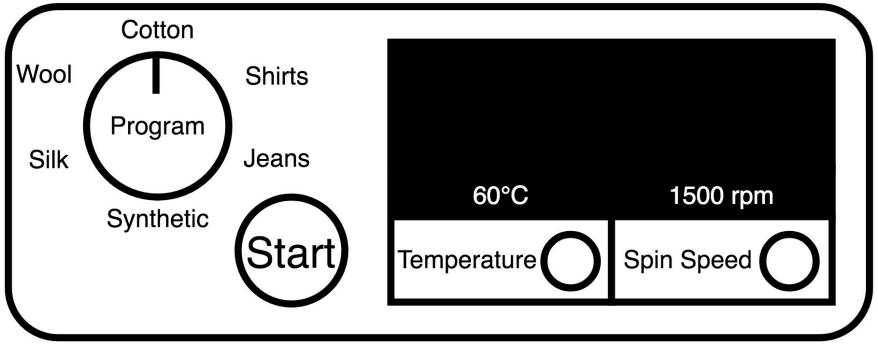


INTERACTIÖNS



INTERACTIÖNS





INTERACTIÖNS

```
{“prg”:”regular”,
 “tmp”:”cool”,
 “rpm”: 1000
 “hl”: true}
```

```
{“program”:”cotton”}
```

INPUTS

INTERACTIÖNS

~~400 BAD REQUEST~~

```
400 BAD REQUEST
{“message”:”door not closed”}
```

ERROR FEEDBACK

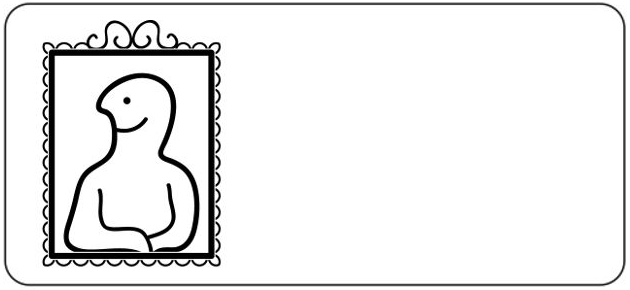
INTERACTIÖNS

~~200 OK~~

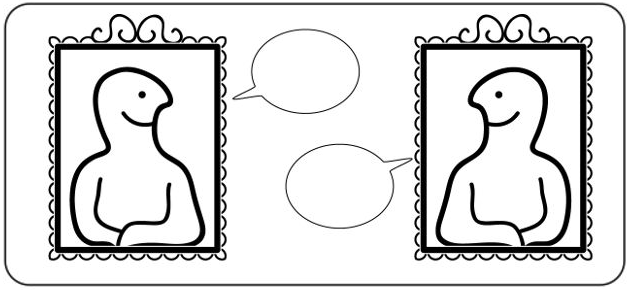
202 ACCEPTED
{“finishedIn”:”00:45:00”}

SUCCESS FEEDBACK

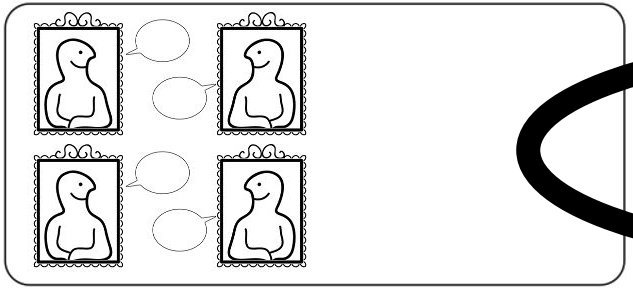
STRAIGHTFORWARD ÄPI



1.REPRESENTATIONS



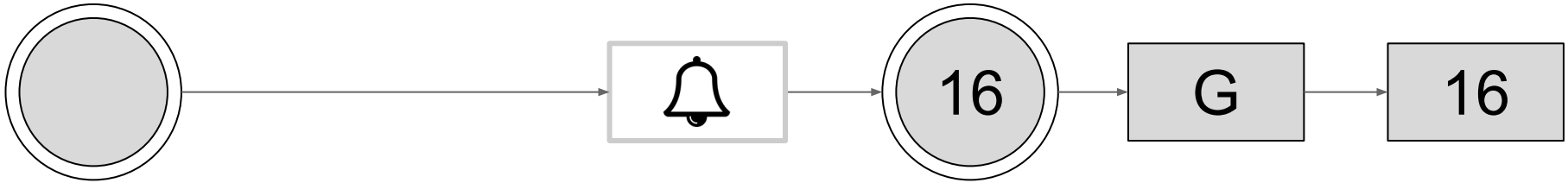
2.INTERACTIONS



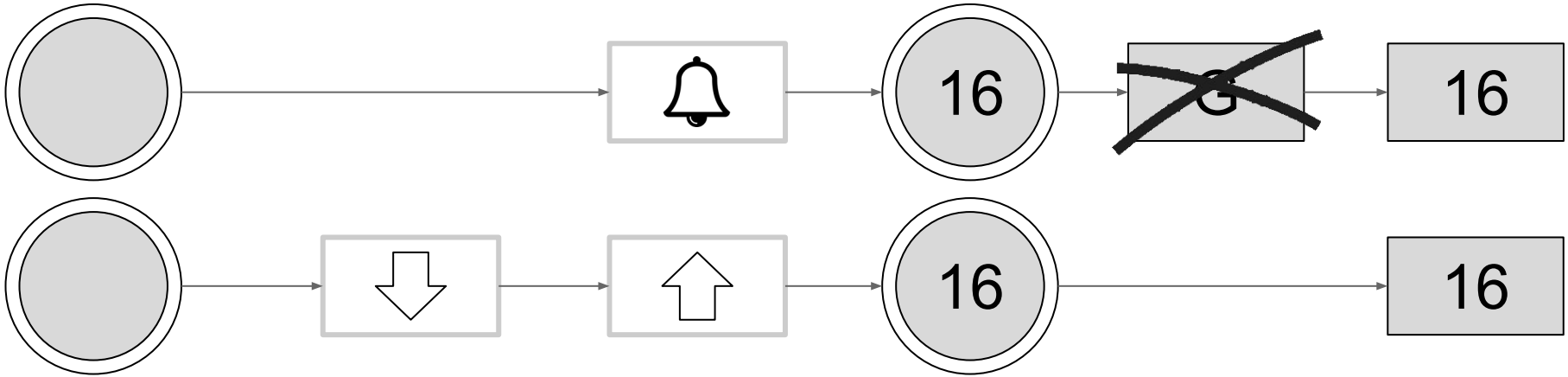
3.FLOWS

FLOWS

FLOWS



FLOWS



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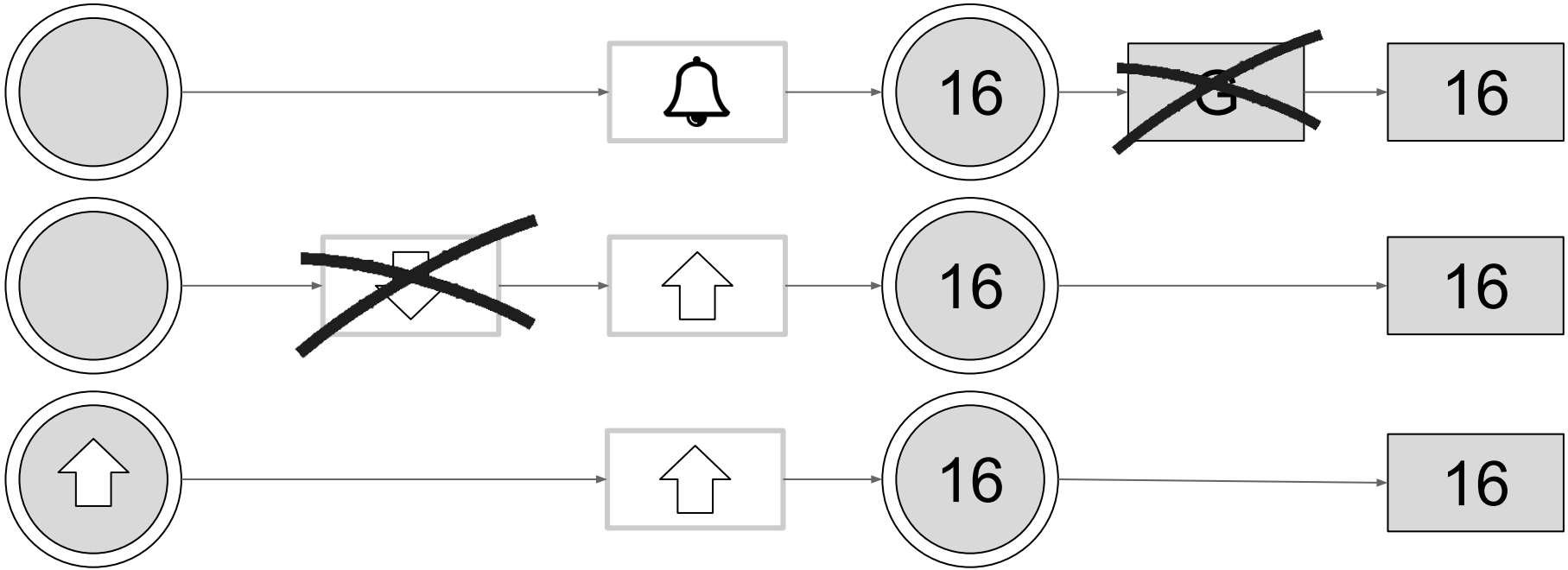
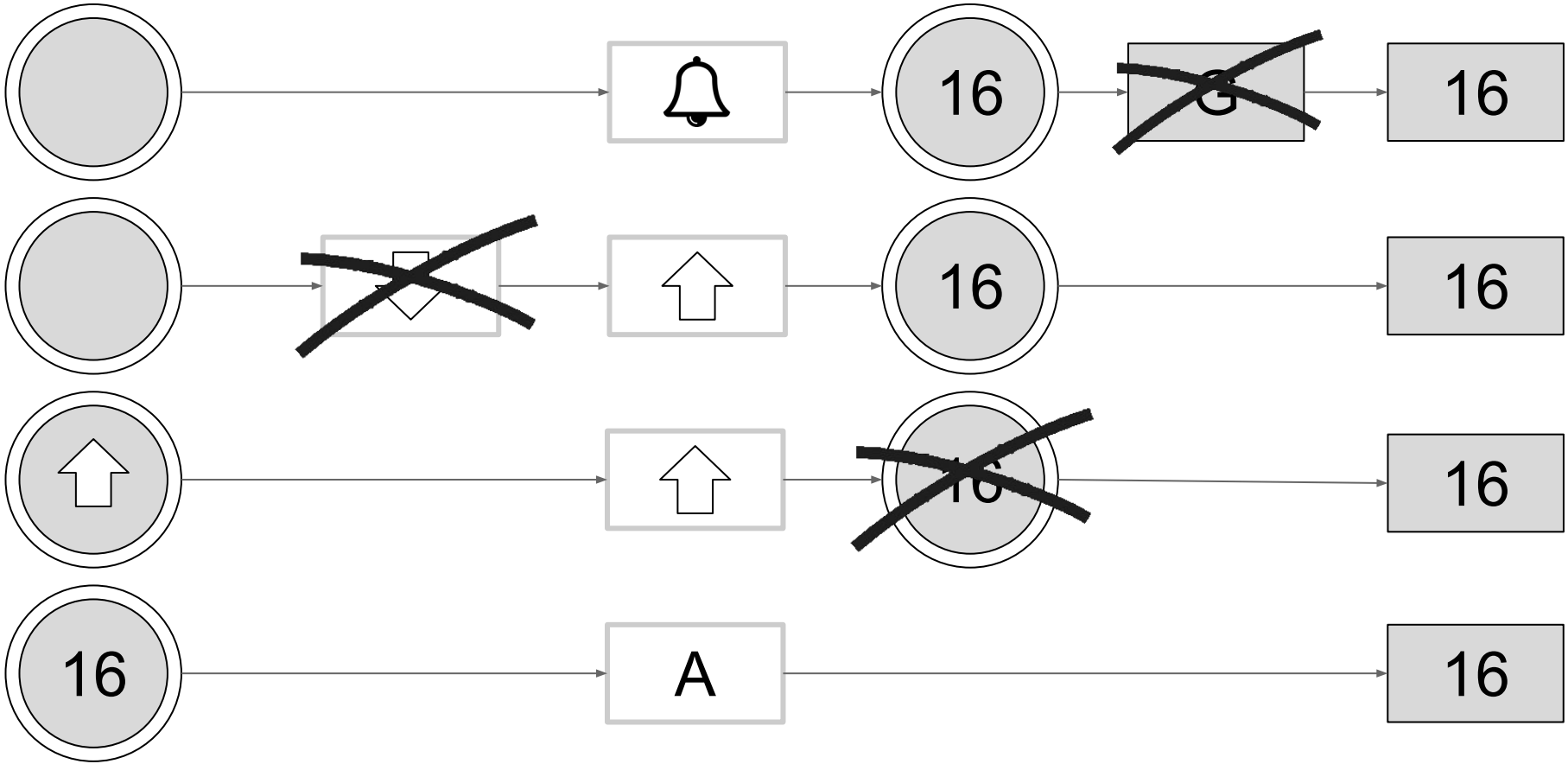


FLOWS



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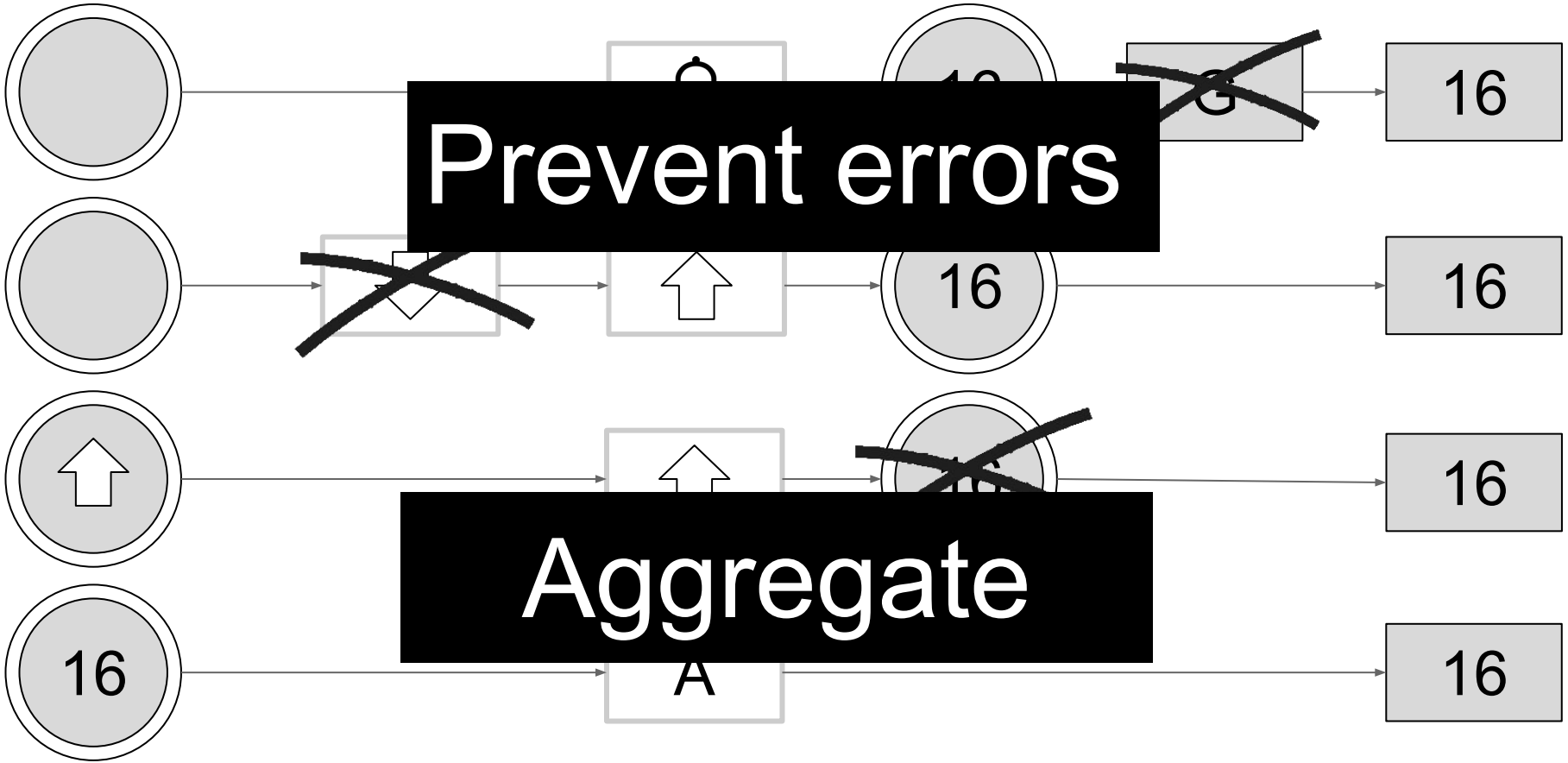
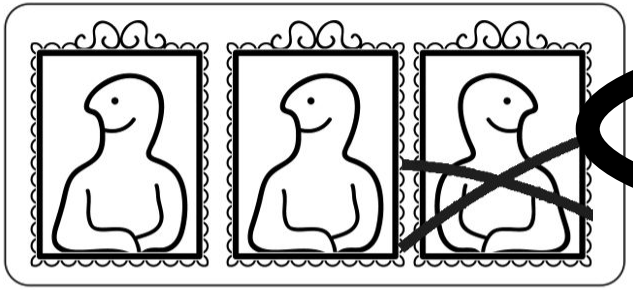
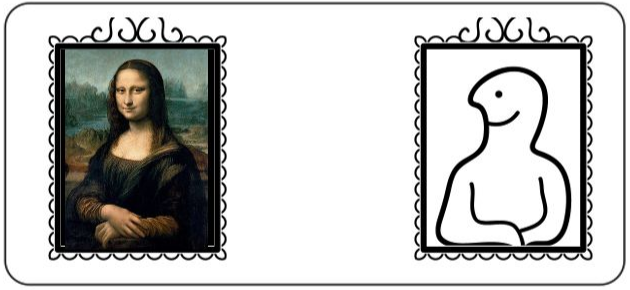


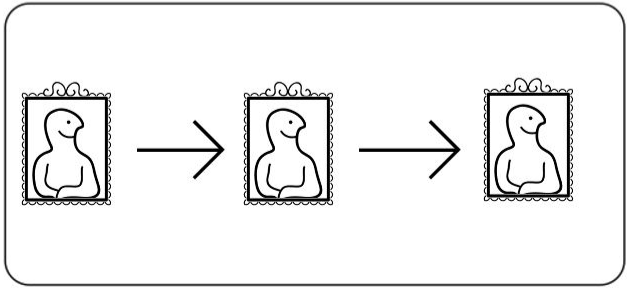
PREDICTABLE ÄPI



1.CONSISTENT

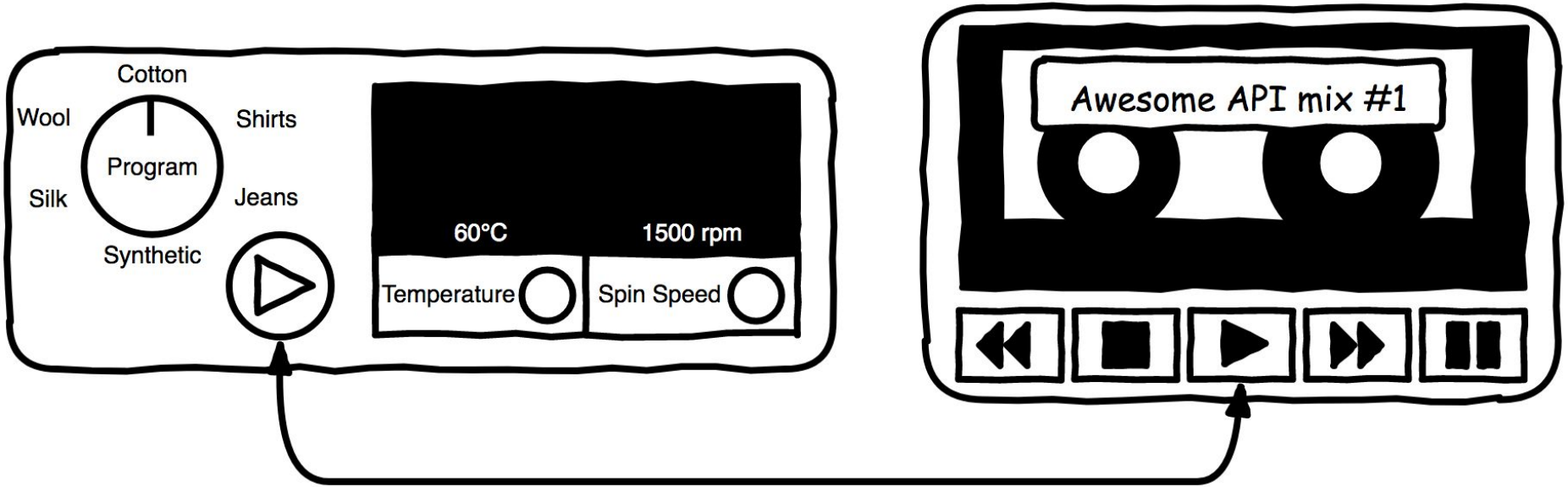


2.ADAPTABLE



3.DISCOVERABLE

CONSISTENT DESIGN



CONSISTENT DESIGN

SELF-CONSISTENT

CONSISTENT DESIGN

SELF-CONSISTENT

CONSISTENT ACROSS ORGANIZATION

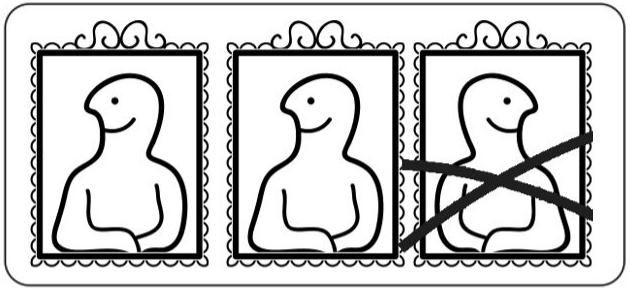
CONSISTENT DESIGN

SELF-CONSISTENT

CONSISTENT ACROSS ORGANIZATION

COMMON PRACTICES & STANDARDS

PREDICTABLE ÄPI



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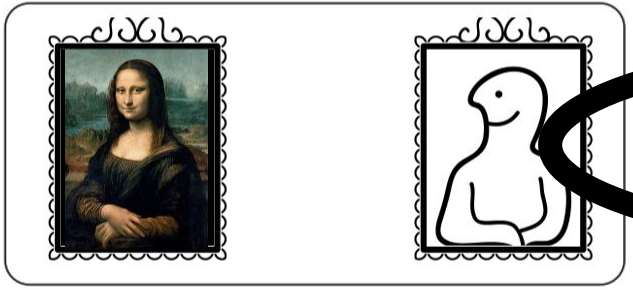
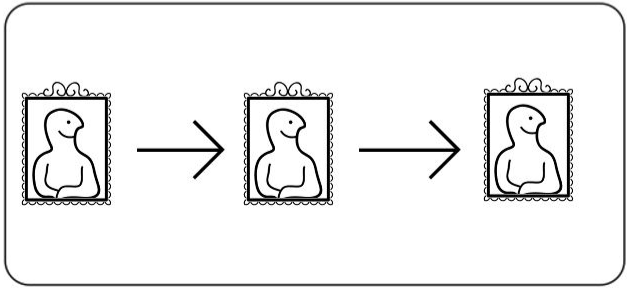


2.ADAPTABLE



3.DISCOVERABLE

ADAPTABLE DESIGN

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

CONTENT NEGOTIATION

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

CONTENT NEGOCIATION

INTERNATIONALIZATION

ADAPTABLE DESIGN

PAGINATION, SORT, FILTER

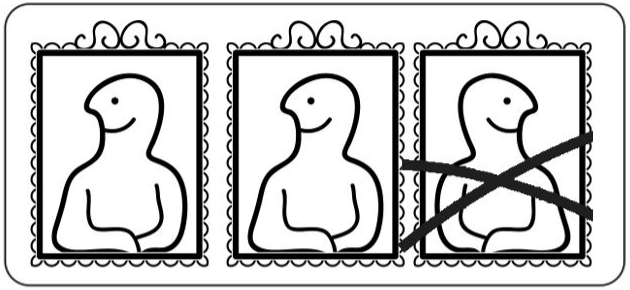
CONTENT NEGOCIATION

INTERNATIONALIZATION

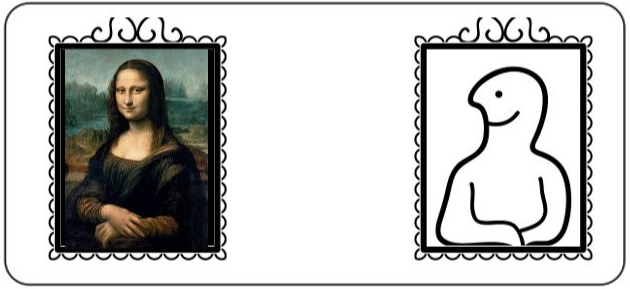
DATA SELECTION

TOO MUCH ADAPTABLE

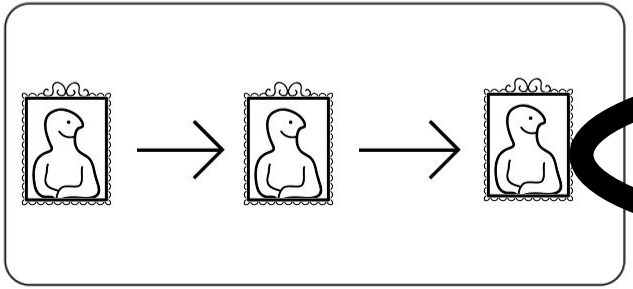
PREDICTABLE ÄPI



1.CONSISTENT

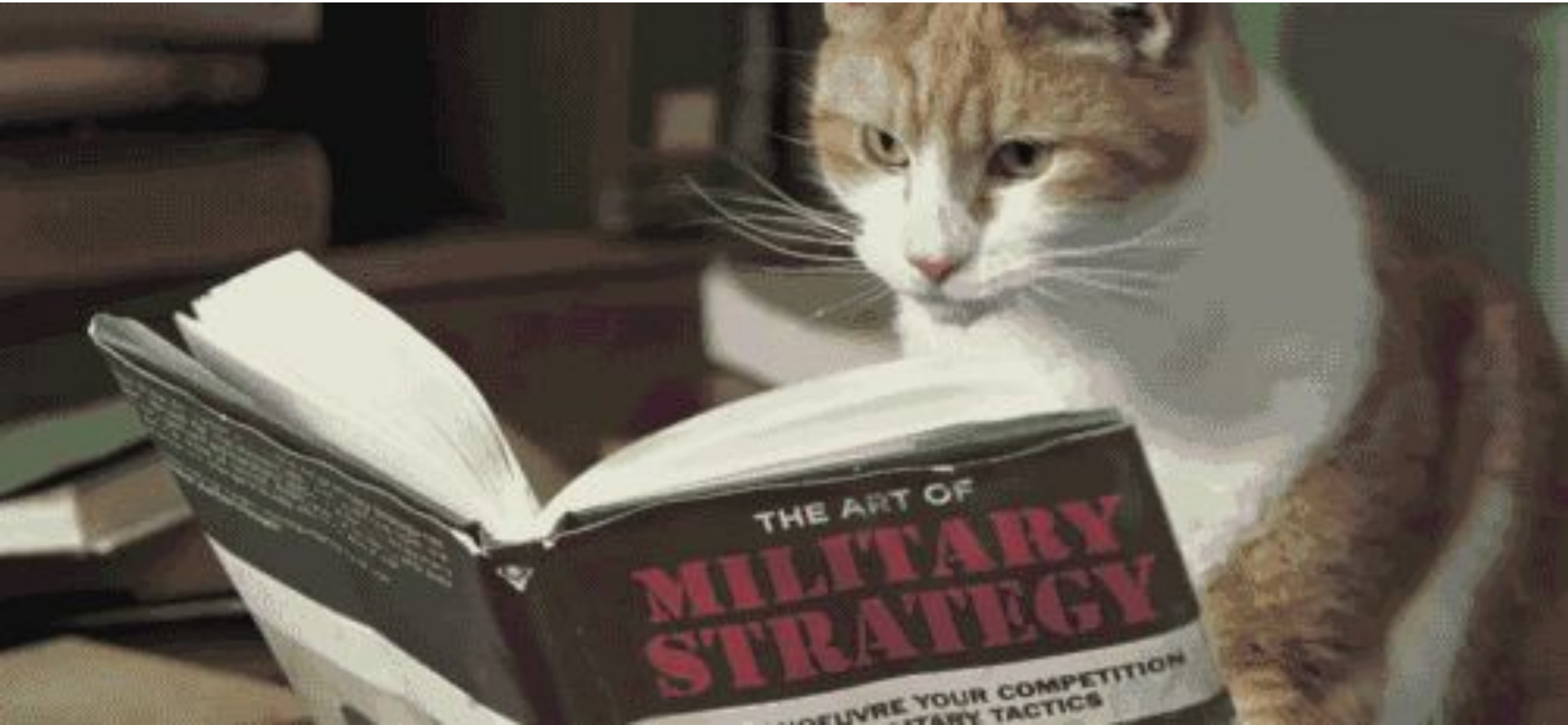


2.ADAPTABLE



3.DISCOVERABLE

DISCOVERABLE DESIGN



DISCOVERABLE DESIGN

```
“currentPage”: 2,
“lastPage”: 10
```

METADATA

DISCOVERABLE DESIGN

```
“_links”: {
  “self”: “/books/123”,
  “authors”: “/books/123/authors”
}
```

HYPERMEDIA

DISCOVERABLE DESIGN

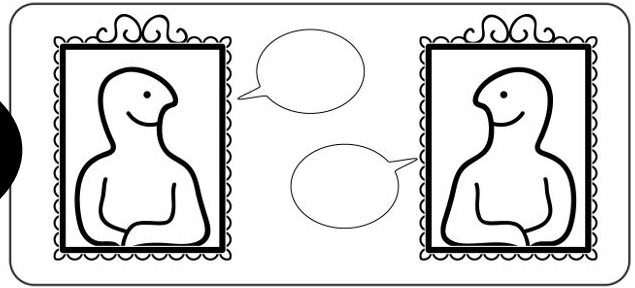
```
OPTIONS /BOOKS

200 OK
Allow: GET, POST
```

PROTOCOL

3.
CONSTRAINED
API DESIGN

CONSTRAINED API DESIGN

1.USER



2.PROVIDER

USERS CONTEXT

USERS CONTEXT

LATENCY/GRANULARITY

USERS CONTEXT

LATENCY/GRANULARITY

FREQUENCY/WEBHOOKS,STREAMING

USERS CONTEXT

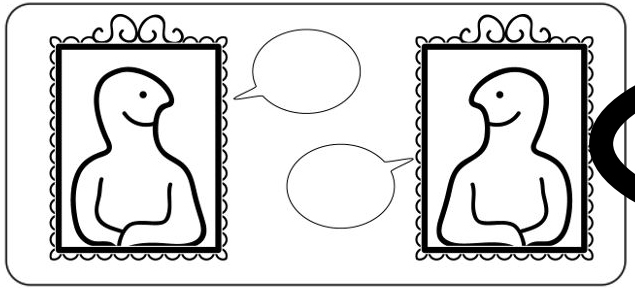
LATENCY/GRANULARITY

FREQUENCY/WEBHOOKS,STREAMING

VOLUME/BATCH,BULK

CONSTRAINED API DESIGN

1.USER



2.PROVIDER

PROVIDER'S CONTEXT

PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PERFORMANCE/ASYNCHRONOUS

PROVIDER'S CONTEXT

SCALABILITY/RATE LIMITING

PERFORMANCE/ASYNCHRONOUS

NOT 24-7/NO GO

PROVIDER'S CONTEXT

TAKEAWAYS

2018
THE DESIGN OF EVERYDAY
APIS
EMPATHY
CONTEXT
ARNAUD LAURET
@APIHANDYMAN