Making Apps More Resilient By Applying Darwinism

Masking Technology
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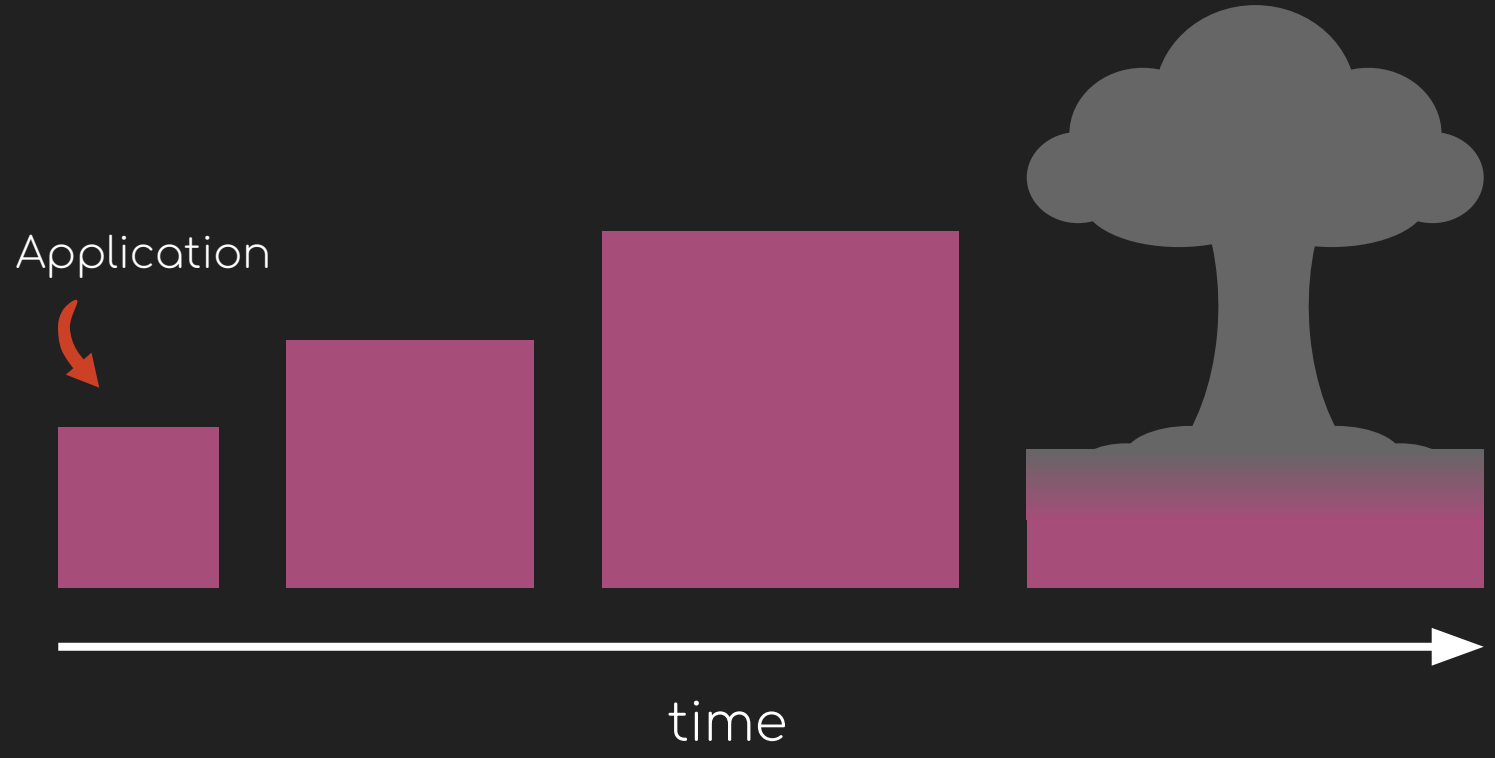
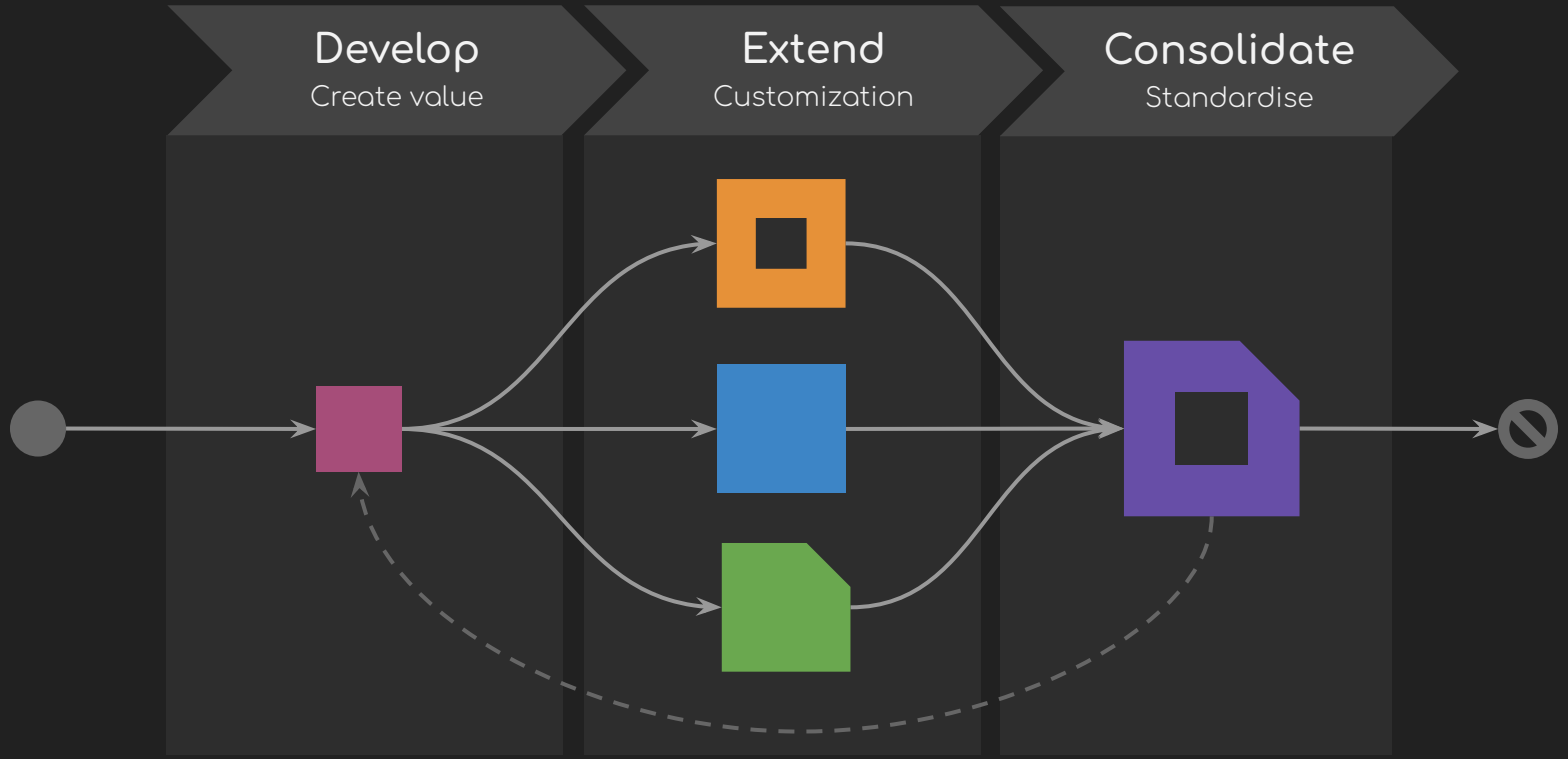
linkedin.com/company/maskingtechnology

Masking Technology

Evolution in software development

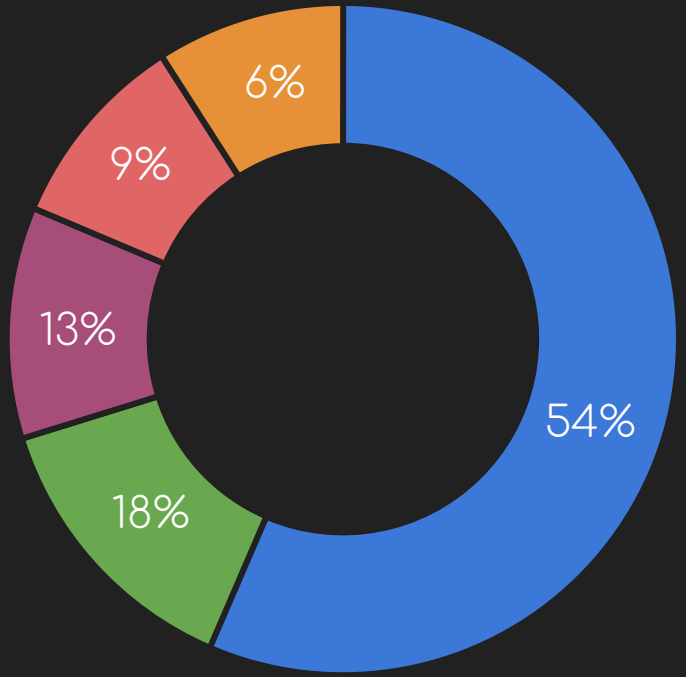


Common application life cycle

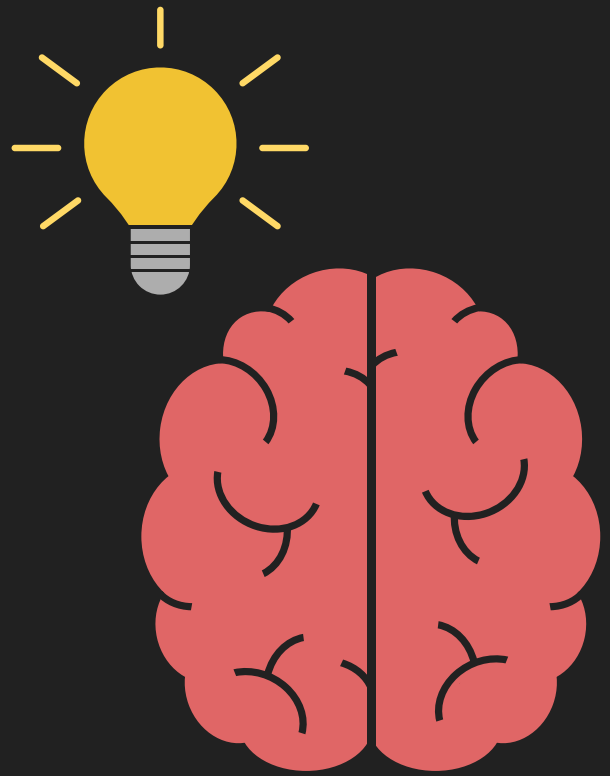


Biggest challenges of software development

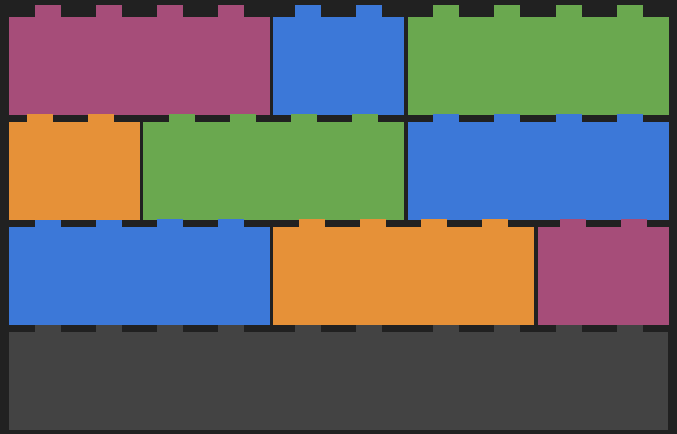
- Integrating different systems and technologies
- Understanding user requirements
- Finding and hiring right developers
- Continuous performance management
- **Adapting to changing client requirements**



(GoodFirms. (2025, June 25). Remarkably Useful Stats and Trends on Software Development)



Sharing
ideas



Common application structure

Extendable

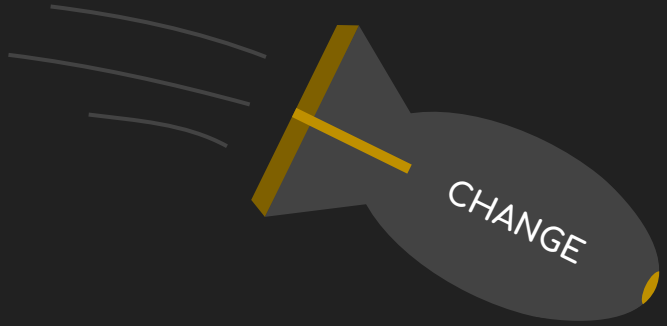
Modifiable

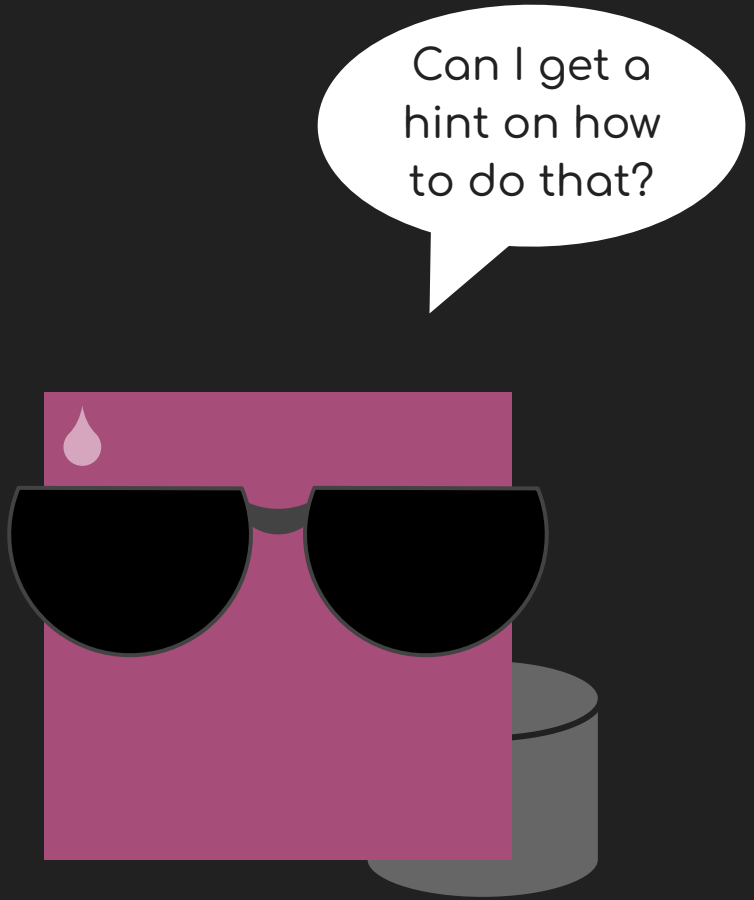
Reducible

Resilient applications are adaptable by nature.

With minimal refactoring, recover from disruptions, and avoid catastrophic failure.

- Masking Technology -


CHANGE


Can I get a hint on how to do that?

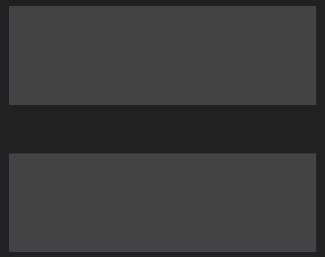
A penny on its side is stable unless disturbed.

This is the same for a software system.

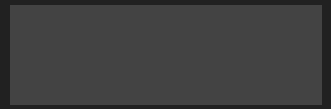
- Robert C. Martin (CEO Clean Coder) -

Extendable

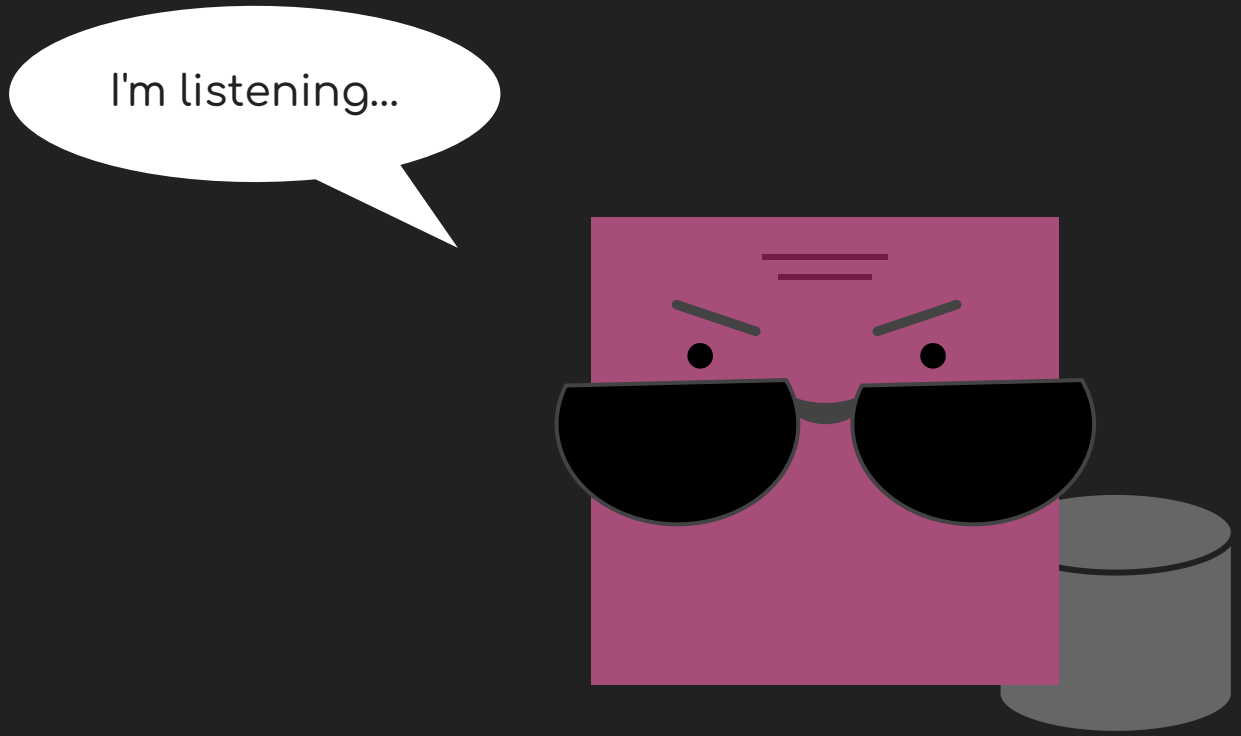
Disturbances



Modifiable

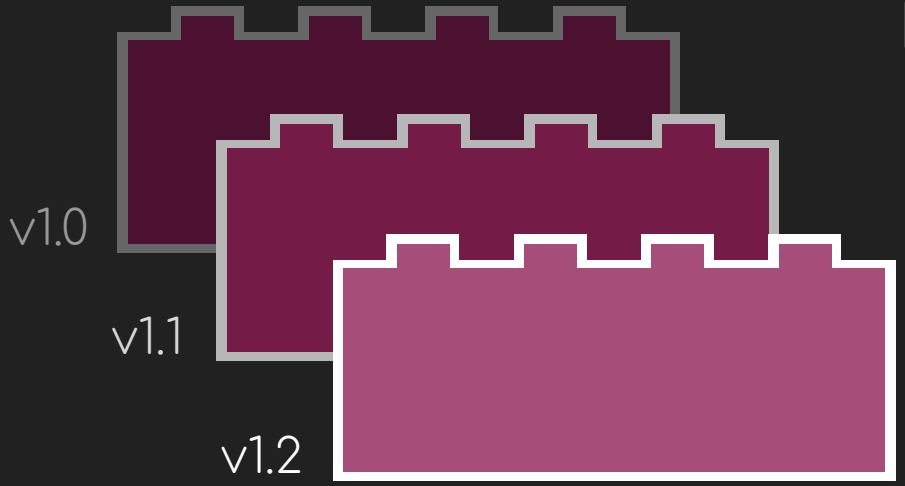


Reducible

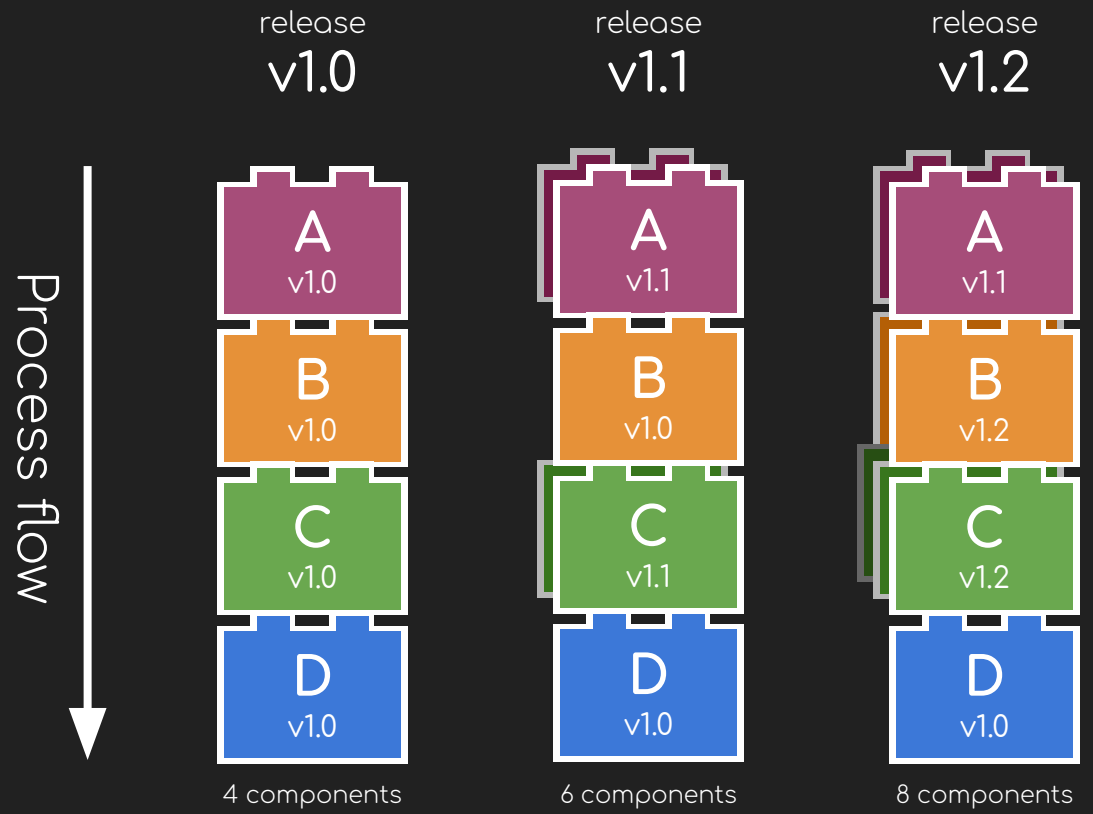

I'm listening...

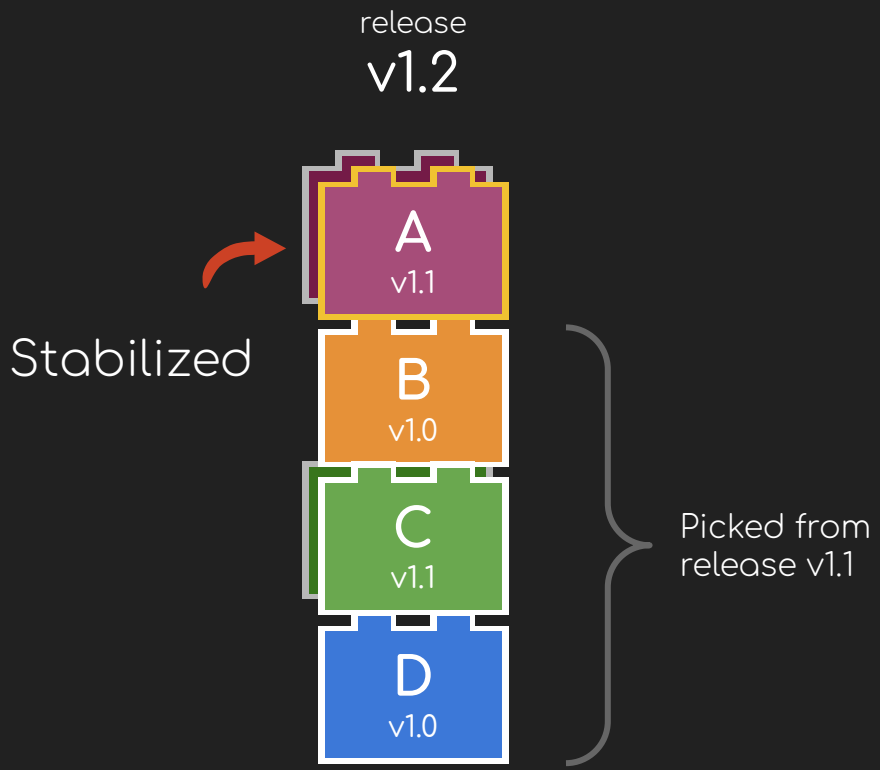
Make components immutable

Create a new version per change



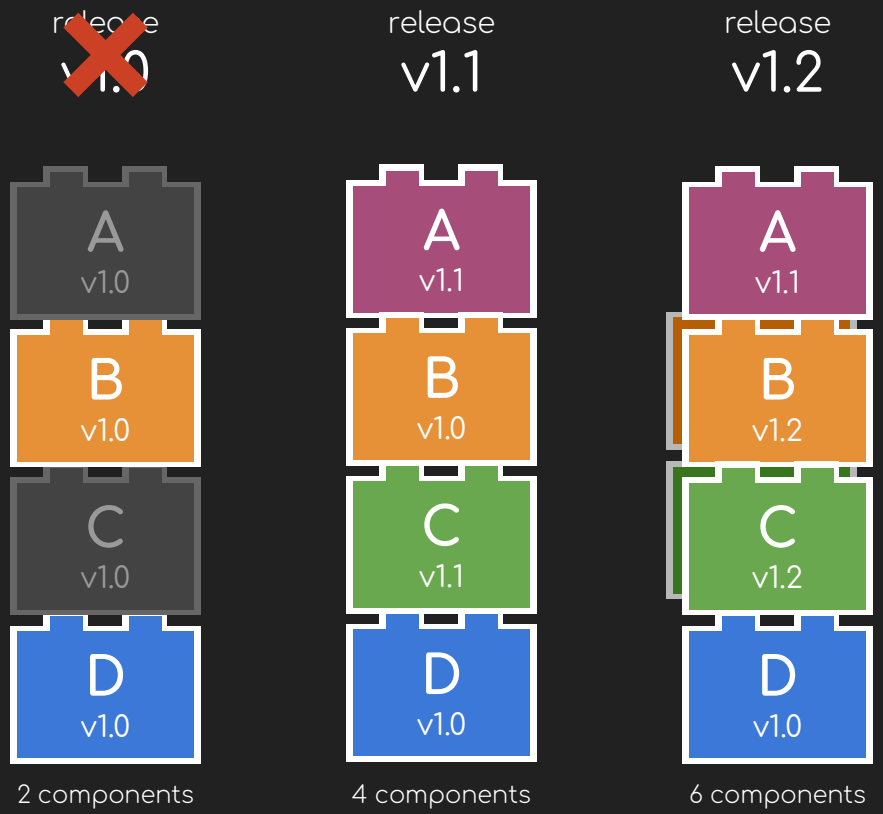
Compose by release





Stabilize by feature

Cleanup unused components

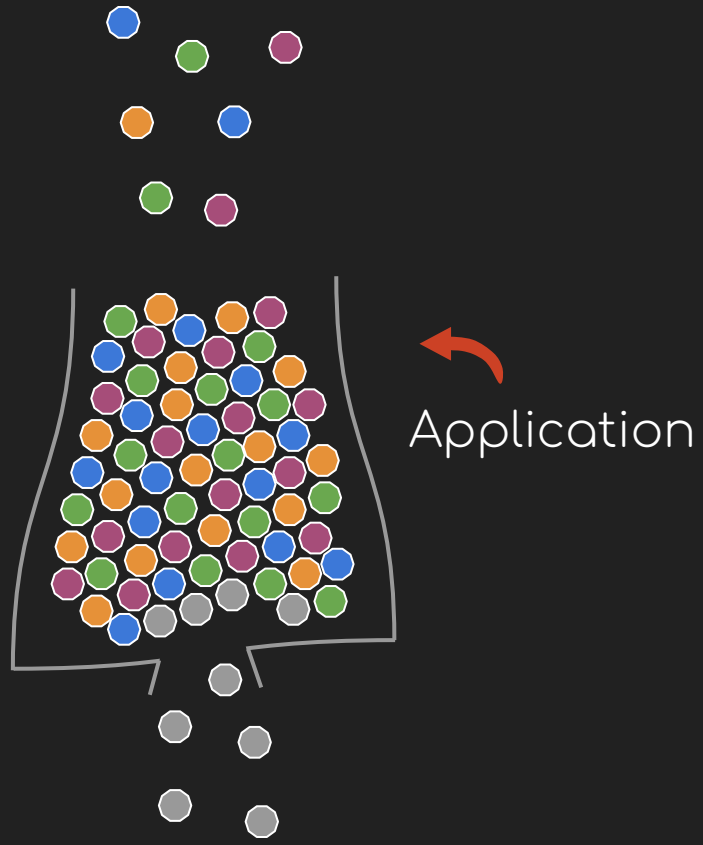


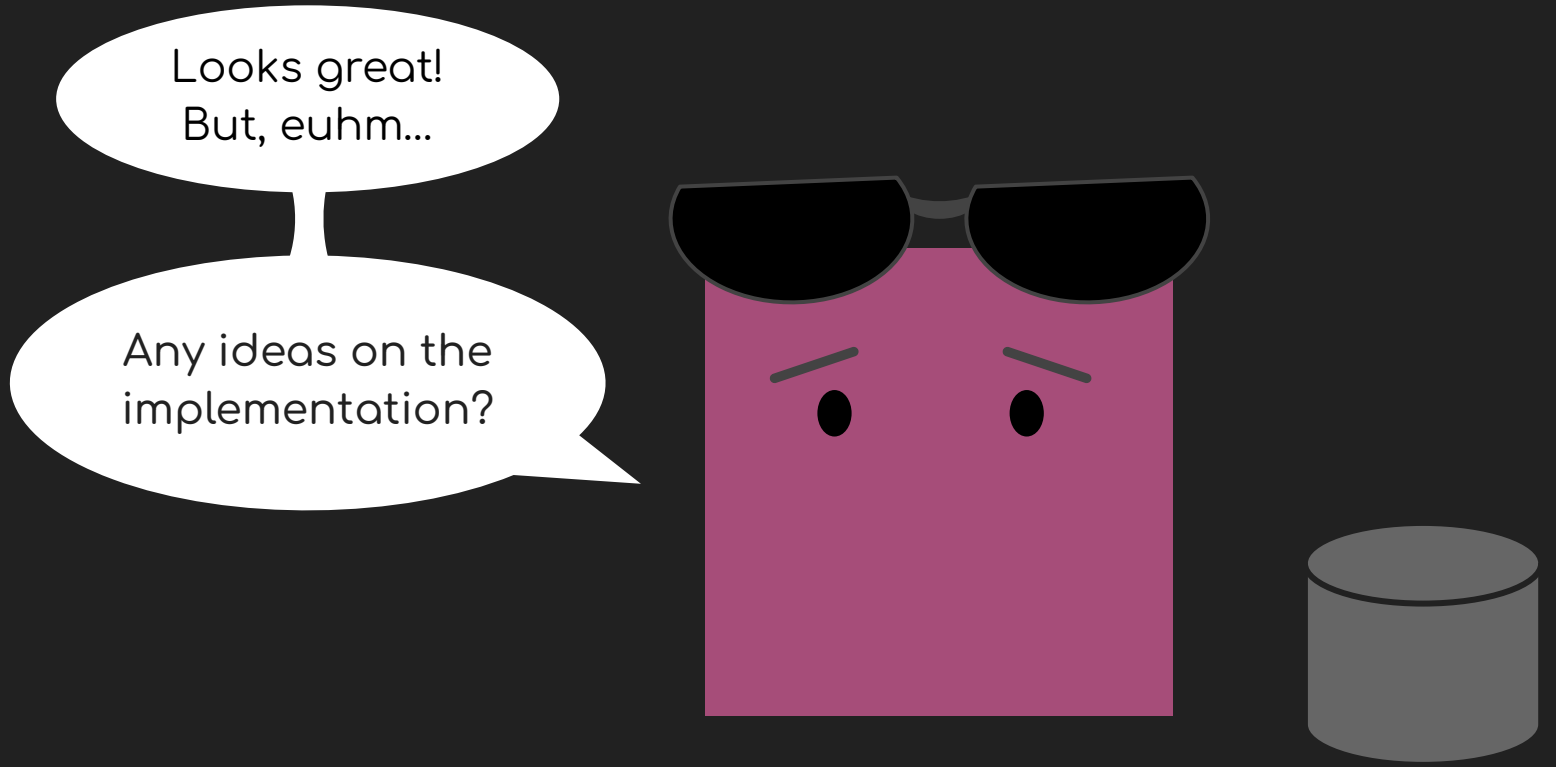
Natural selection

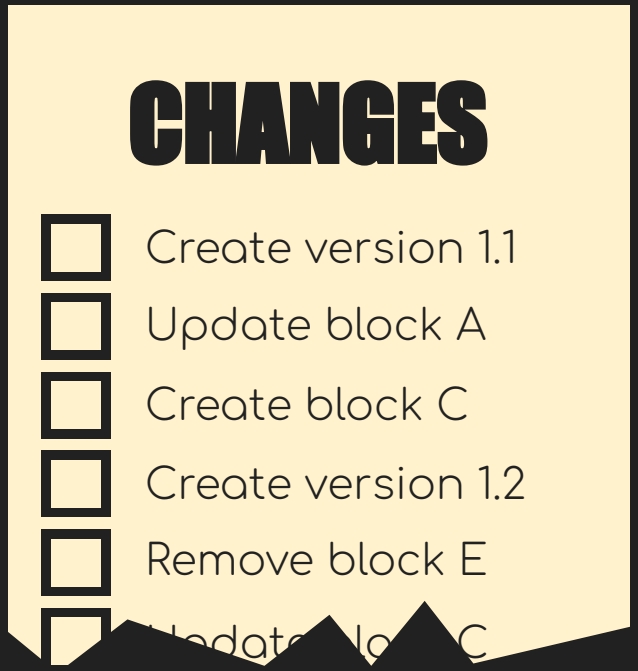
New components are added

Used components survive

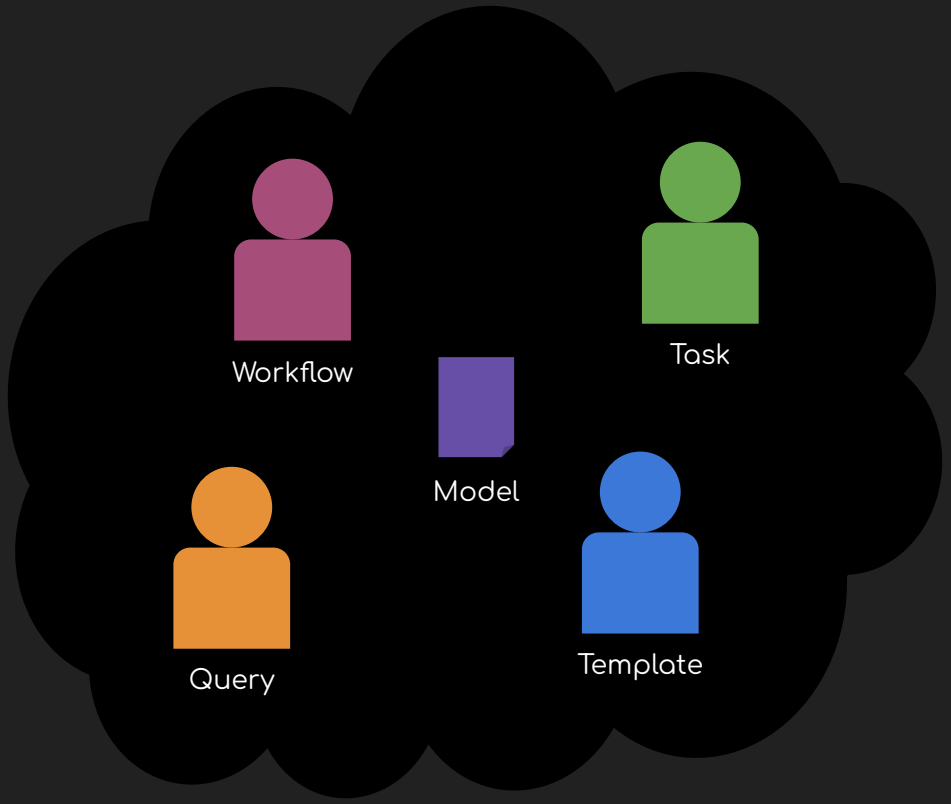
Unused components die off




Looks great!
But, euhm...
Any ideas on the implementation?



Keep track of changes

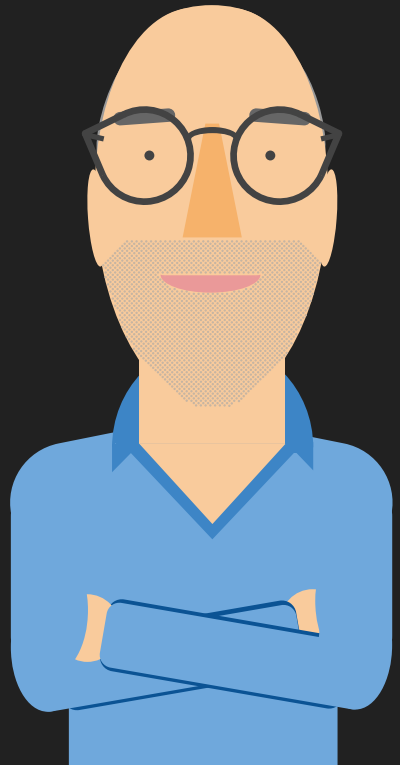


Predefine building blocks

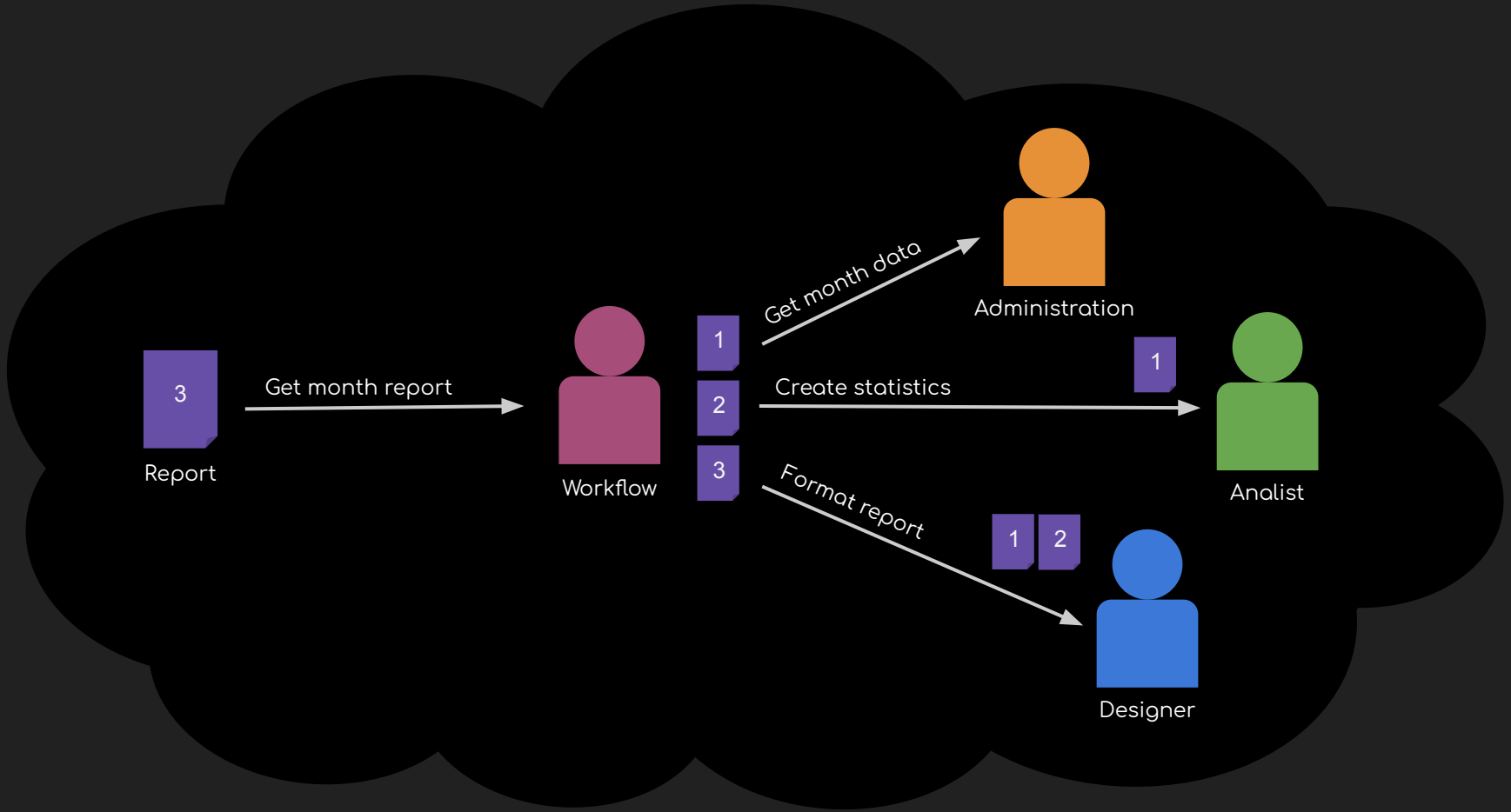
ReciPie

Homemade pie for everyone

As sales manager
I want a monthly
report of the
revenu per day.



Sales
manager


3
Report
Get month report
Workflow
1
2
3
Get month data
Administration
Create statistics
1
Analist
Format report
1
2
Designer

Get month report

workflow

Process for creating the sales report for the given month.

v1.0.0 | Peter van Vliet

Stabilized

```
1  RUN 'Get month data' WITH year, month GET data;
2  RUN 'Create statistics' WITH data GET statistics;
3  RUN 'Format report' FROM dtp WITH data, statistics GET report;
```

Parameters

year : string
month : string

Result

report : string

Month data

model

Data structure for the month data.

v1.0.0 | Bas Meeuwissen

```
1  FIELD string AS year;
2  FIELD string AS month;
3  FIELD real AS numbers MULTIPLE;
```

Parameters

(none)

Get month data

query

Queries the database for sales data per month.

v1.0.0 | Bas Meeuwissen

```
1  SELECT 'Month data'
2  FROM sales
3  WITH year = year AND month = month
4  GET year, month, numbers;
```

Parameters

year : string
month : string

Create statistics

expert

Sums the numbers in the given data.

v1.0.0 | Bas Meeuwissen

```
let total = 0;

for (const number of data.numbers)
{
        total += number;
}

return total;
```

Parameters
data : object

Result
: real

Format report

template

Creates the graphical report in html.

v1.0.0 | Peter van Vliet

```
<h1>Sales {{ data.month }} {{ data.year }}</h1>
<table>
	{{ REPEAT data.numbers AS number }}
	<tr>
		<td>{{ #number | inc }}</td>
		<td>{{ number | usd }}</td>
	</tr>
	{{ DONE }}
	<tr>
		<td>Total</td>
		<td>{{ statistics | usd }}</td>
	</tr>
</table>
```

Parameters

data : object

ReciPie

v1.0.0

Sales january 2025

Day	Revenue
1	$ 7.50
2	$ 22.50
3	$ 30.00
4	$ 15.00
5	$ 22.50
Total	$ 97.50

Lovely!

Where can I see the number of orders per day?

Month data

model

Data structure for the month data.

v2.0.0 | Bas Meeuwissen

```
FIELD string AS year;
FIELD month AS year;
~FIELD real AS numbers MULTIPLE~
OBJECT numbers MULTIPLE;
        FIELD string AS date;
        FIELD int AS orders;
        FIELD real AS revenue;
DONE;
```

Parameters

(none)

Create statistics

expert

Sums the numbers in the given data.

v2.0.0 | Bas Meeuwissen

```
let total = 0;

for (const number of data.numbers)
{
        total += number.revenue;
}

return total;
```

Parameters
data : object

Result
: real

Format report

template

Creates the graphical report in html.

v2.0.0 | Peter van Vliet

```
<h1>Sales {{ data.month }} {{ data.year }}</h1>
<table>
	{{ REPEAT data.numbers AS number }}
	<tr>
		<td>{{ number.date | date }}</td>
		<td>{{ number.orders }}</td>
		<td>{{ number.revenue | usd }}</td>
	</tr>
	{{ DONE }}
	<tr>
		<td colspan="2">Total</td>
		<td>{{ statistics | usd }}</td>
	</tr>
</table>
```

Parameters

data : object

Result

: string

ReciPie

v2.0.0

Sales february 2025

Date	Orders	Revenue
Sat 1 february	5	$ 37.50
Sun 2 february	3	$ 22.50
Mon 3 february	6	$ 45.00
Tue 4 february	4	$ 30.00
Wed 5 february	8	$ 60.00
	Total	$ 195.00

PERFECT!

Does this also work for January?

Get month report

workflow

Process for creating the sales report for the given month.

v2.0.0 | Peter van Vliet

Stabilized

```
1  RUN 'Get month data' WITH year, month GET data;
2  RUN 'Create statistics' WITH data COMPLY data GET statistics;
3  RUN 'Format report' FROM dtp WITH data, statistics COMPLY data
   GET report;
```

Parameters

year : string
month : string

ReciPie

v2.0.0

Sales january 2025

Day	Revenue
1	$ 7.50
2	$ 22.50
3	$ 30.00
4	$ 15.00
5	$ 22.50
Total	$ 97.50

Sales february 2025

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Mon 3 february	6	$ 45.00
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Wed 5 february	8	$ 60.00
Total		$ 195.00


Demo time!

Thanks!

https://masking.tech