

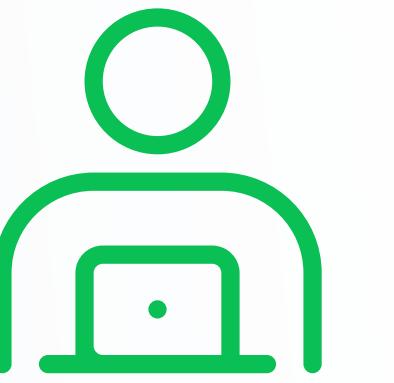
OpenAPI Code Generation



The API economy is on fire 🔥

OpenAPI to the rescue 💧

Me



adyen Developer Advocate



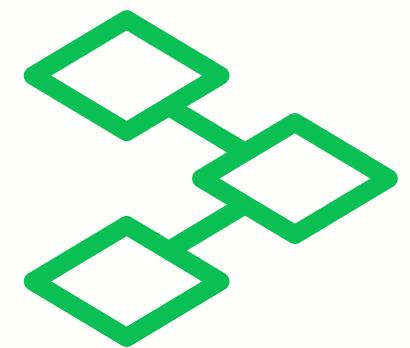
@beppecatanese



gcatanese



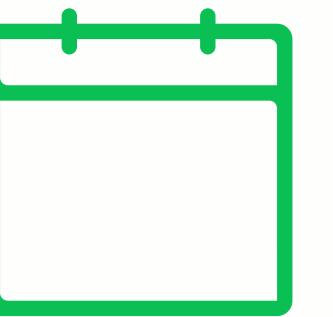
Adyen



*The platform built to simplify and accelerate
global payments*

- Single platform
- Large businesses and marketplaces
- Organic growth
- Global, 3 technical hubs

Agenda



- OpenAPI intro
- Code generation
- Mustache templates
- Extensions

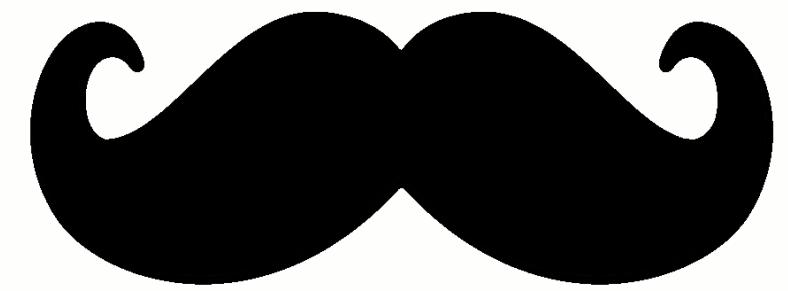
OpenAPI

- OpenAPI “lingua franca”
- Wordnik, Swagger, OpenAPI initiative
- Features
 - Schema generation
 - Code generation

Code generation

- Client, server stubs (100+ languages and frameworks)
- CLI, Docker, jar file, Maven, Gradle
- [api.openapi-generator.tech??](https://api.openapi-generator.tech)

Mustache templates



- Logic-less
- Source code, config, documentation
- Tags: variables, sections, lists

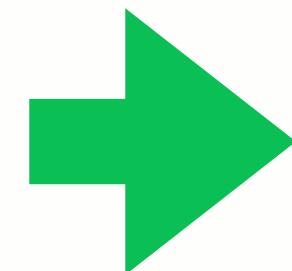
Separation of concerns done right

Mustache template variable

(template) Hello {{name}}

(data)

```
{  
  "name": "Beppe"  
}
```



Hello Beppe

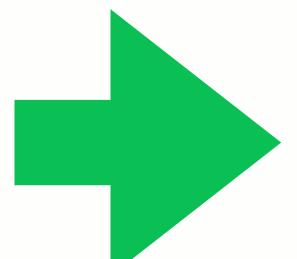
Mustache template section tag

(template)

```
{{#param}}
  if {{#name}} != null {
    // do something
  }
{{/param}}
```

(data)

```
{
  "param": {
    "name": "city"
  }
}
```



```
if city != null {
  // do something
}
```

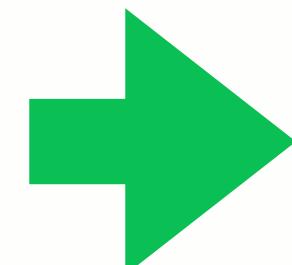
Mustache template section tag (not)

(template)

```
{{^param}}
  System.out.println("Missing parameter");
{{/param}}
```

(data)

```
{}
```



```
System.out.println("Missing parameter");
```

Mustache template: context

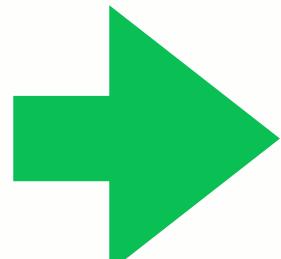
(template)

```
{{{#param}}}  
  log.debug("Name is " + {{{name}}});  
{{{/param}}}
```

(data)

```
{  
  "param":  
    {"name": "Amsterdam"}  
}
```

```
log.debug("Name is Amsterdam");
```



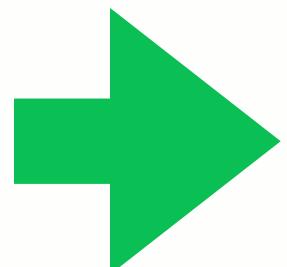
Mustache template list

(*template*)

```
{{#allParams}}  
{{type}} p{{name}},  
{{/allParams}}
```

(*data*)

```
[  
 {"type": "String", "name": "City"},  
 {"type": "String", "name": "Country"}  
]
```



String pCity, String pCountry,

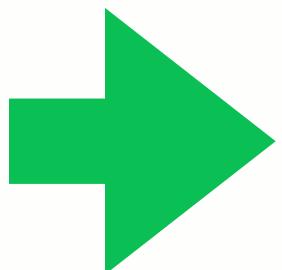
Mustache template list (last)

(template)

```
{{#allParams}}
{{type}} p{{name}}{{^last}}, {{/last}}
{{/allParams}}
```

(data)

```
[{"type": "String", "name": "City"}, {"type": "String", "name": "Country"}]
```

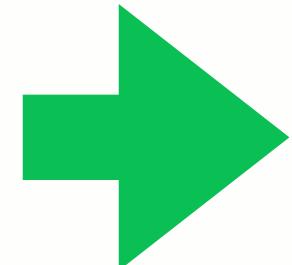


String pCity, String pCountry

Mustache template list (**index**, **first**)

(*index*)

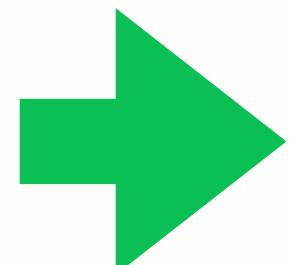
```
{{#allParams}}  
  {{type}} param{{-index}},  
{{/allParams}}
```



param0, param1, param2

(*first*)

```
{{#allParams}}  
  {{#-first}}({{/first}} ... {{#-last}}){{/last}}  
{{/allParams}}
```



(...)

Mustache template partial

(partial)

```
{{{#allParams}}}  
{{> param_template}}  
{{{/allParams}}}
```

- modular (import *param_template.mustache*)
- runtime rendering
- contextual (use `{{name}}`)

Mustache template: others

- comments: `{{{! comment here}}}`
- custom delimiters
- lambda functions (lowercase, uppercase, etc..)

OpenAPI generator variables

operations:

operation:

path: /user

operationId: get-user

httpMethod: GET

summary: "Get a user"

allParams:

isBodyParam: true

paramName: body

required: true

operation:

path: /user

operationId: post-user

httpMethod: POST

Extend and customise

- extend language generator
- generate endpoints and/or models
- skip files (.openapi-generator-ignore)
- bring your own models

Extend language generator

```
public class MyCodegen extends GoClientCodegen {  
  
    @Override  
    public String tomodelName(String name) {  
  
        @Override  
        public String modelFileFolder() {  
  
            @Override  
            public OperationsMap postProcessOperationsWithModels(..)
```

Final thoughts

Automated vs Manual work

github.com/adyen

github.com/adyen-examples

Thank You!

adyen