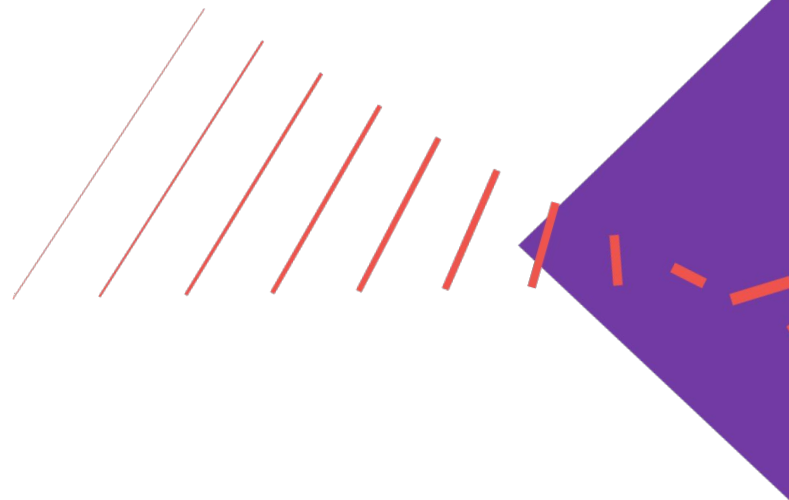


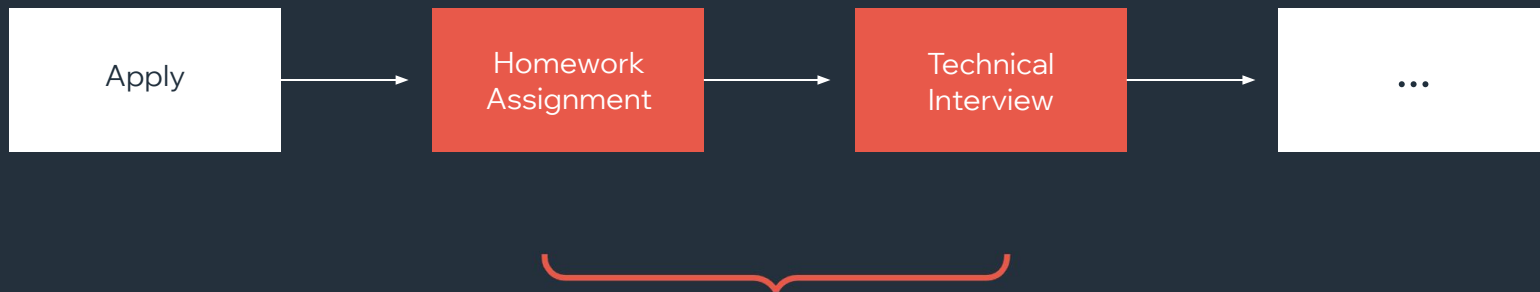
APRIL 2023

Wix Grow

Technical Parts

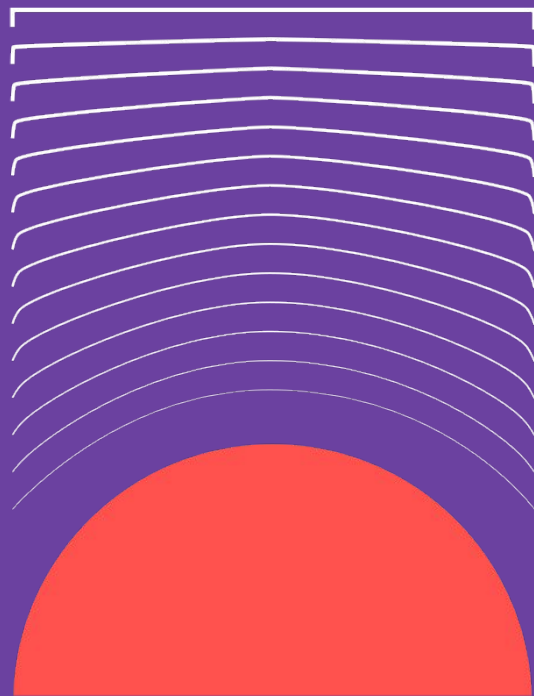


What does this cover?



for mobile, front-end, back-end

Some Context



Teams in Vilnius

| | |
|------|-----|
| Frog | MFB |
|------|-----|

| | |
|--------|-----|
| Events | MFB |
|--------|-----|

| | |
|-------|-----|
| Forum | MFB |
|-------|-----|

| | |
|---------|-----|
| Members | MFB |
|---------|-----|

| | |
|---------|-----|
| Loyalty | MFB |
|---------|-----|

| | |
|---------------|-----|
| Pricing Plans | MFB |
|---------------|-----|

| | |
|----------|-----|
| Invoices | MFB |
|----------|-----|

| | |
|------------|-----|
| Wix Emails | MFB |
|------------|-----|

| | |
|----------|-----|
| Wix Data | MFB |
|----------|-----|

| | |
|------|-----|
| CTOO | MFB |
|------|-----|

| | |
|----------|-----|
| Spartans | MFB |
|----------|-----|

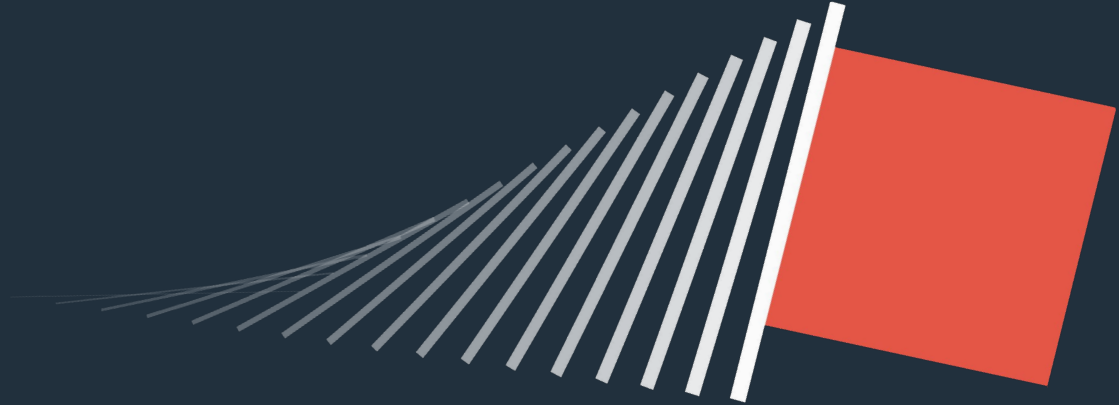
| | |
|------------|-----|
| Components | MFB |
|------------|-----|

| | |
|-------|-----|
| DevEx | MFB |
|-------|-----|

| | |
|----------|-----|
| Scala FW | MFB |
|----------|-----|

The Guilds

- Front-end
- Back-end
- Mobile



Technologies we use (plus more)

Mobile



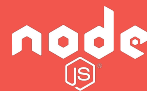
React
Native



Front-end



React



webpack



GraphQL

Back-end



Scala



mongoDB



MySQL



kafka



Bazel

Allowed languages for home assignments

Mobile



Front-end



... and any "front-end" language

Back-end



... and any "modern" language

Important Practices

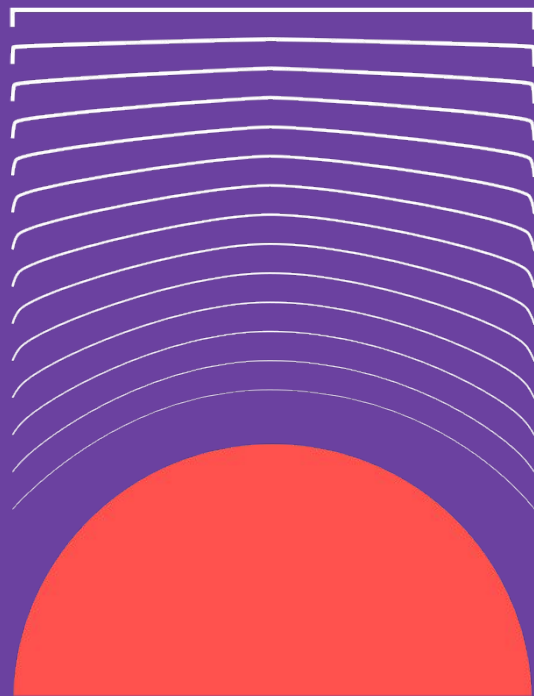
(which we follow)

- Test everything
- Automate everything
- Simple over "smart"
- Designing for code reusability

...it all boils down to: we have a big system to maintain.

Programming Skills

- OK not to know much.
- OK not to have design skills.
- BUT what you do use, you should know well.
- Programming fundamentals and practices!



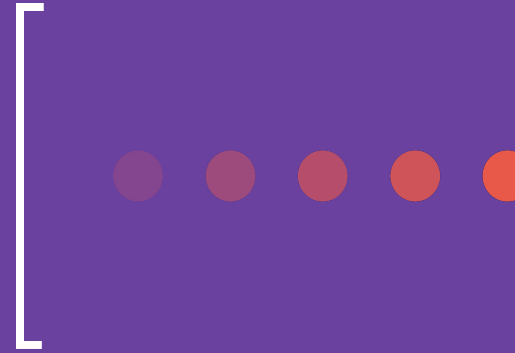
Learning

- OK not to be learning 24/7.
- OK not to have side-projects.
- OK not to have special interests.

We just want you be actively improving:

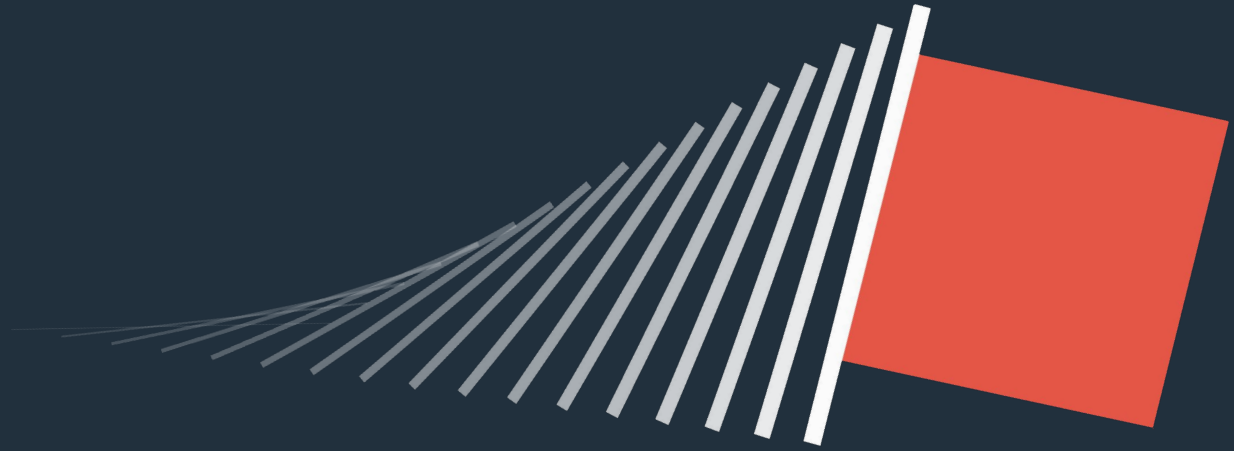
- Looking for opportunities.
- Willing to face roadblocks.
- Be very collaborative!

Communication



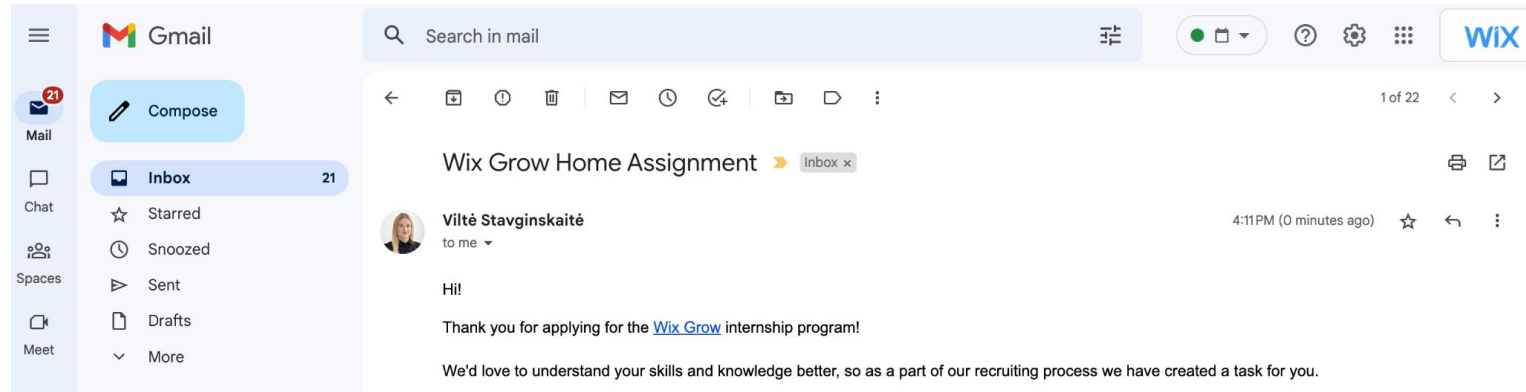
- Not the same as being extravert!
- You should freely communicate your ideas.
- Asking questions is part of "communication".
- One hard requirement: being comfortable communicating in English.

Homework Assignment



Task via Email

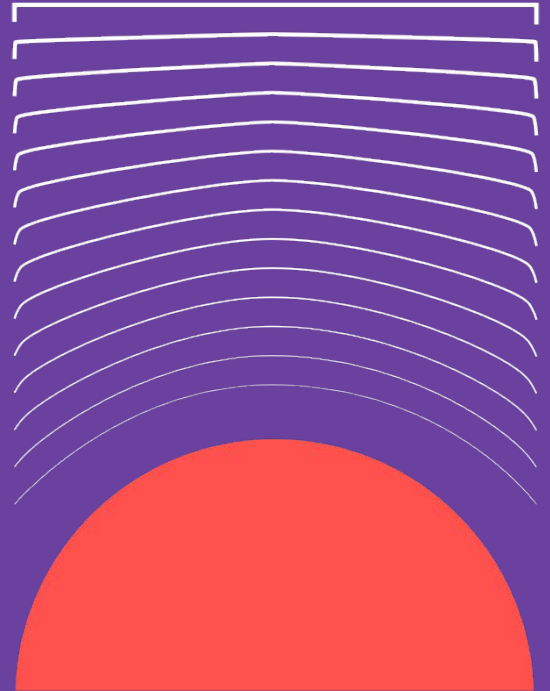
- It is important, do not delete or ignore it!



Problem Definition

Full instructions

View



Spreadsheet Evaluator

| | | | |
|----|---|---|-------------|
| C1 | | | =sum(B1,A1) |
| | A | B | C |
| 1 | 4 | 6 | =sum(B1,A1) |

Take spreadsheet,
compute values.



What is a spreadsheet?

| | | A | B | C | D | E | |
|----------|-------|---|---|---|---|---|--|
| [...], | Row 1 | 1 | | | | | |
| [...] | Row 2 | 2 | | | | | |
| | | 3 | | | | | |

What is a spreadsheet?

```
[  
  [  
    A1, B1, C1  
  ],  
  [  
    A2, B2, C2  
  ]  
]
```

| | A | B | C | D | E | |
|---|---|---|---|---|---|--|
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |

A1 Notation

A1

Column

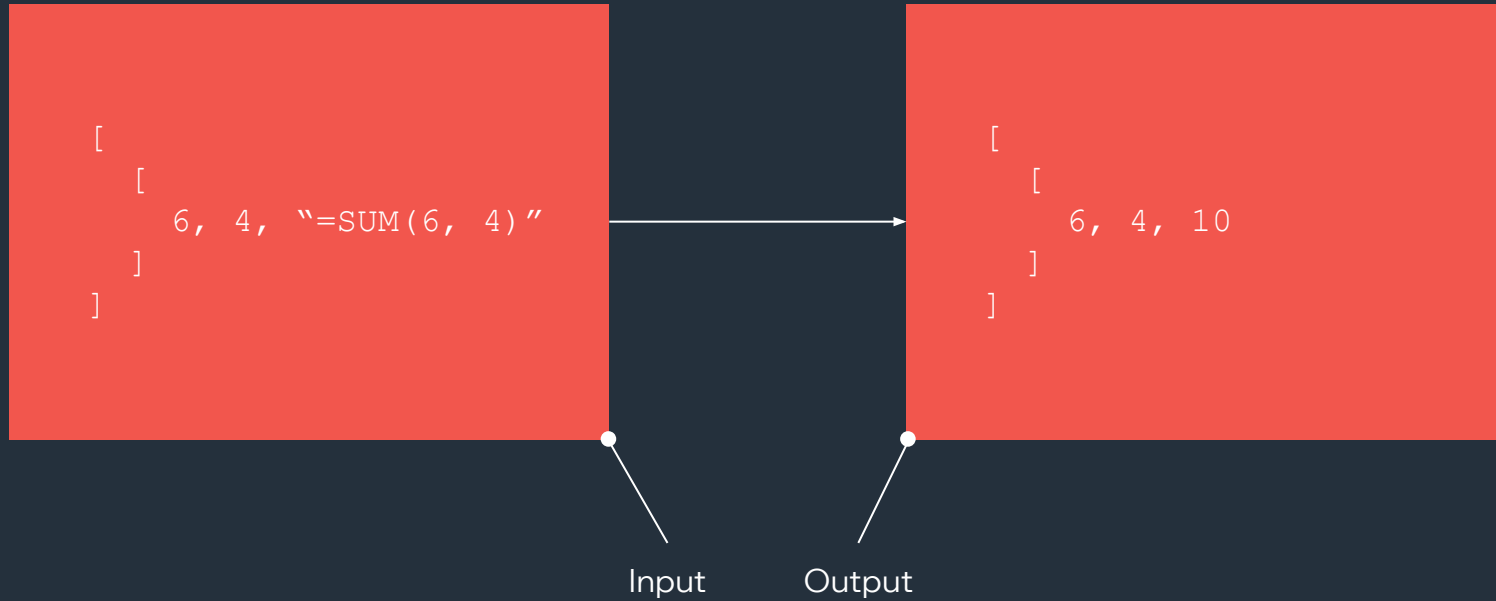
Row

What is a spreadsheet?

```
[  
  [  
    4, A1  
    6, B1  
    "=SUM(A1, B1)"  
  ],  
  [...]  
]
```

| | | | | |
|----|-----------|-------------|-------------|---|
| C1 | <i>fx</i> | =sum(B1,A1) | | |
| | A | B | 10 × | C |
| 1 | 4 | 6 | =sum(B1,A1) | |

Core of the task



Cells

- Value

- Number

- Text

- Boolean

- Error

- Formula *only in input

```
123,  
'abc'  
true
```

```
"#ERROR: ..."
```

```
"=MULTIPLY (...)"
```

Formulas

"=SUM(A1, B2)"

Operator Name

Arguments

Possible Value Types

```
[ '=123' ]           // number  
[ '="abc"' ]         // string  
[ "=true" ]          // boolean
```

```
[ '=A1' ]            // reference
```

```
[ '=SUM(A1, B1)' ]   // function
```

Formulas

```
{  
  "formula": {  
    "sum": [  
      { "reference": "A1" },  
      { "reference": "B1" }  
    ]  
  }  
}
```

Operator Name

Arguments

Exceptions

```
{ "formula": { "value": { "number": 123 } } }  
{ "formula": { "value": { "text": "abc" } } }  
{ "formula": { "value": { "boolean": false } } }
```

```
{ "formula": { "error": "Banana" } }
```

```
{ "formula": { "reference": "A1" } }
```

Leaf Operators

Formulas

Things can get more complicated...

```
=SUM(A1, B1)
```

```
=SUM(6, 4)
```

```
=SUM(A1, 4)
```

```
=CONCAT(A1, B1)
```

```
=CONCAT(6, true)
```

```
=CONCAT("ab", "cd")
```

```
=SUM(6, SUM(6, 4))
```

```
=SUM(A1, SUM(6, 4))
```

```
=CONCAT(SUM(6, 4), "a")
```


Formulas: Operators

=SUM

=MULTIPLY

=DIVIDE

=GT

=LT

=EQ

=NOT

=AND

=OR

=IF

=CONCAT

Plan Ahead

01

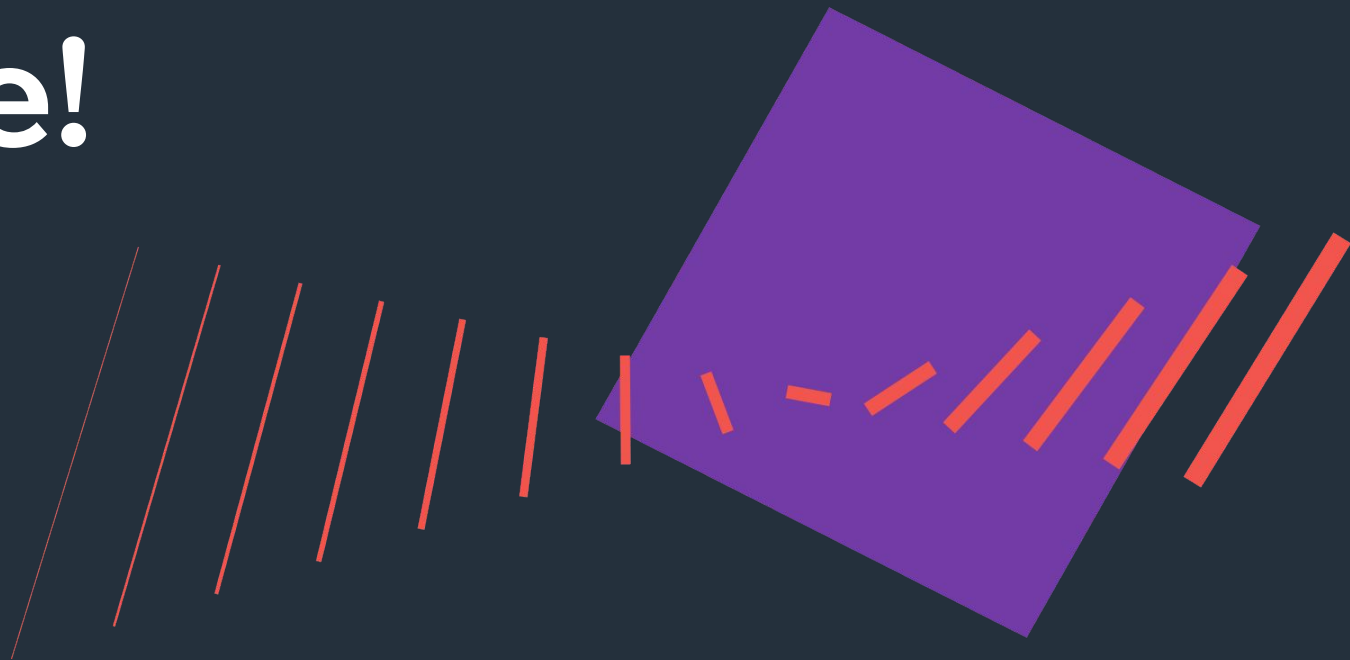
How are references
going to be resolved?

02

How to handle errors?

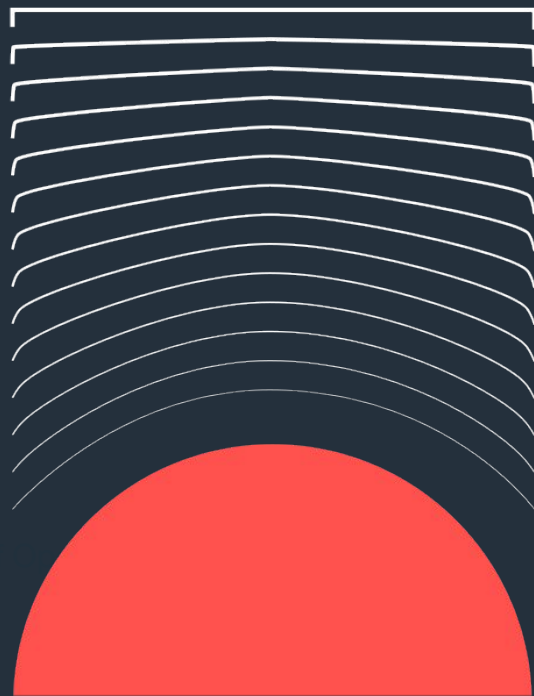
Assume something is not going to
work and you'll have to figure it out.

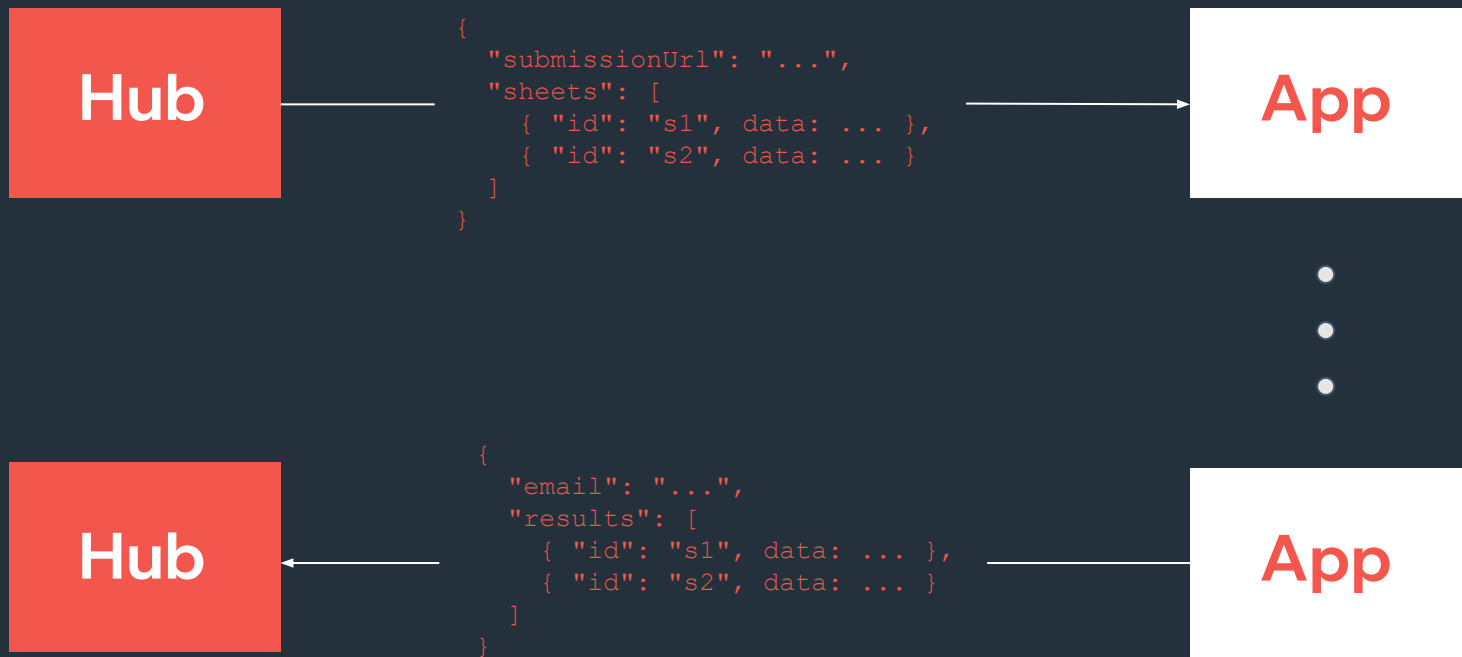
There's
more!

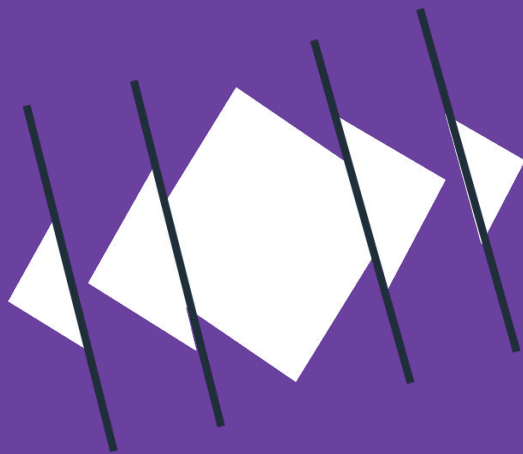


"The hub"

Your application is **"a worker"**







Making the HTTP requests is part of your application!

Core of the task

```
[  
  [  
    6,  
    4,  
    "=SUM(A1, B1)"  
  ]  
]
```

And do a
bunch of
those!

```
[  
  [  
    6, 4, 10  
  ]  
]
```

Input

Output

Getting Jobs

```
{  
  "submissionUrl": "https://wix.com/_something/verify",  
  "sheets": [  
    {  
      "id": "s123",  
      "data": [  
        [6, 4, "=SUM(A1, B1)"]  
      ]  
    }  
  ]  
}
```

Yes, this is important

The spreadsheet
we just covered

Posting Jobs

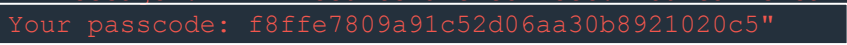
```
POST <url_you_got_previously>
```

This is where it goes

```
{
  "email": "your@email.com",
  "results": [
    {
      "id": "sheet-1",
      "data": [
        [
          6, 4, 10,
        ]
      ]
    }
  ]
}
```

Success / Failure

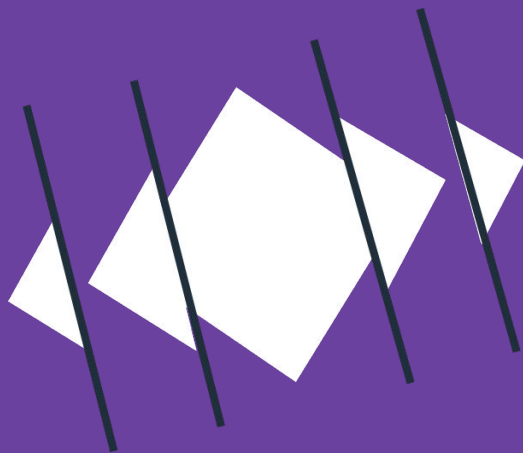
```
{  
  "message": "All results are correct. You can clean up and submit your source code now.  
Your passcode: f8ffe7809a91c52d06aa30b8921020c5"  
}
```



This is unique

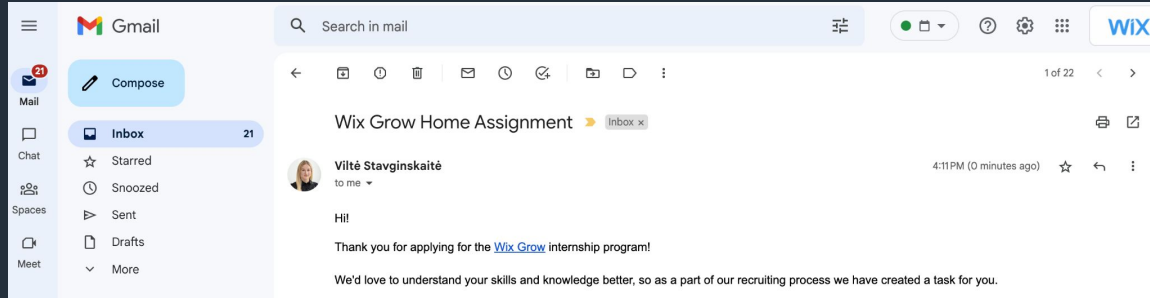
or

```
{  
  "error": "invalid job-2 result: invalid cell B1: content does not match"  
}
```

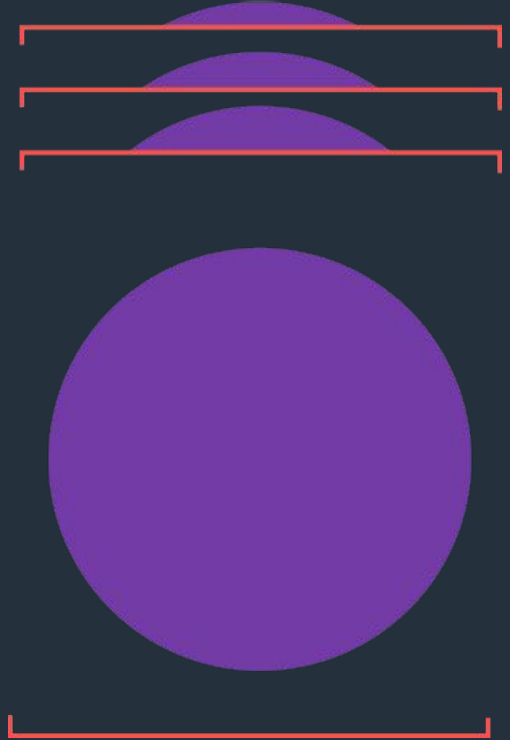


You can use hub as much as you want.
Submitting jobs multiple times has no penalty!

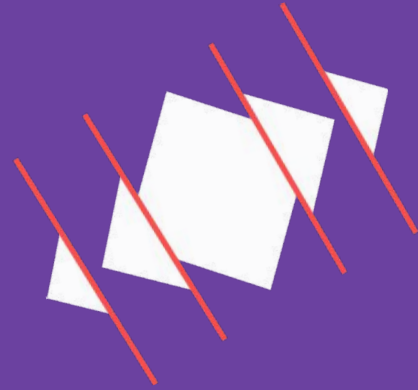
Tech Support



Use "Reply"



Definition of "Done"





01

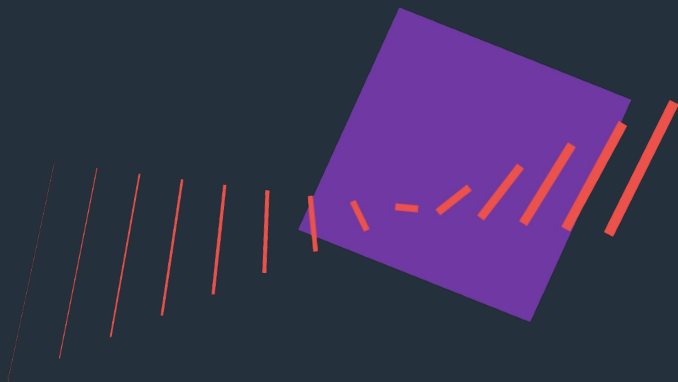
Job results are accepted
(see the response)

02

You are happy with the
code

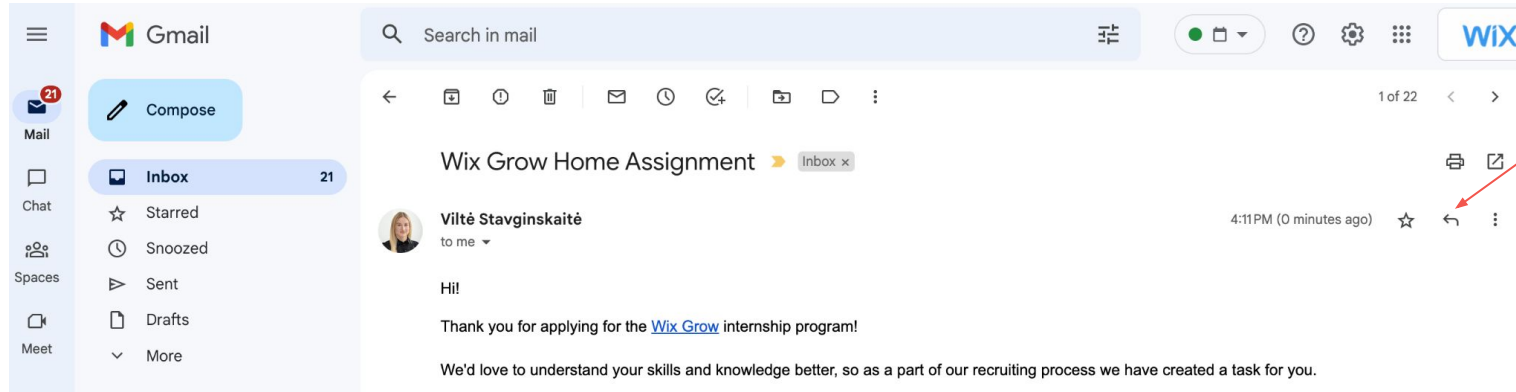
Side-note

- 3rd parties allowed



Submitting Code

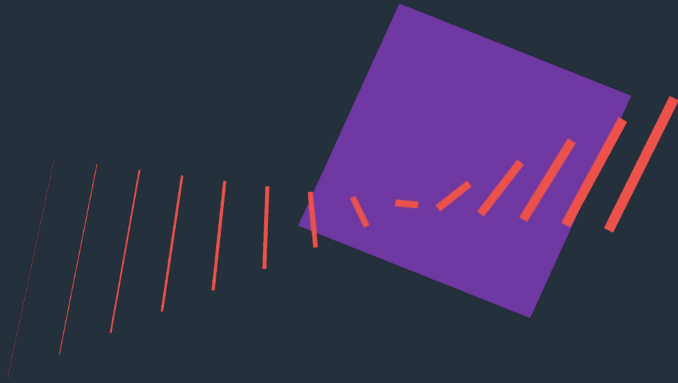
- ZIP it, upload to our site and sent download url by replying to instructions email!
- Clean it up before ZIPing. Only the source code!
- Add **passcode** hashcode in the email!



Use "Reply"

Evaluation

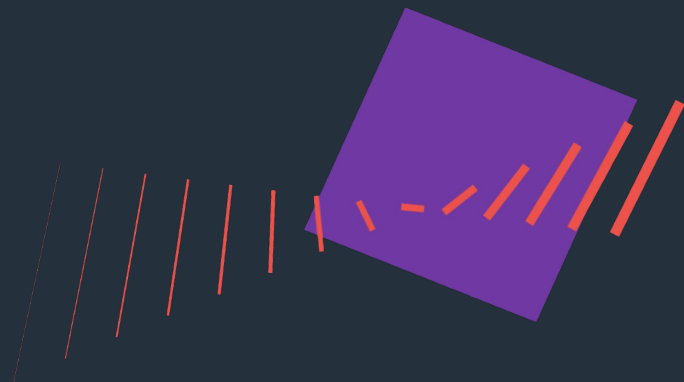
- Passcode is correct?
- Requirements satisfied?
- Readable code?
- Code structure?
- Simple design?



Technical Interview



What's going to happen?



- Will talk a little about you.
- Will talk a little about Wix.
- Will do some live coding.

What do we expect?



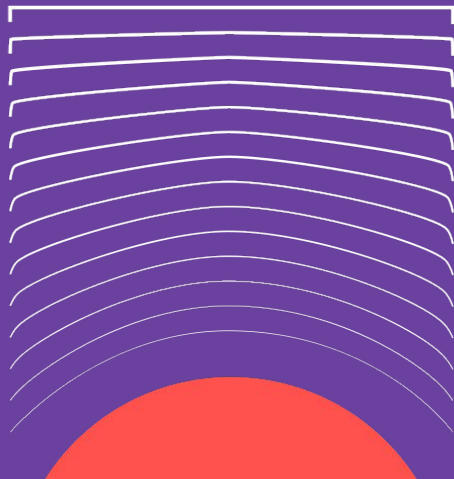
- You can write code.
- You can reason about your code.
- You can express your ideas.
- You know what you are doing.
- You can solve basic problems

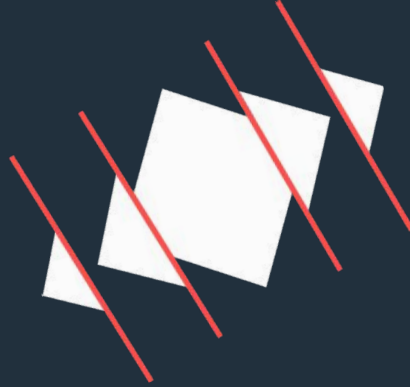
What should you expect?

- Not to know all the answers.
 - OK to use your own words.
 - OK to "think through" the answer.
- Be asked obvious questions.
- Be asked stupid questions.

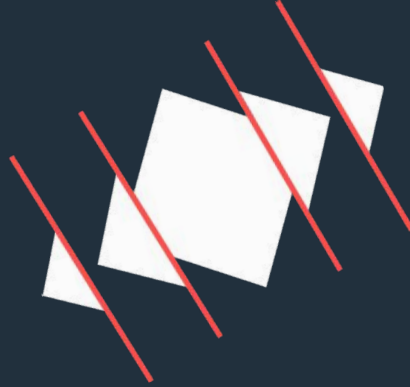


Stay Calm
Keep Talking





No detailed feedback :(



Let's move on to Q&A