What the Flow??!! Learnings Migrating to TypeScript



Rodrigo Fernández

Tech Lead Engineer at Taxfix

@FdezRomero



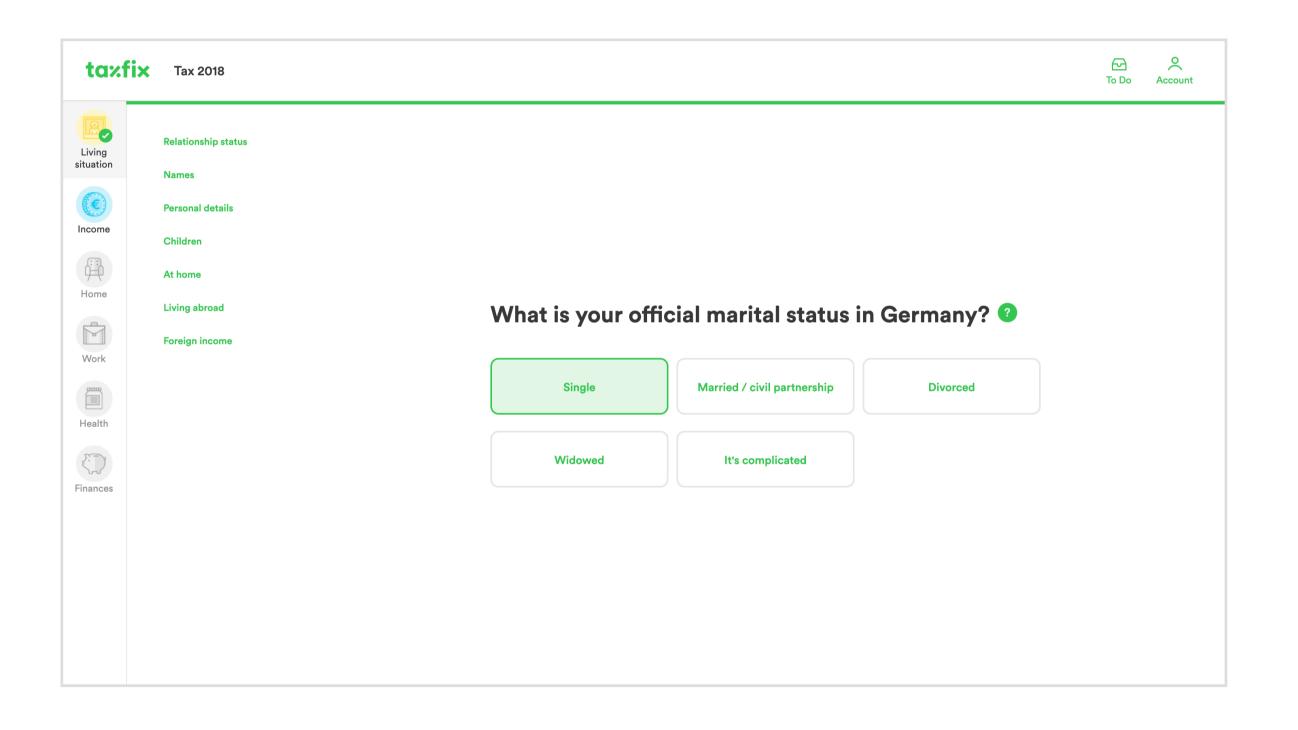
DISCLAIMER:

Just based on my experience. Please don't take this as a best practice. Why the change? 😜

Multiple reasons (your situation might be different)

But first some context

Flow in Mobile & Web apps





TypeScript in the backend

- Microservices
- Shared libraries
- Shared types @taxfix/types



Flow problems flow-typed & flow-bin

flow-bin

Internally coupled to React features and versions:

We had 0.83.0

React Hooks needed 0.87.0

Parameters in useCallback needed 0.88.0

React.forwardRef needed 0.89.0

React.useImperativeHandle needed 0.92.0

It never ends 🐹



Understanding complex Flow errors

How we started migrating 👉



Flow & TypeScript working together Progressive migration of components Then everything else

rescripts

Update to latest rescripts

yarn add -D @rescripts/cli@^0.0.7

Which updates underlaying Create React App

react-scripts@^2.1.0

tsconfig.json

Install typescript as dev dependency

yarn add -D typescript

Exclude Flow .js files

```
"include": ["src"],
"exclude": ["src/**/**.js"]
```

.eslintrc

New rule:

```
"import/extensions": [0, "never", { "ts": "never" }],
```

New setting:

```
"import/resolver": {
    "node": true,
    "eslint-import-resolver-typescript": true
}
```

Caveats !

Importing

| | From Flow file (.js) | From TypeScript file (.ts) |
|-----------------------|----------------------------------------------|----------------------------|
| Flow file (.js) | | |
| TypeScript file (.ts) | <pre>// \$FixFlowImport declare module</pre> | |

.flowconfig

Add module definitions as a library:

```
[libs]
flow-typed
typescript-migration
```

Add suppress comment and type:

```
[options]
suppress_comment= \\(.\\|\n\\)*\\$FlowIgnoreImport
suppress_type=$FlowIgnoreImport
```

Importing TypeScript from Flow

```
src/App.js
// $FlowFixImport
import Component from '../path/to/typescript-file';
typescript-migration/definitions.js
declare module '../path/to/typescript-file' {
  declare module.exports: any;
```

Current situation 177

Thanks!



#