STATE MACHINE STRIKE BACK

ET UNE FONCTION D'UPDATE = REDUCER

MIAGE M2 - QUALITÉ DU SI - THOMAS HAESSLÉ & QUENTIN BURG

```
const reducer: (state: State, command: Command) => State =
    (state: State, command: Command) => {
    switch (state.type) {
        case "idle": {
            switch (command.type) {
                case "face": return idle();
                case "start": return moving();
                default: throw new Error("Impossible");//
        case "moving": {
            switch (command.type) {
                case "stop": return idle();
                default: throw new Error("Impossible");//
```







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ERREURS

FP-TS

```
import { pipe } from 'fp-ts/function';
import * as E from 'fp-ts/Either';
type State = E.Either<Error, Idle | Moving>
const initialState: State = pipe(idle(), E.right);
const reducer = (state: State, command: Command) => {
   // ! `chain` is `flatmap` or `bind` name in fp-ts;
   // be carefull bind is js Function.prototype.bind ... naming are hard
    return E.chain(
       // 😟 TS inference is bad, you will often need to help the typer
        (state: Idle | Moving): E.Either<Error, Idle | Moving> => {
            switch (state.type) {
                case "idle": {
                   switch (command.type) {
                        case "face": return pipe(idle(), E.right); // idle () |> E.right
                        case "start": return pipe(moving(), E.right);
                        case "stop": return pipe(new Error("Illegal Action from Idle")
                                           , E.left);// 😇
                case "moving": {
                    switch (command.type) {
                        case "stop": return pipe(idle(), E.right);
                        default: return pipe(new Error("Illegal Action from Moving"),
                                             E.left);//
    )(state)
```