

NgRx

NgRx

*Being Actively Reactive
With NgRx*

What is NgRx ?

A framework for building

Reactive

USER

applications in Angular

What problem does NgRx target?

State Management In Reactive Way

NgRx is inspired from Redux

How do we pass data between components?

Property Binding- @Input()

Event Binding- @Output()

Services

&

NgRx Store

NgRx Key Terms

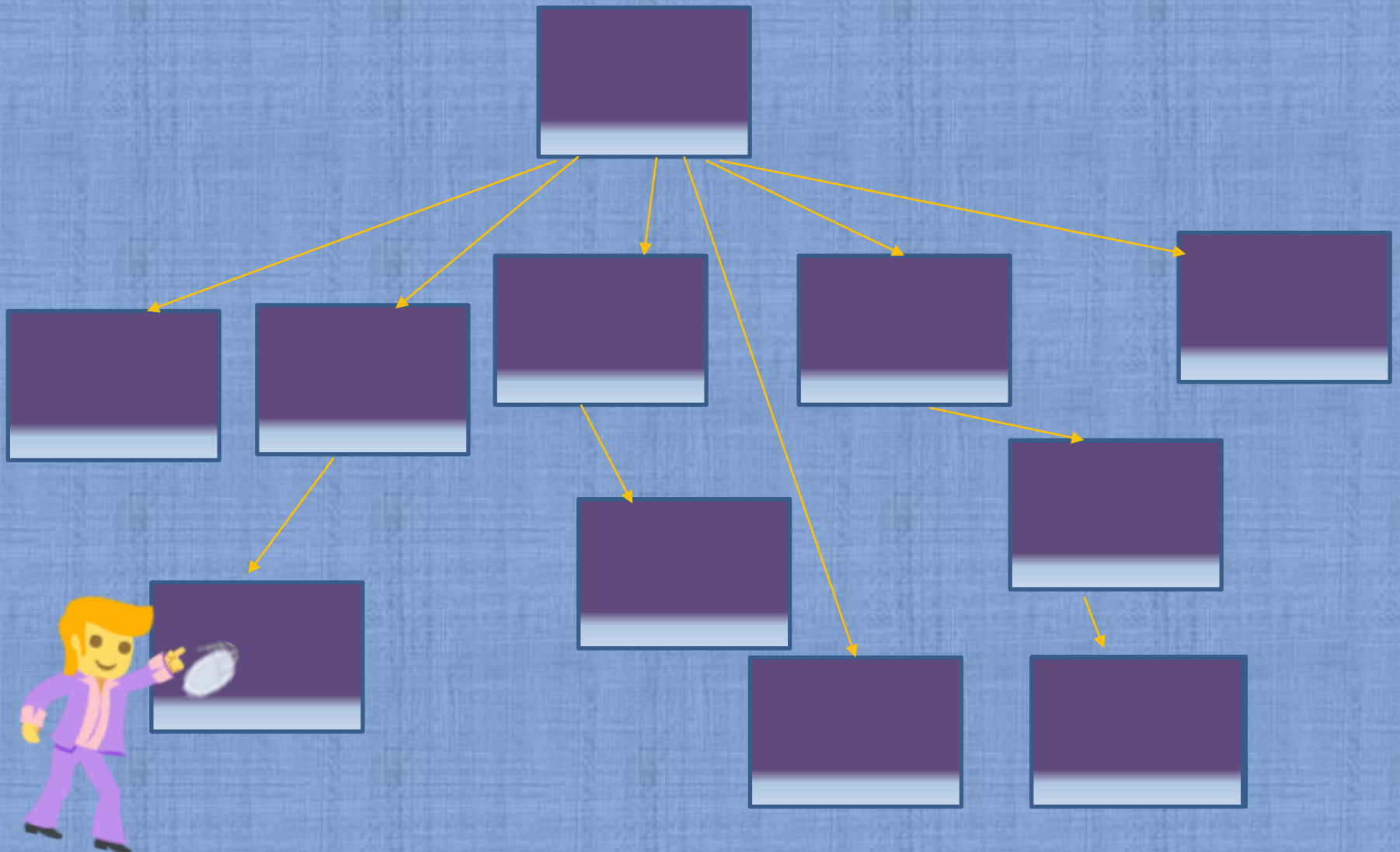
Store

Reducers

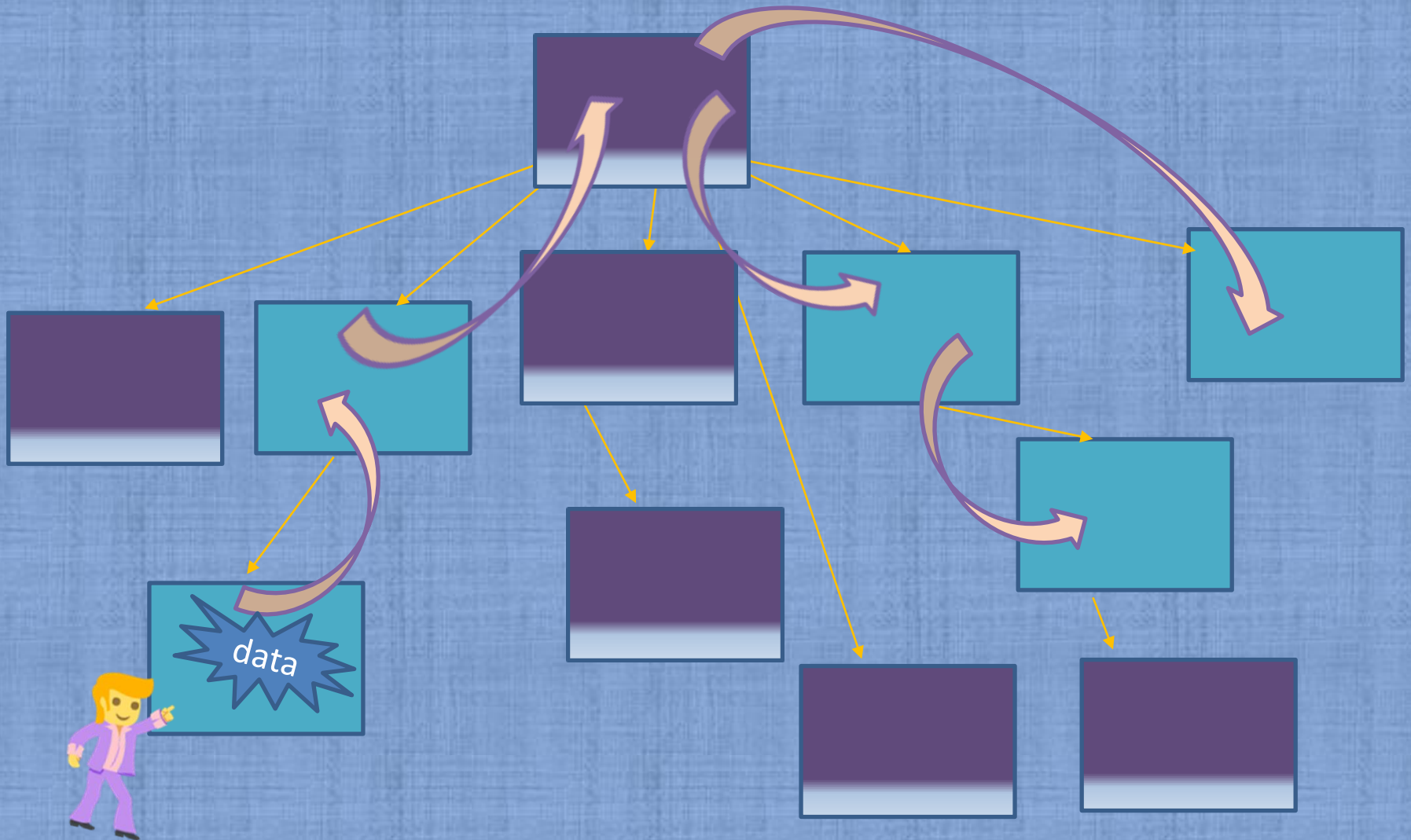
Actions

Selectors

Component Tree



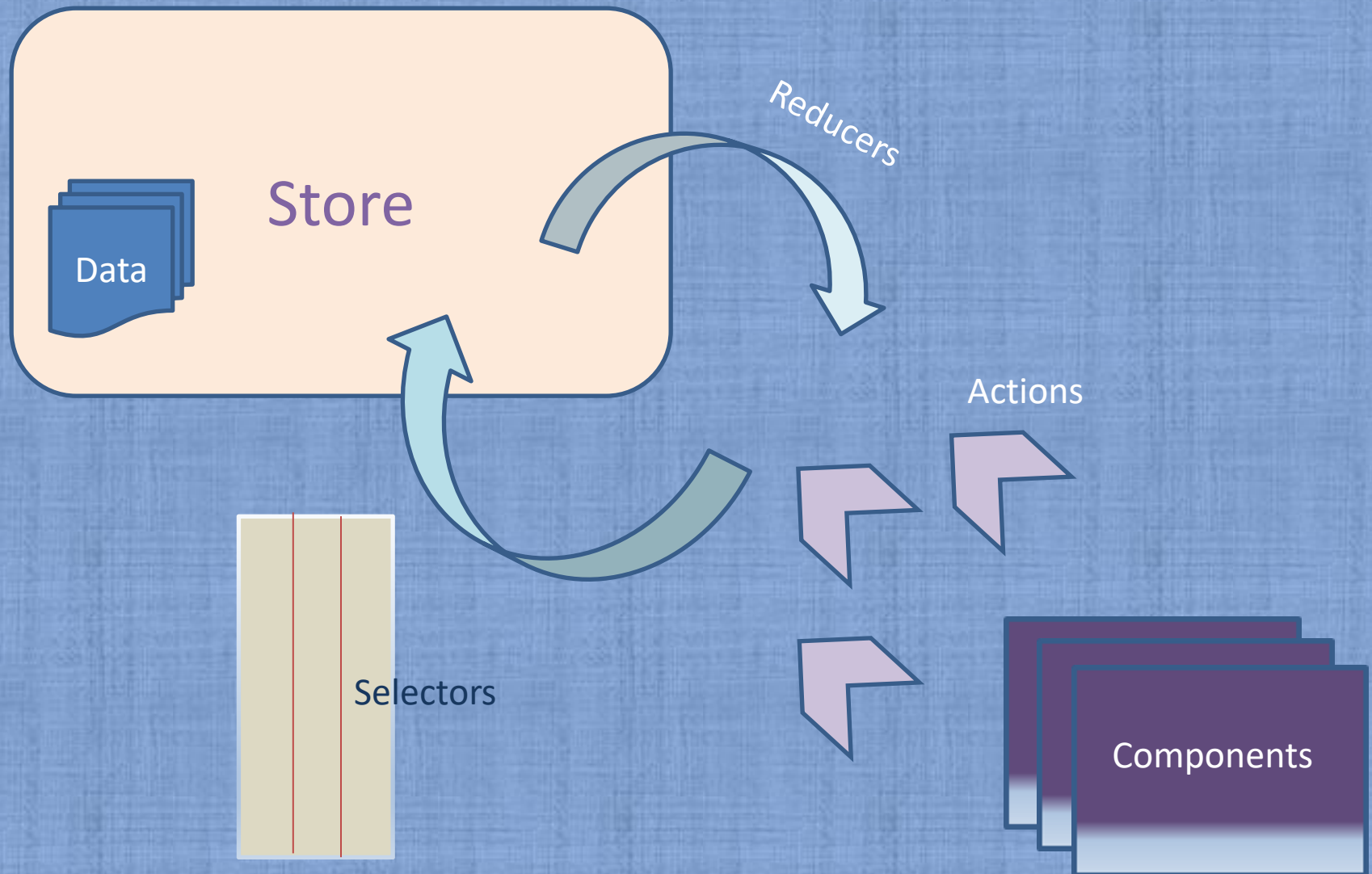
Possible Data Flow



What store is for?

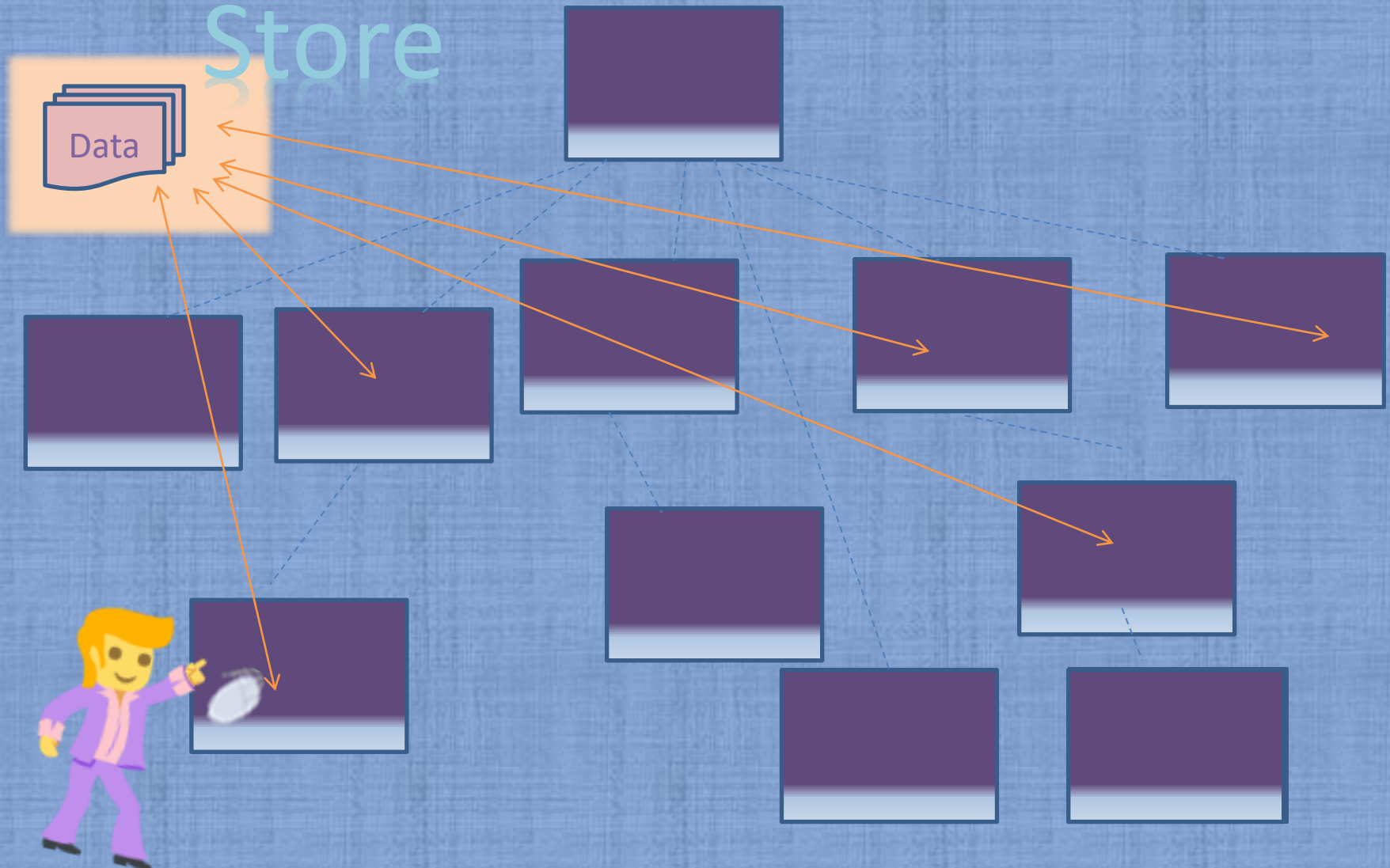
Application wide state / Global State

NgRx Model

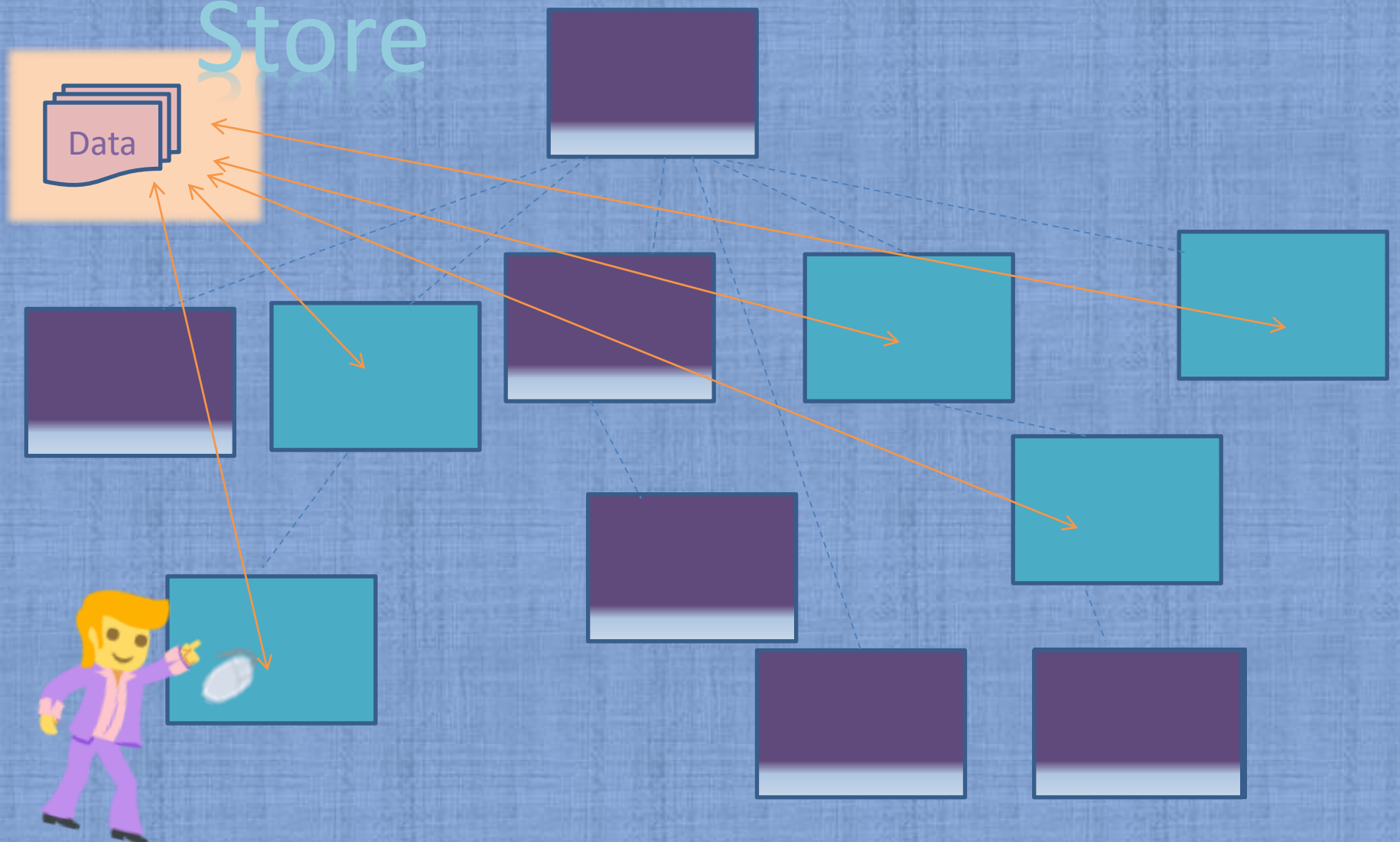


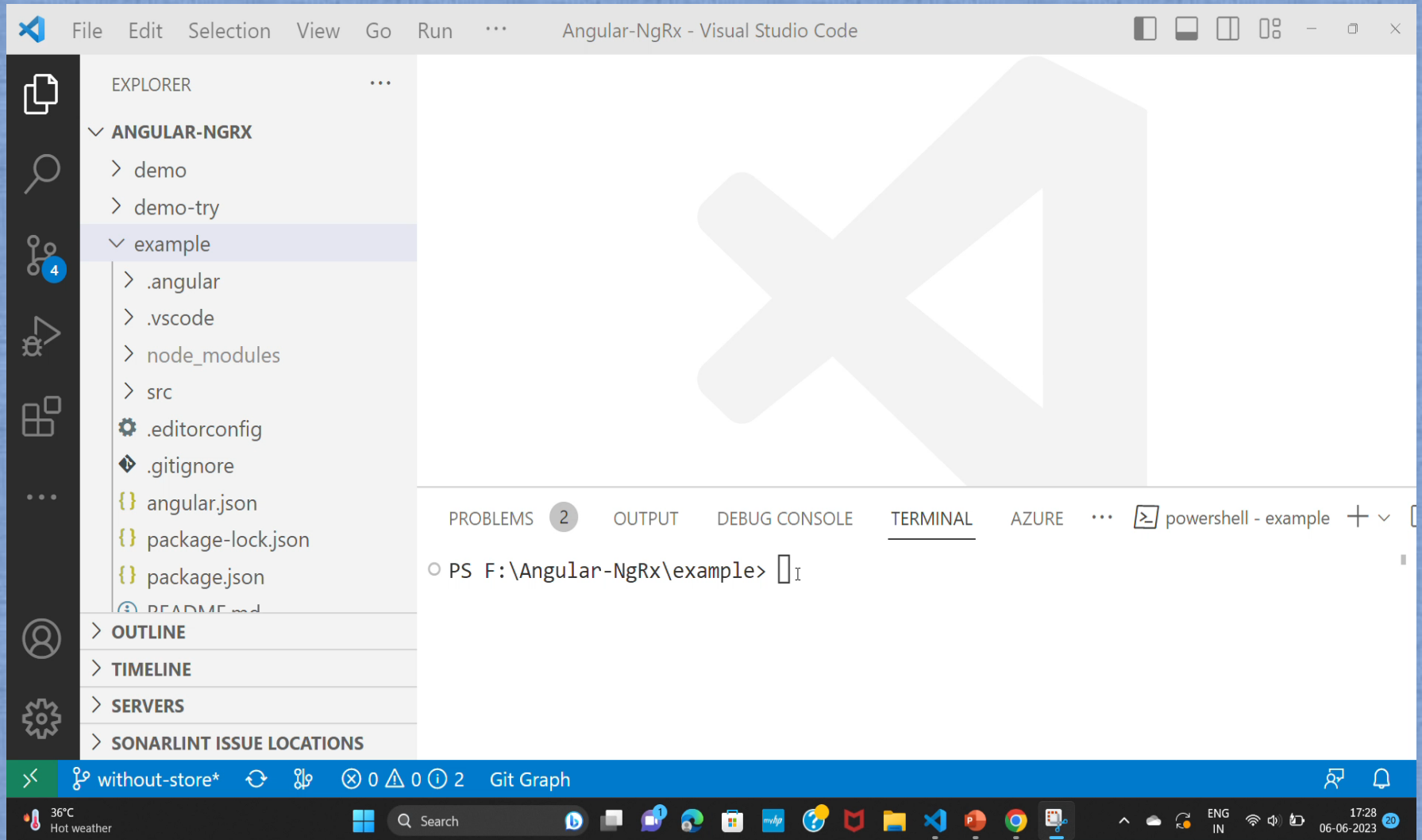
With Store

Store



Store





StoreModule

Visual Studio Code interface showing the Angular-NgRx project structure and the `app.module.ts` file.

EXPLORER

- ANGULAR-NGRX
 - child-sara
 - child-tom
 - grand-parent
 - parent
 - TS app-routing.mod...
 - app.component.h...
 - app.component.s...
 - TS app.component.s...
 - TS app.component.ts
 - TS app.module.ts
 - TS babycare.actions.ts
 - TS babycare.red... 5
 - TS material.module.ts
- OUTLINE
- TIMELINE
- SERVERS
- SONARLINT ISSUE LOCATI...

app.module.ts - Angular-NgRx - Visual Studio Code

```
example > src > app > TS app.module.ts > AppModule
14 import { BrowserModule }
15 | | | from '@angular/platform-browser/animations';
16 @NgModule({
17   declarations: [
18     AppComponent,
19     ChildSaraComponent,
20     ChildTomComponent,
21     GrandParentComponent,
22     ParentComponent
23   ],
24   imports: [
25     BrowserModule,
26     StoreModule.forRoot({babycare:babycareReducer}, {}),
27     AppRoutingModule,
28     MaterialModule,
29     BrowserAnimationsModule
30   ],
31   providers: [],
```

An orange arrow points from the `StoreModule.forRoot` call in the `imports` array to the `StoreModule` entry in the `declarations` array.

Bottom status bar: main* 0 5 1 Git Graph You, 3 days ago Ln 20, Col 23 Spaces: 2 UTF-8 CRLF {} TypeScript 11:57 05-06-2023

Actions

The screenshot displays the Visual Studio Code interface with the following components:

- Explorer Panel:** Shows the project structure under 'ANGULAR-NGRX'. The file 'babycare.actions.ts' is selected and highlighted in blue.
- Editor Panel:** Displays the code for 'babycare.actions.ts'. The code includes an import for 'createAction' from '@ngrx/store' and seven exported action constants: 'hungrySara', 'thirstySara', 'hungryTom', 'thirstyTom', and 'resetAct'. Each action is created using the 'createAction' function with a specific payload string.
- Terminal Panel:** Shows a successful compilation message: '✓ Compiled successfully.'
- Status Bar:** Indicates the current file is 'main*', the encoding is 'UTF-8', and the line/col position is 'Ln 7, Col 59'.
- System Tray:** Shows the system clock as 13:11 on 05-06-2023 and the weather as 33°C Sunny.

```
1 import { createAction } from "@ngrx/store";
2
3 export const hungrySara = createAction('[hungry child1] Feed1');
4 export const thirstySara = createAction('[Thirsty child1] GiveWater1');
5 export const hungryTom = createAction('[hungry child2] Feed2');
6 export const thirstyTom = createAction('[Thirsty child2] GiveWater2');
7 export const resetAct = createAction('[Resetting] reset');
```


Reducers

babycare.reducer.ts - Angular-NgRx - Visual Studio Code

EXPLORER

- ANGULAR-NGRX
 - grand-parent.compone...
 - grand-parent.compone...
 - parent
 - app-routing.module.ts
 - app.component.html
 - app.component.sass
 - app.component.spec.ts
 - app.component.ts
 - app.module.ts
 - babycare.actions.ts
 - babycare.reducer.ts**
 - material.module.ts
 - messages.ts

OUTLINE

TIMELINE

SERVERS

SONARLINT ISSUE LOCATIONS

TS babycare.reducer.ts

```
example > src > app > TS babycare.reducer.ts > ...
You, 10 minutes ago | 1 author (You)
1 import { createReducer, on } from "@ngrx/store";
2 import { hungrySara, hungryTom, resetAct, thirstySara, thirstyTom } from
3
4 export const initialState = {m1:'All Good',
5 m2:'All Good'};
6 export const babycareReducer = createReducer(
7   initialState,
8   on(hungrySara,(state)=>state= {m1: "Sara is hungry..Grandma gave some
9   on(thirstySara,(state)=>state={m1:state.m1,m2:"Sara is thirsty..Grand
10  on(hungryTom,(state)=>state= {m1: "Tom is hungry..Grandma gave some c
11  on(thirstyTom,(state)=>state={m1:state.m1,m2:"Tom is thirsty..Grandma
12  on(resetAct,(state)=>state={m1:'All Good',m2:'All Good'})
13 );
```

PROBLEMS OUTPUT TERMINAL

node - example

✓ Compiled successfully.

main* 0 0 Git Graph You, 3 days ago Ln 5, Col 16 Spaces: 4 UTF-8 CRLF {} TypeScript

Breaking news 13:13 05-06-2023

Links to download material

- Github Link :

<https://github.com/sangeeta-brewtechblue/AngularNgRxDemo.git>

- Website

<https://brewtechblue.com/>



Thank You

Sangeeta Joshi

sangeeta.joshi@brewtechblue.com

India : 91 9881304953

UK : 44 7920599184