FLORIAN THOM
RICO STUCKE
JENNIFER VORMANN

THYROHELPIII

UNBESCHWERT LEBEN MIT SCHILDDRÜSEN KRANKHEIT

Die Idee

WHY WE DO WHAT WE DO

DIE SCHILDDRÜSE

KLEINES ORGAN MIT GROßER WIRKUNG

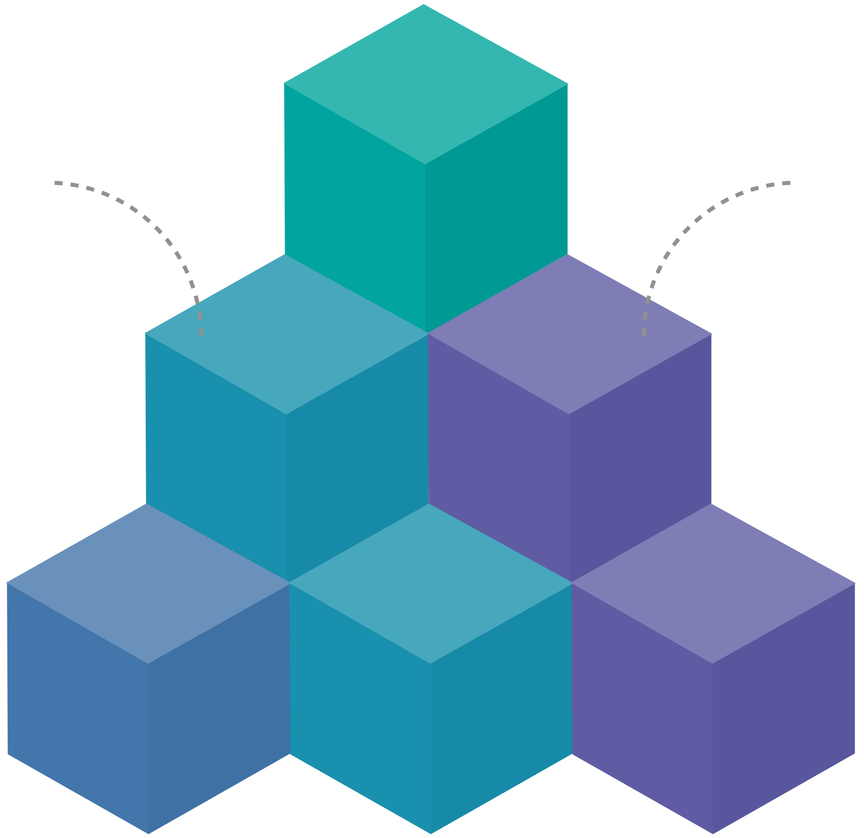
ALLGEMEIN

Überfunktion

Unterfunktion

Vergrößerung der Schilddrüse

Knoten in der Schilddrüse



AUTOIMMUN-ERKRANKUNGEN

- Vermehrte Antikörper
- Zerstört sich selbst
- Teils zu viele Hormone im Körper
- Kann schwanken zwischen den Typen

Hashimoto

Schilddrüsenunterfunktion

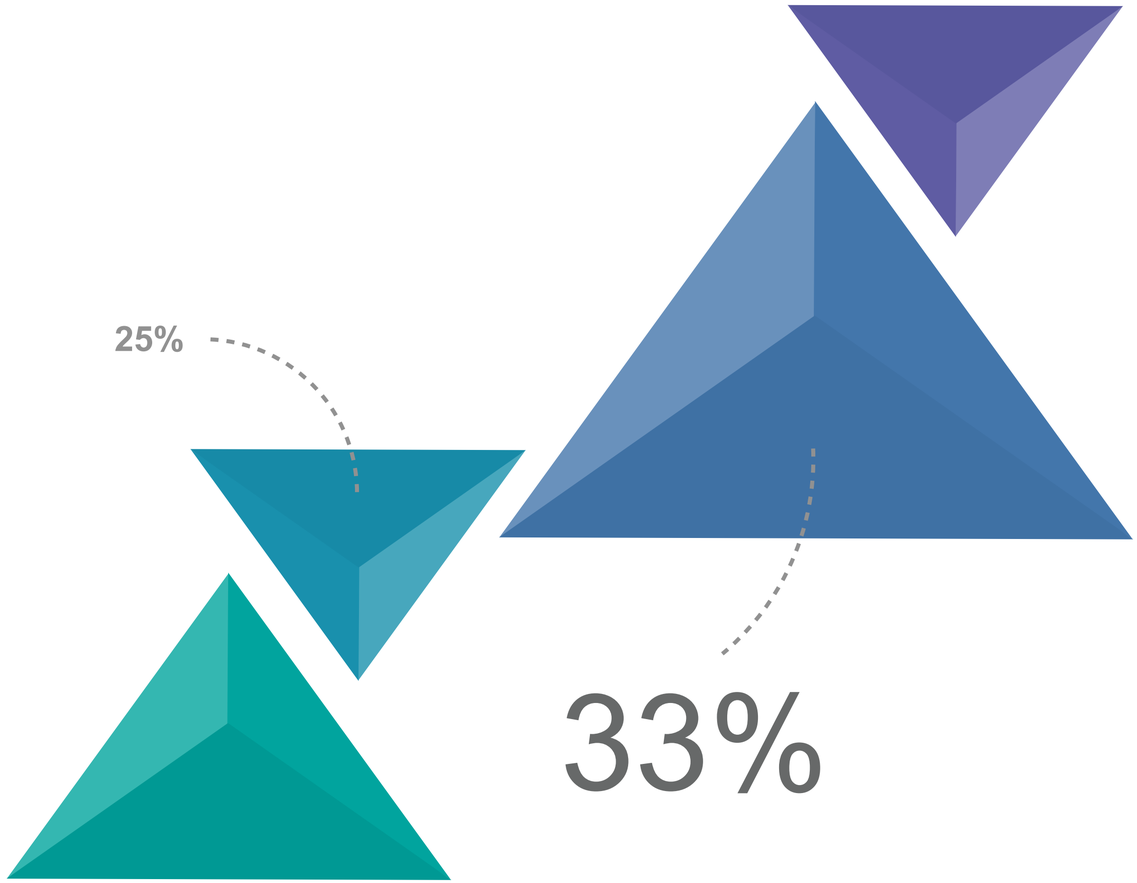
Morbus-Basedow

Schilddrüsenüberfunktion

WARUM

SCHILDDRÜSE ?

- Psyche
- Energieverbrauch - Gewicht
- Kälte/Wärmeempfinden
- Blutdruck
- Blutfettwerte - Cholesterin
- Augen
- Haare, Haut, Nägel



Sport & Ernährung haben positiven ODER negativen Einfluss

Stress ist Gift

Symptome und Stimmung variieren täglich

Tagebuch

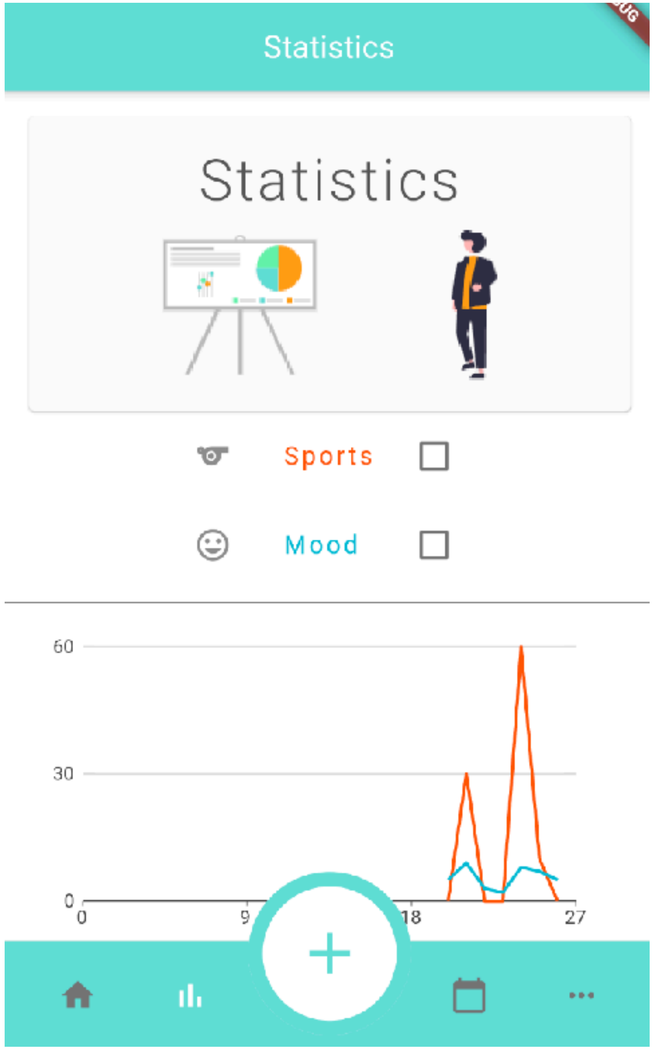
- Mood & Stress
- Symptome
- Schlaf
- Aktivität
- Ernährung

Statische Auswertungen
Korrelationen

gute Usability
Multilingual

THYROHELPIII

UNBESCHWERT LEBEN MIT SCHILDDRÜSEN KRANKHEIT



Die Lösung

TECHNICAL IMPLEMENTATION

VORGEHEN

WHAT AND WHEN

Anforderungsanalyse
Konkurrenz-Analyse

Backlog - Trello
ER-Modell
Personas
Repository

Minimum Viable Product
Definition of Done

Umsetzung

- Frontend
- Backend

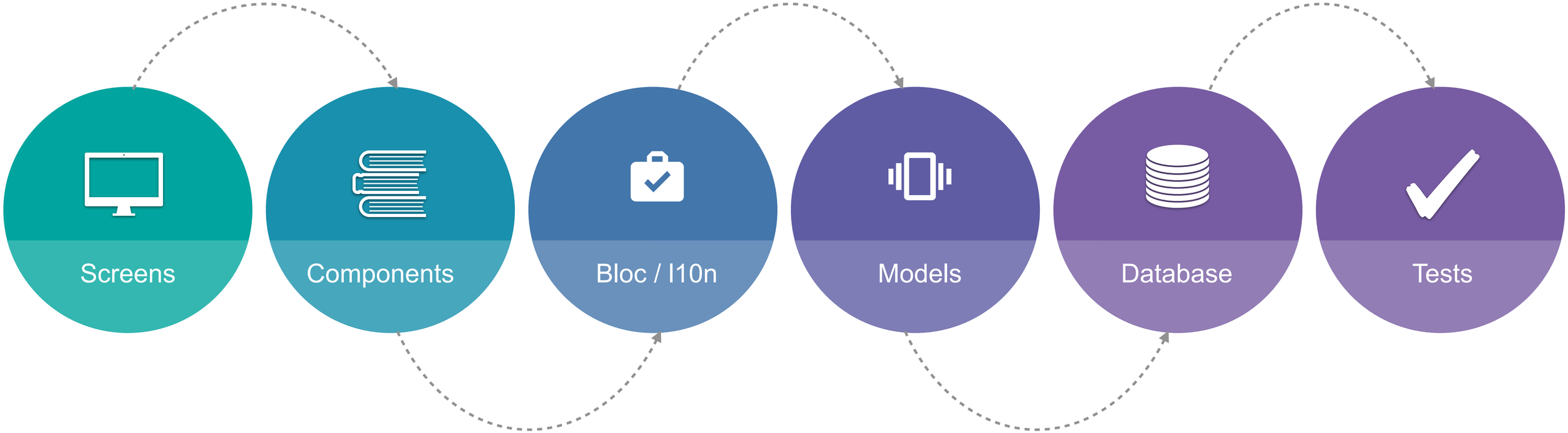
Flutter/Dart

sqflite

Android Studio

ERGEBNISSE

TECHNISCHE UMSETZUNG

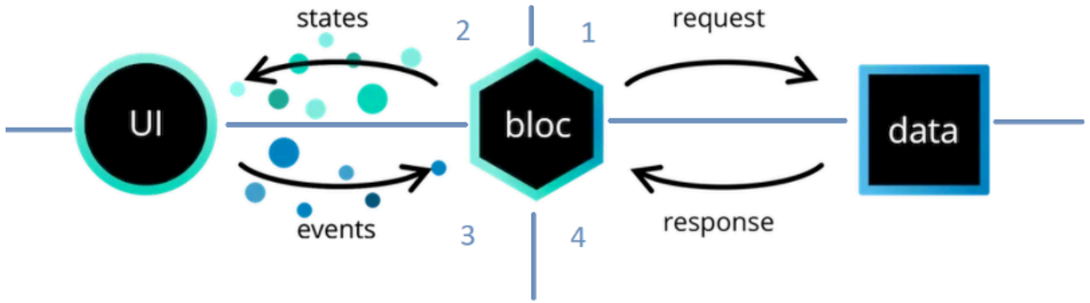


LIVE DEMO

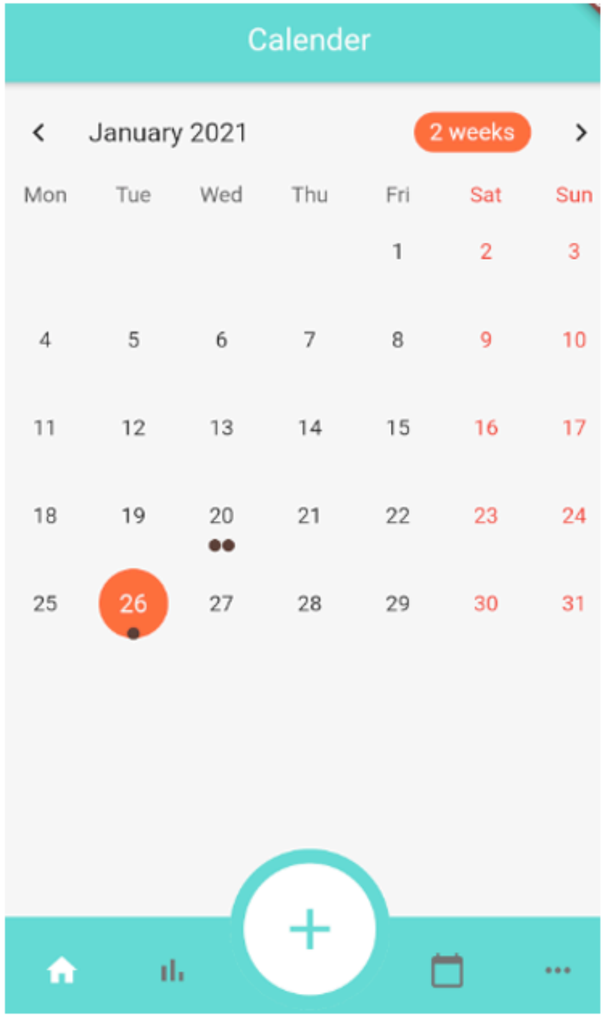
DIE THYROHELPIII APP

BLOC PATTERN

OVERARCHING STATE MANAGEMENT

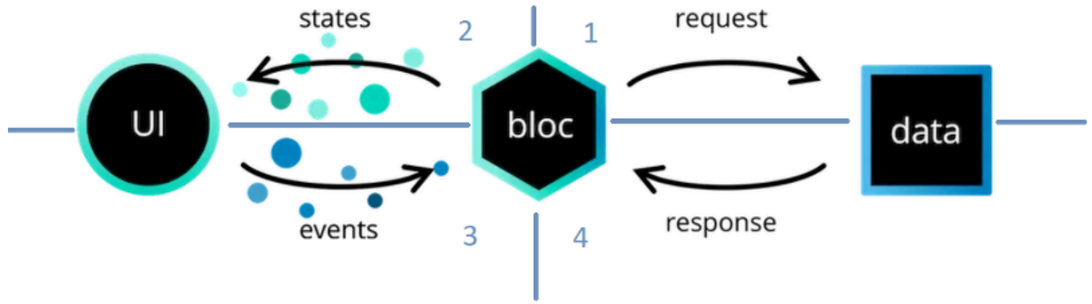



```
onDaySelected: (DateTime day, List events, List holidays) {
  context.read<TableCalenderBloc>().add(SetSelectedDayEvent(day));
},
```



BLOC PATTERN

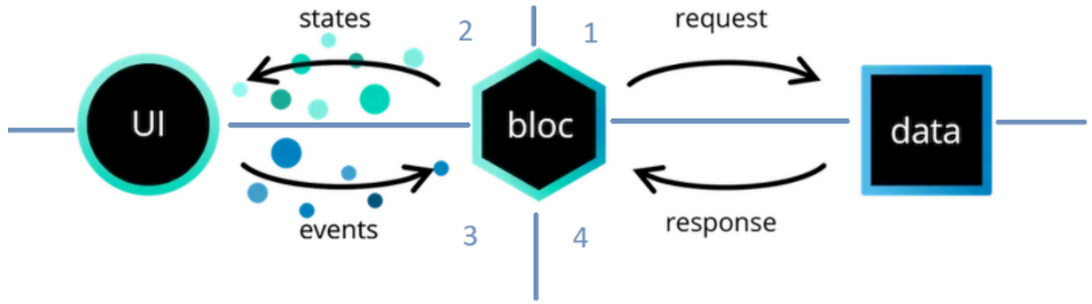
OVERARCHING STATE MANAGEMENT




```dart
abstract class TableCalenderEvent {}

class SetSelectedDayEvent extends TableCalenderEvent {
  DateTime daySelected;

  SetSelectedDayEvent(this.daySelected);
}
```

BLOC PATTERN

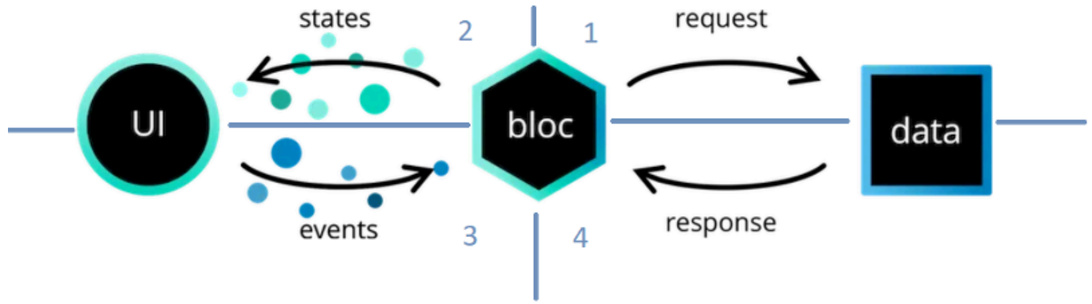
OVERARCHING STATE MANAGEMENT




```dart
class TableCalenderBloc extends Bloc<TableCalenderEvent, TableCalenderState> {
  TableCalenderBloc() : super(TableCalenderState(DateTime.now()));

  @override
  Stream<TableCalenderState> mapEventToState(TableCalenderEvent event) async* {
    if(event is SetSelectedDayEvent)
    {
      var request = event.daySelected;
      var response = TableCalenderState(request);
      yield response;
    }
  }
}
```

BLOC PATTERN

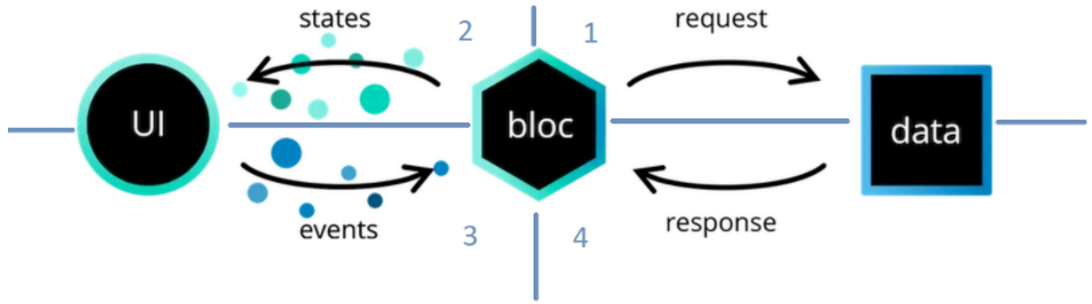
OVERARCHING STATE MANAGEMENT




```dart
class TableCalenderState {
  DateTime daySelected;
  TableCalenderState(this.daySelected);

  // ...
}
```

BLOC PATTERN

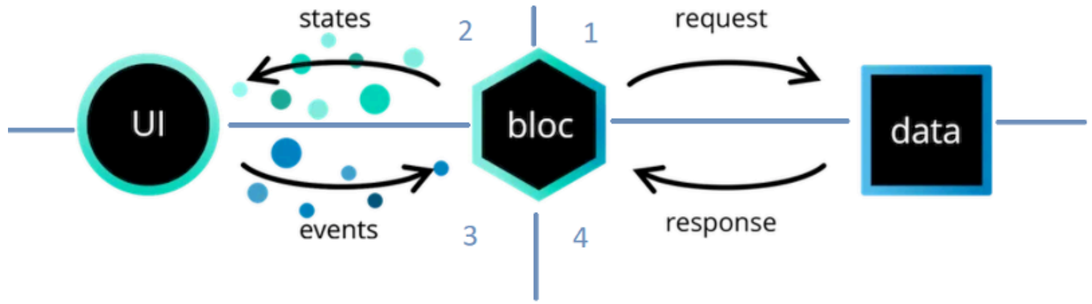
OVERARCHING STATE MANAGEMENT




```dart
class TableCalenderBloc extends Bloc<TableCalenderEvent, TableCalenderState> {
  TableCalenderBloc() : super(TableCalenderState(DateTime.now()));

  @override
  Stream<TableCalenderState> mapEventToState(TableCalenderEvent event) async* {
    if(event is SetSelectedDayEvent)
    {
      var request = event.daySelected;
      var response = TableCalenderState(request);
      yield response;
    }
  }
}
```

BLOC PATTERN

OVERARCHING STATE MANAGEMENT




```
1
2   BlocBuilder<TableCalenderBloc, TableCalenderState>(
3   builder: (context, state) {
4       var diaryEntries = data
5           .where((element) => state.daySelected == DateTime.parse(element.dateString))
6           .toList();
7       print(diaryEntries);
8       return HomeCategoryList(
9           key: UniqueKey(), diaryEntries: diaryEntries);
10  },
11
```

BLOC PATTERN

OVERARCHING STATE MANAGEMENT

```
class MyApp extends StatefulWidget {
  @override
  _MyAppState createState() => _MyAppState();
}


class _MyAppState extends State<MyApp> {
  @override
  Widget build(BuildContext context) {
    return MultiBlocProvider(
      providers: [
        BlocProvider<NavbarBloc>(
          create: (context) => NavbarBloc(),
        ),  // BlocProvider
        BlocProvider<TableCalenderBloc>(
          create: (context) => TableCalenderBloc(),
        ),  // BlocProvider
      ],
      child: MaterialApp(
```

STATISTIC

STATISTICSSCREEN.DART

Checkboxen Mood & Sport: weitere bereits vorbereitet

NumericComboLinePointChart(sampleData)

formatWeek() : Woche als Liste in DateTime
formatDay(List<DateTime> week) : Tag int für x-Achse
intensityOfSport(List<DateTime> week) : Liste Sport Intensität (min) 7 Tage
intensityOfMood(List<DateTime> week) : Liste Mood 1 -10
_createSampleData(_valueSport, _valueMood) : generiert die Charts

STATISTIC

KOVARIANZ - PEARSON KORRELATION

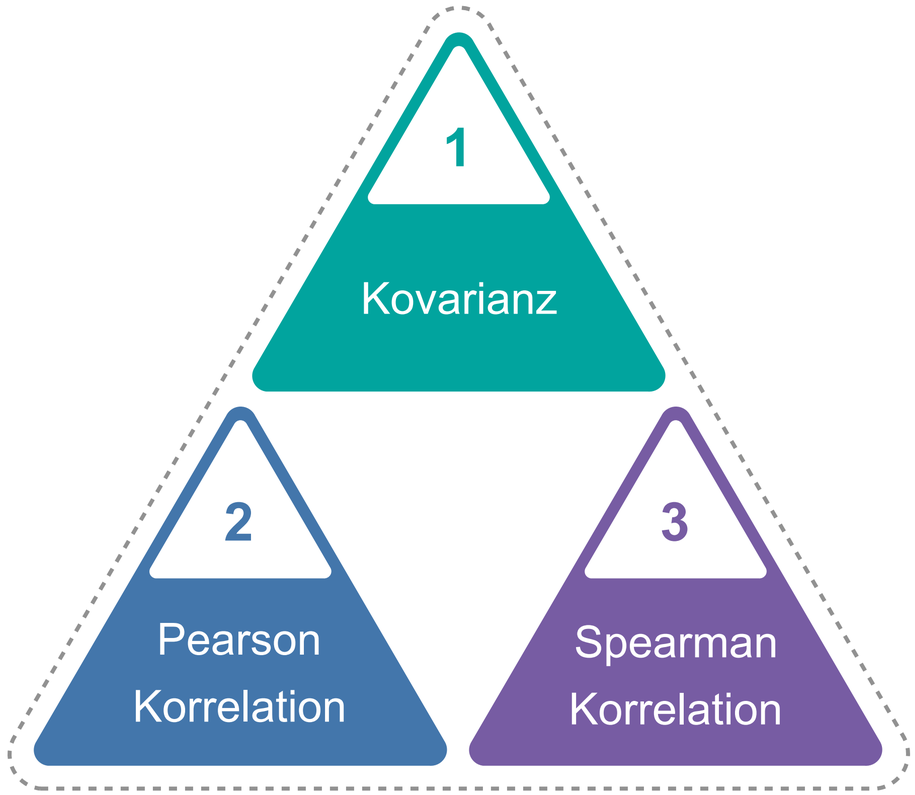
```
double calculateCovariance(Array x, Array y) {
  if (x.length != y.length) return null;

  var sumOfX = x.reduce(
      (previousValue, element) => previousValue + (element - mean(x)));
  var sumOfY = y.reduce(
      (previousValue, element) => previousValue + (element - mean(y)));
  var covariance = (sumOfX * sumOfY * 1 / (x.length - 1));

  return covariance;
}
```

```
double pearsonCorrelation(Array x, Array y) {
  if (x.length != y.length) return null;

  var covariance = calculateCovariance(x, y);
  var stdv = standardDeviation(x) * standardDeviation(y);

  return covariance / stdv;
}
```

STATISTIC

SPEARMAN KORRELATION

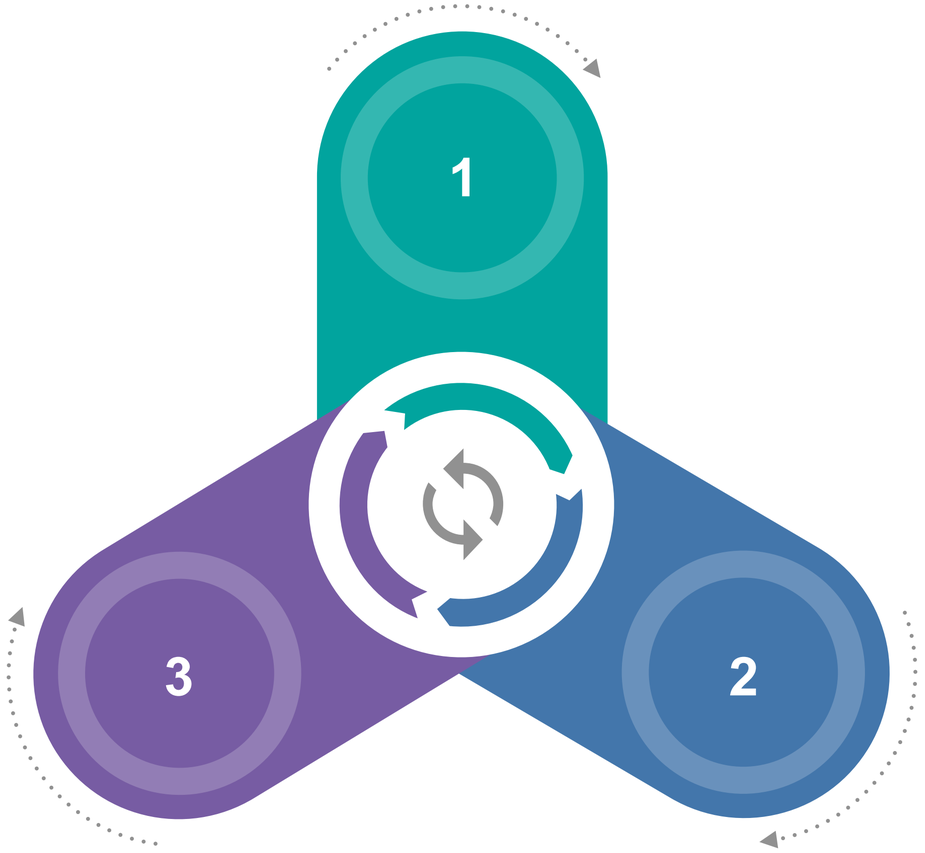
- Korrelation zwischen eventuell nicht linearen, nicht normalverteilten Variablen
- Ergebnis zwischen -1 und 1
- zur Berechnung der relative Rang benutzt statt Messwerte
- Spearman = Kovarianz(rank(X), rank(Y)) / (stdv(rank(X)) * stdv(rank(Y)))
- nimmt monotone Beziehung der Variablen an



AUSBLICK

WHAT COULD BE NEXT

1. Fingercode / Pin für Unlock
   Export in Datei / Import in Dateien statt Login
2. Partiellen Korrelation
   PCA Korrelation
3. UI/UX Design



FLORIAN THOM
RICO STUCKE
JENNIFER VORMANN

VIELEN DANK FÜR DIE AUFMERKSAMKEIT

FRAGEN?

Thyro Helpiii

SOURCES

QUELLENANGABE

https://resocoder.com/2020/08/04/flutter-bloc-cubit-tutorial/