

## MI133 Lab Assignment 1

Due dates:

• group1: 2018/10/26

• group2: 2018/11/02

This is not a group assignment! Students may collaborate, but have to hand in their own version of the calculator.

## **A Calculator**

Consider a simple pocket calculator:



Everybody knows how this device works: The device state consists of:

- the current INPUT
- an accumulator (ACC)
- a pending operation (OP)

But there are some pitfalls:

- the ACC can be empty
- the OP can be empty
- the input can or can not have a fraction
- the input should not contain leading 0s
- C clears input, but if INPUT is initial value it clears ACC
- division by 0
- equal (=) only performs the pending operation on with INPUT and ACC
- operators (+,-,\*,/) behave differently, if ACC is empty

## **Tasks**

Using React and Redux:

- 1. create a user interface according to the mockup
- 2. handle button and keyboard input
- 3. implement proper integer calculator operation
- 4. allow floating point input
- 5. publish the result on Google App Engine