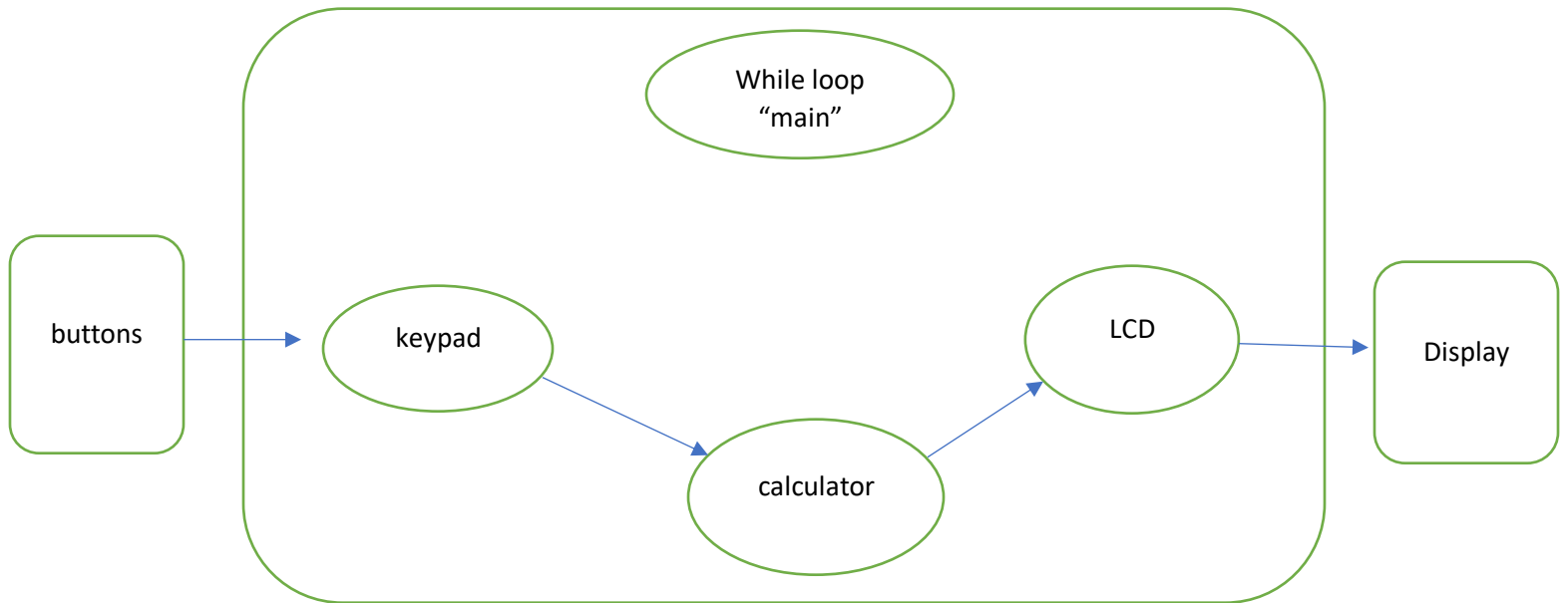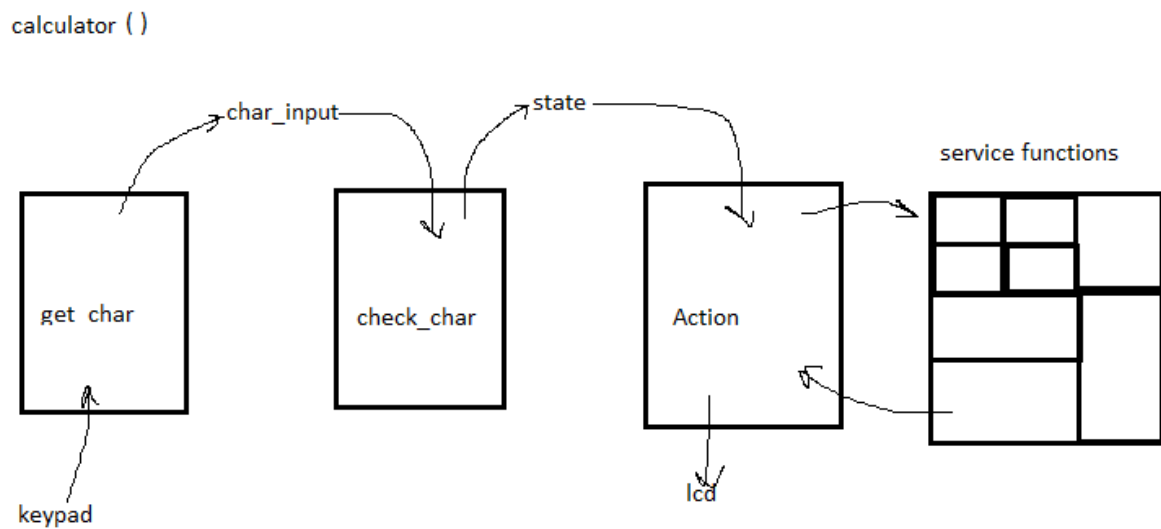**Calculator :** using : AVR32 , LCD , keypad.

Calculator

- calculator()
- calc_init()
- Get_char()
- Check_char()
- Action()

- print_char()
- print_result()
- callback()

- save_number()
- add()
- sub()
- div()
- mul()

calculator ( )

* I have learned with the hard way that **" pointers should be initialized"**

```
                    ( calculator )
                         |
                         v
              +----------------------+
              |  Initialize variables |
              +----------------------+
                         |
                         v
                    /----------\
                   /  Pressed   \        Yes
        +-------->(     'c'      )----------->( END )
        |          \            /
        |           \----------/
        |               |
        |               | No
        |               v
        |          /----------\
        |         /            \
        | No     /   Get_char    \
        +-------(                 )
                 \                /
                  \              /
                   \----------/
                         |
                         | Yes
                         v
                +------------------+
                | Choose the state |
                +------------------+
                         |
         op              v              num
    +------------+      (O)      +---------------+
    |  Send  op  |<-----+------->|  Save number  |
    |  function  |   /  |  \     +---------------+
    +------------+  /   |   \
         |    +----------+  +--------+
         |    | invalid  |= | result |
         |    +----------+  +--------+
         |         |  +-----+   |
         |         |  | 'C' |   |
         |         |  +-----+   |
         |          \   |   /
         |           v  v  v
         |            (O)<------+
         |             |
         |             v
         |        +----------+
         +------->| Index++  |
                  +----------+
```