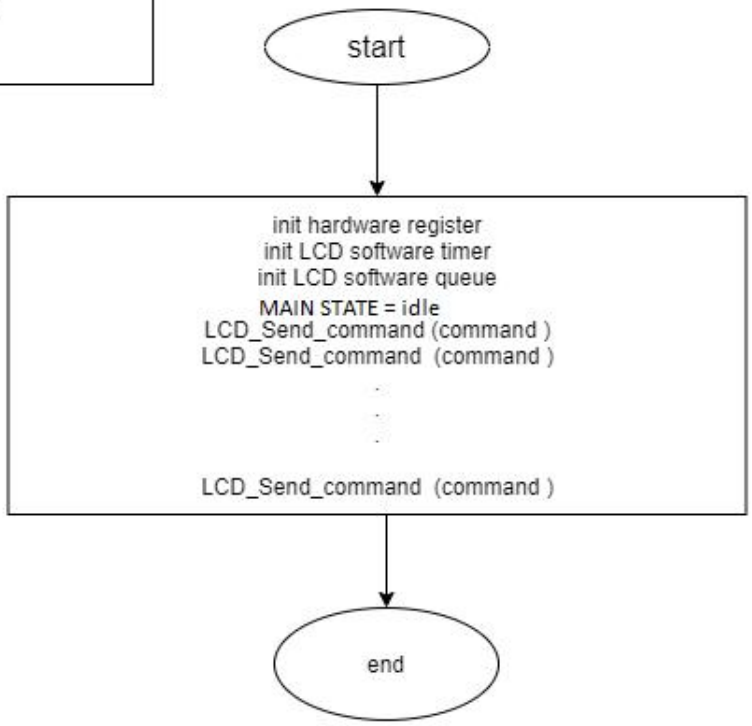
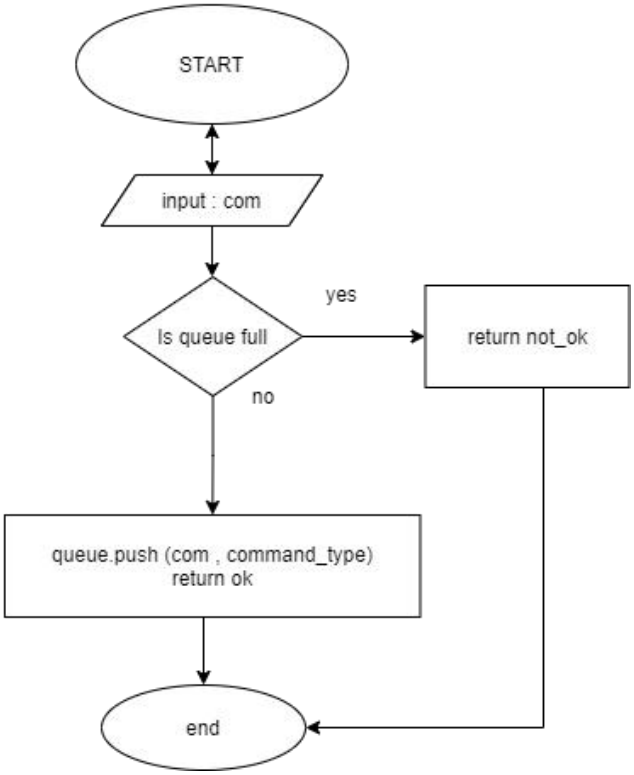
LCD Non Blocking APIs

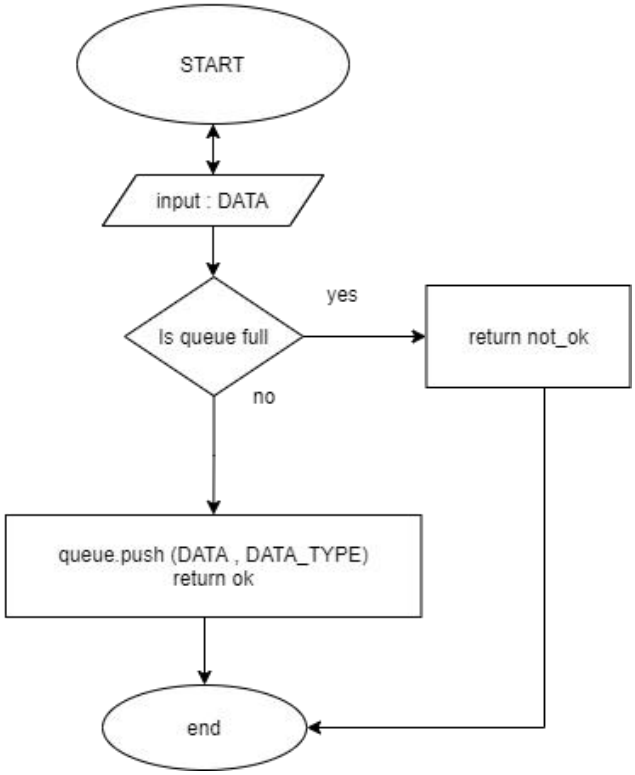
LCD INIT API

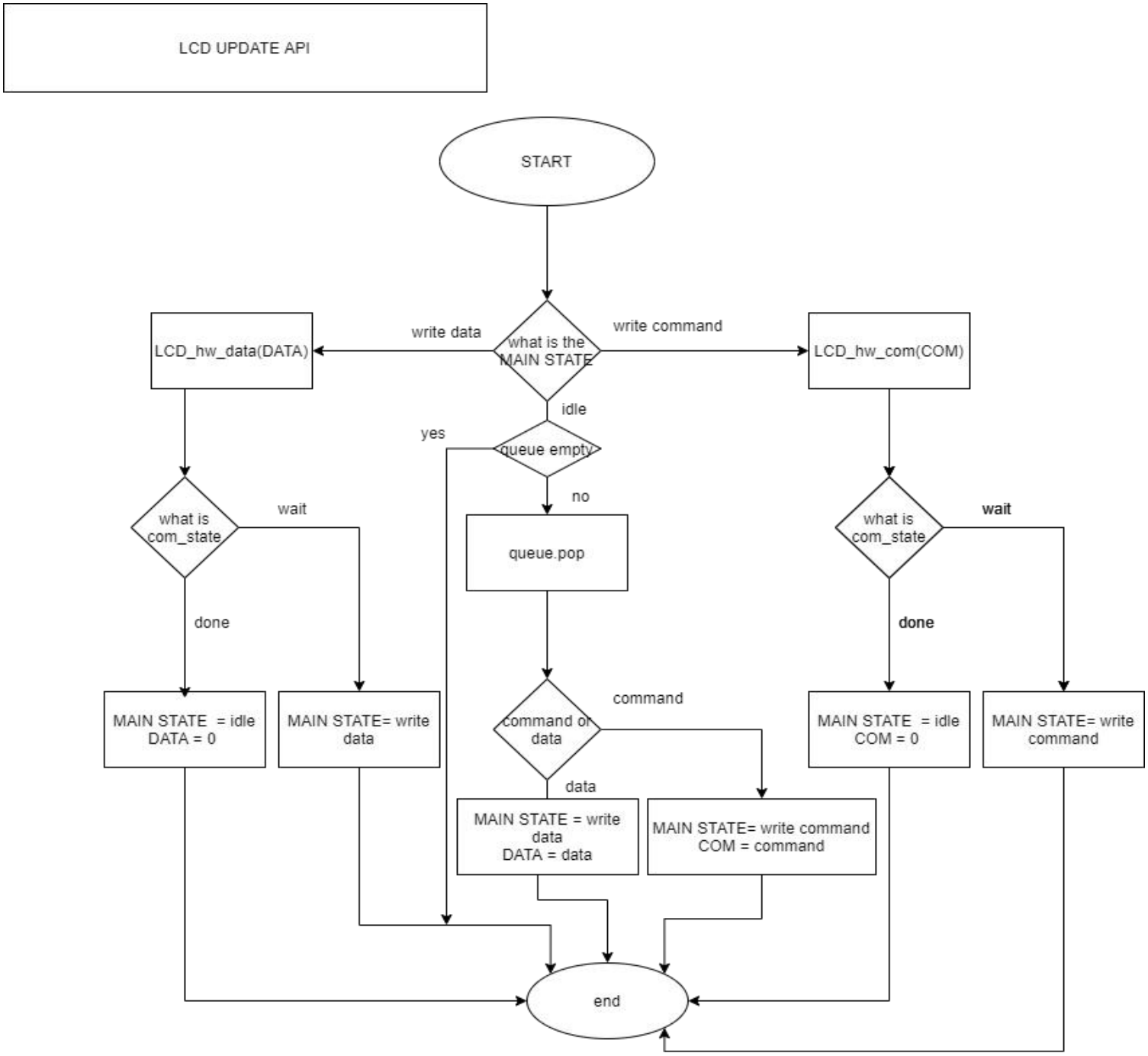


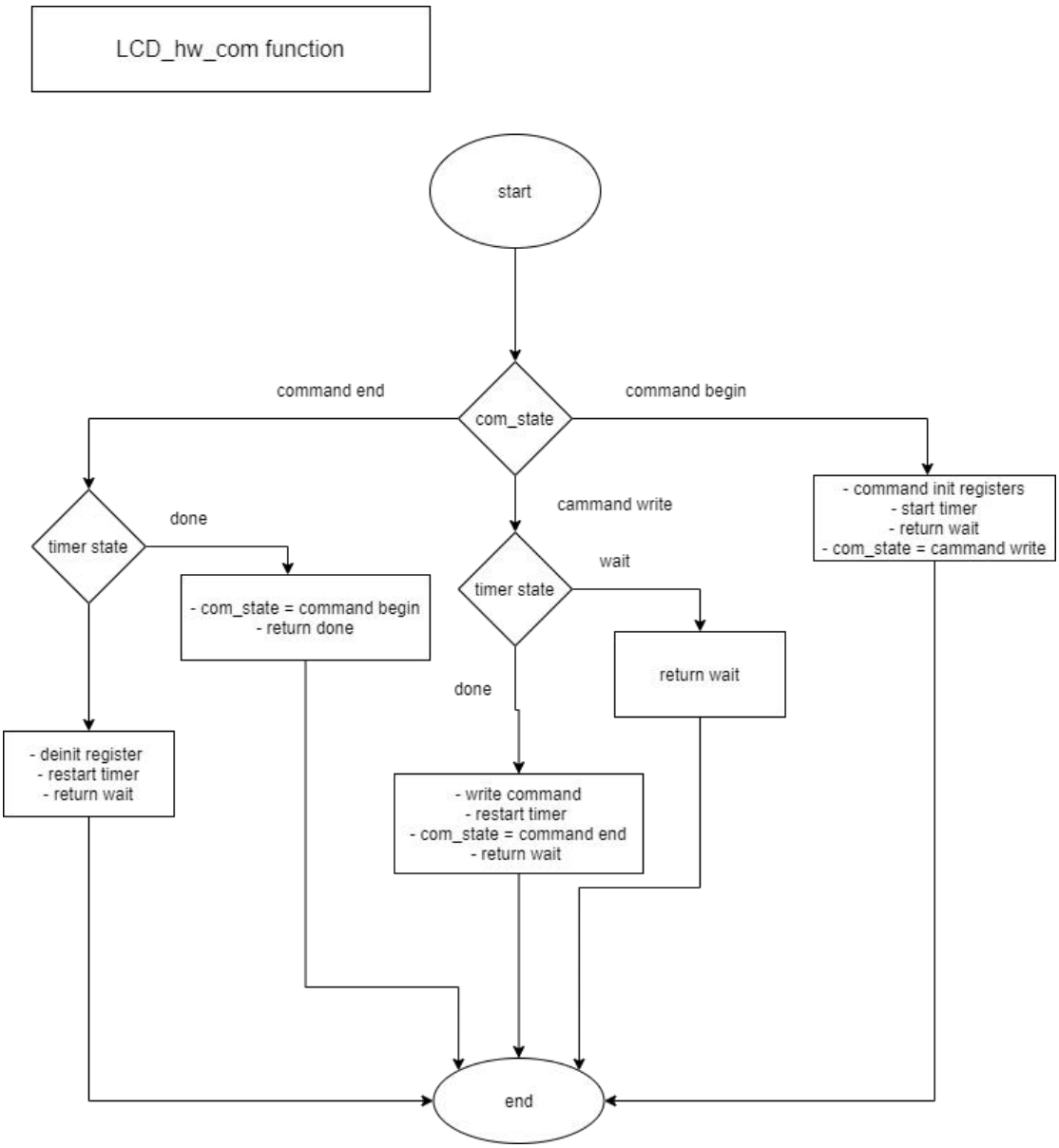
LCD SEND COMMAND API

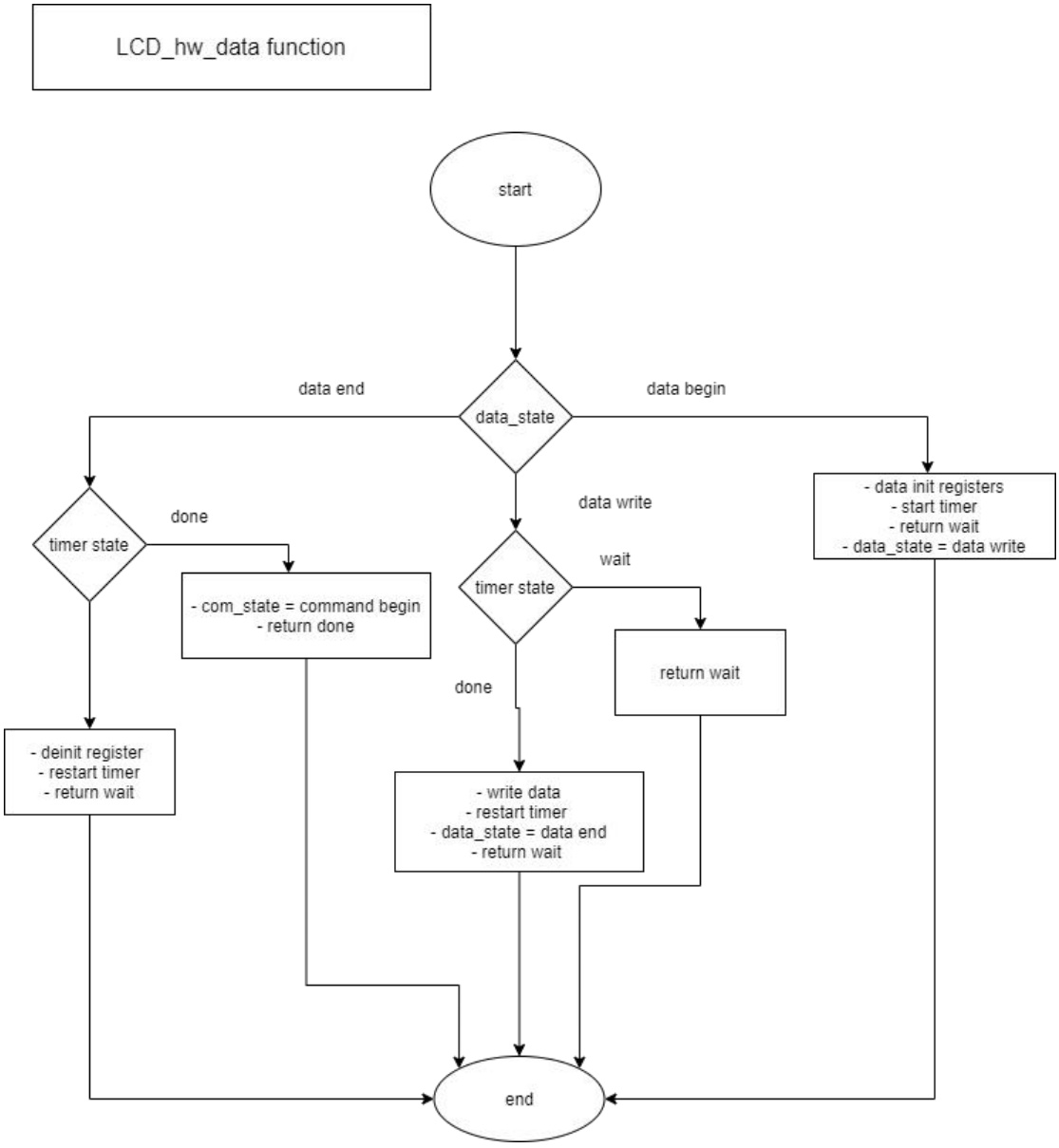


LCD SEND DATA API




LCD UPDATE API
START
what is the MAIN STATE
write data
write command
LCD_hw_data(DATA)
LCD_hw_com(COM)
idle
yes
queue empty
no
what is com_state
wait
done
queue.pop
what is com_state
wait
done
MAIN STATE = idle
DATA = 0
MAIN STATE= write data
command or data
command
data
MAIN STATE = idle
COM = 0
MAIN STATE= write command
MAIN STATE = write data
DATA = data
MAIN STATE= write command
COM = command
end


LCD_hw_com function
start
com_state
command end
command begin
timer state
done
- com_state = command begin
- return done
- deinit register
- restart timer
- return wait
cammand write
timer state
wait
return wait
done
- write command
- restart timer
- com_state = command end
- return wait
- command init registers
- start timer
- return wait
- com_state = cammand write
end


LCD_hw_data function
start
data_state
data end
data begin
data write
timer state
done
- com_state = command begin
- return done
- deinit register
- restart timer
- return wait
timer state
wait
return wait
done
- write data
- restart timer
- data_state = data end
- return wait
- data init registers
- start timer
- return wait
- data_state = data write
end