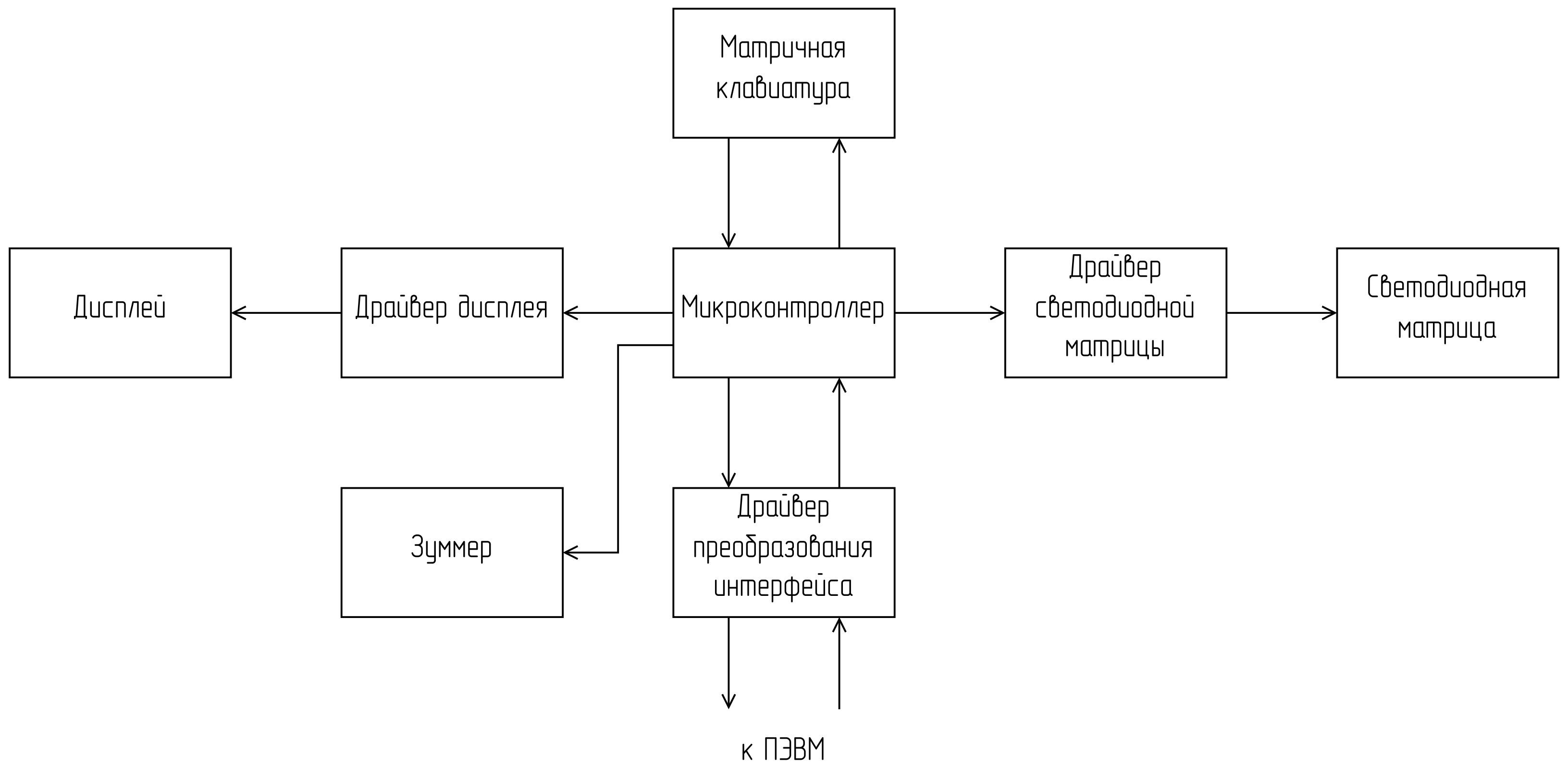
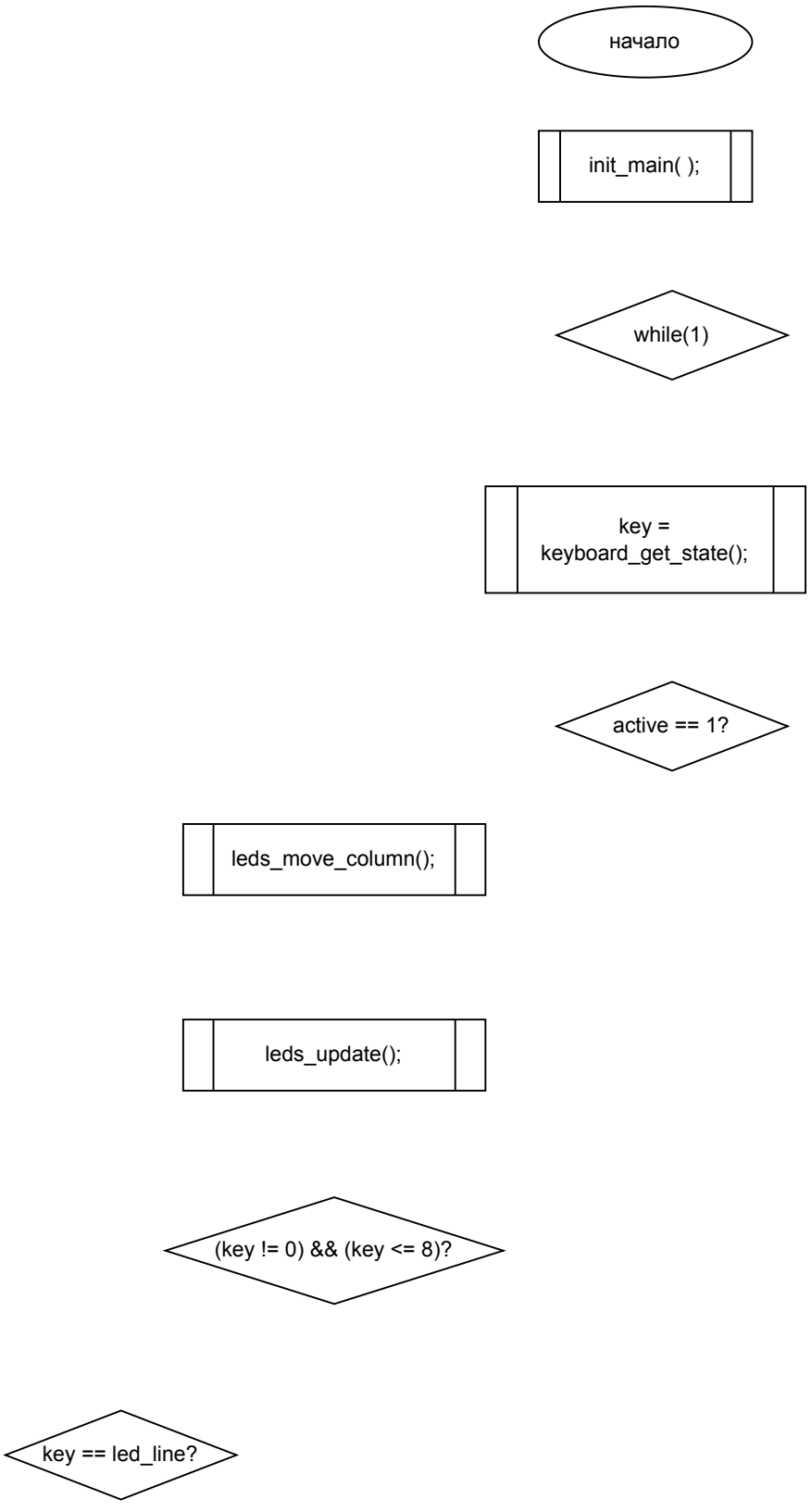
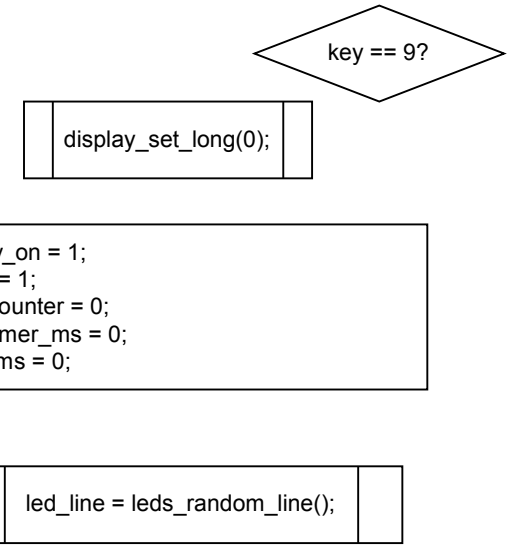
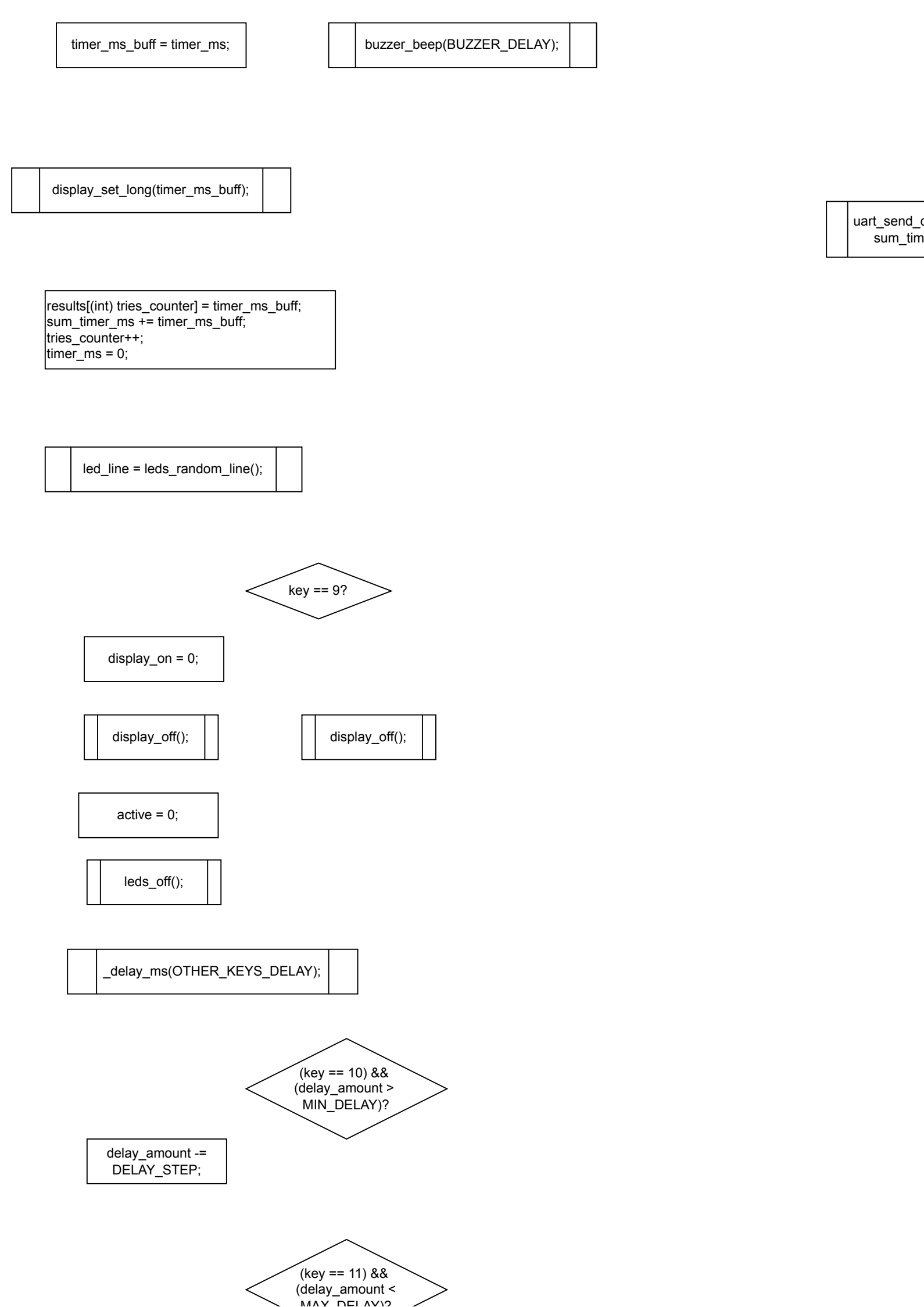
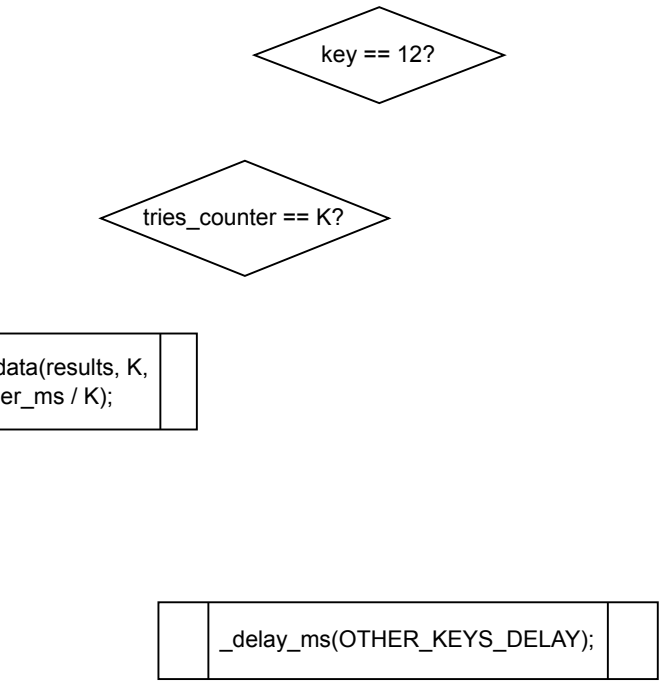
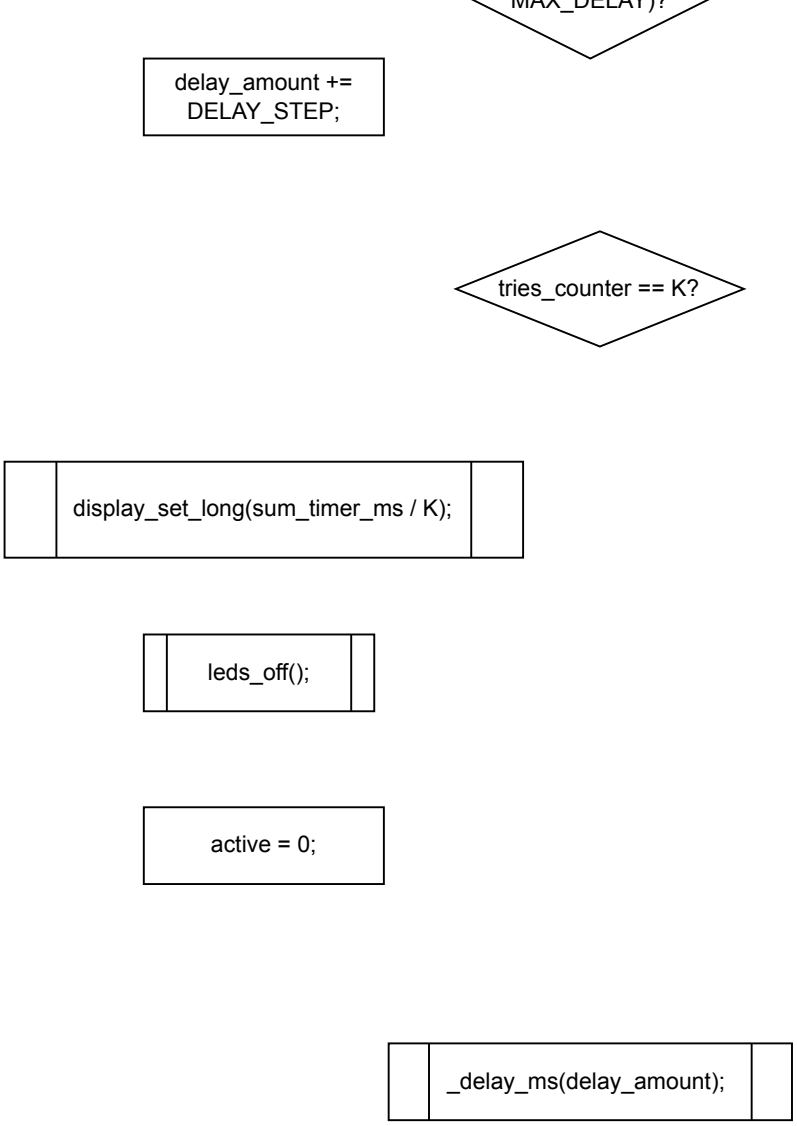

Матричная клавиатура
Дисплей
Драйвер дисплея
Микроконтроллер
Драйвер светодиодной матрицы
Светодиодная матрица
Зуммер
Драйвер преобразования интерфейса
к ПЭВМ

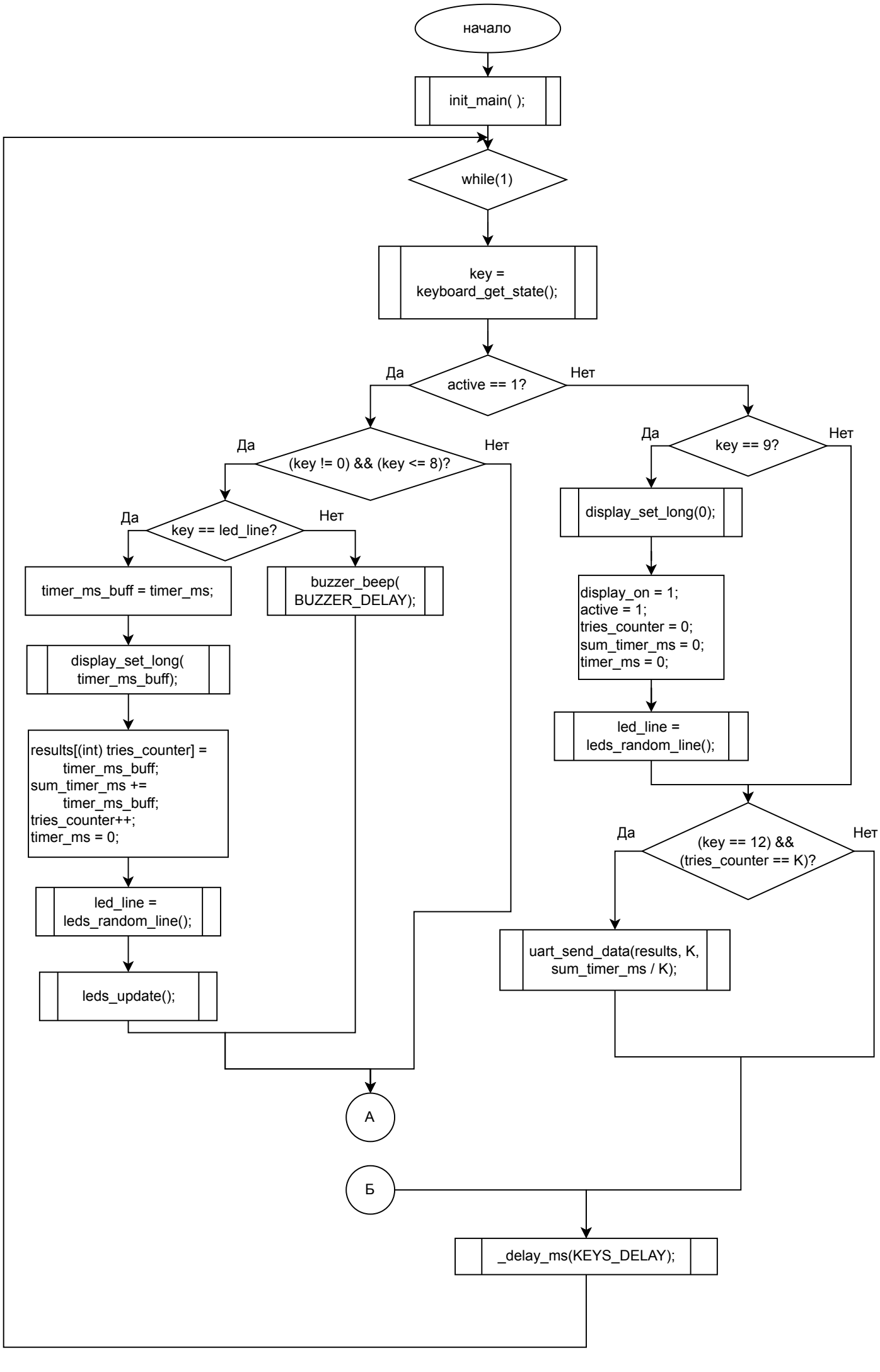

начало
init_main( );
while(1)
key =
keyboard_get_state();
active == 1?
leds_move_column();
leds_update();
(key != 0) && (key <= 8)?
key == led_line?

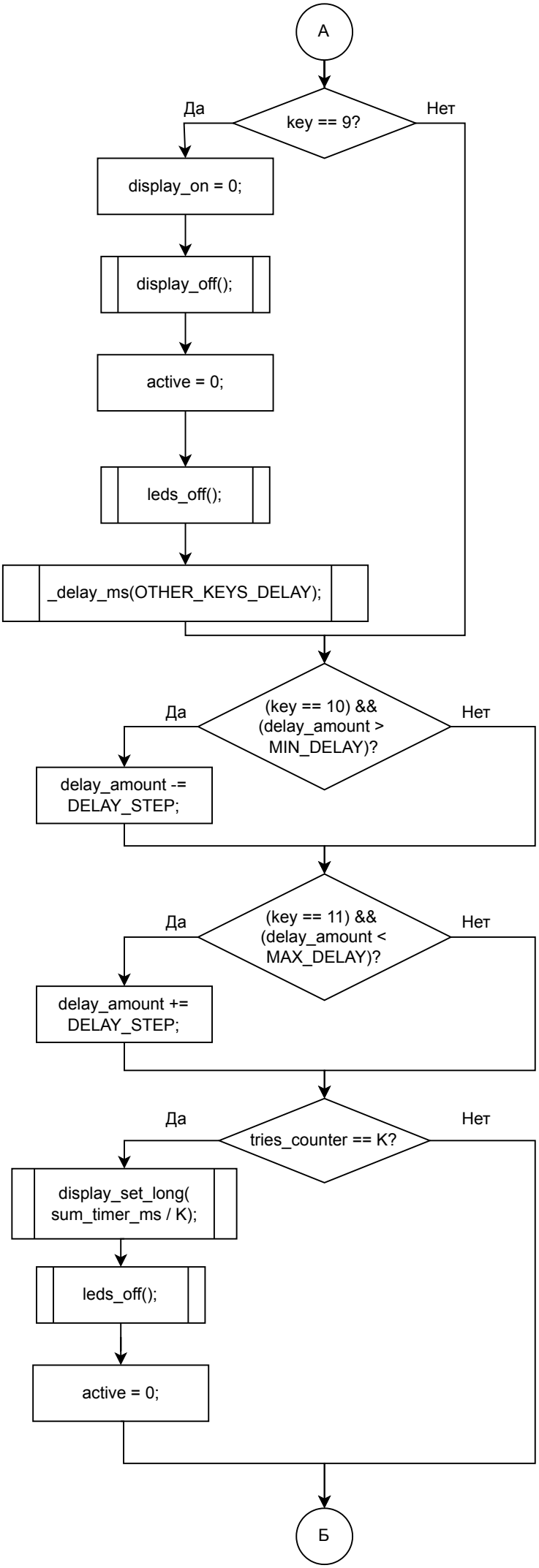

key == 9?
display_set_long(0);
_on = 1;
= 1;
ounter = 0;
mer_ms = 0;
ms = 0;
led_line = leds_random_line();


timer_ms_buff = timer_ms;
buzzer_beep(BUZZER_DELAY);
display_set_long(timer_ms_buff);
uart_send_c
sum_tim
results[(int) tries_counter] = timer_ms_buff;
sum_timer_ms += timer_ms_buff;
tries_counter++;
timer_ms = 0;
led_line = leds_random_line();
key == 9?
display_on = 0;
display_off();
display_off();
active = 0;
leds_off();
_delay_ms(OTHER_KEYS_DELAY);
(key == 10) &&
(delay_amount >
MIN_DELAY)?
delay_amount -=
DELAY_STEP;
(key == 11) &&
(delay_amount <


key == 12?
tries_counter == K?
data(results, K,
er_ms / K);
_delay_ms(OTHER_KEYS_DELAY);


MAX_DELAY)?
delay_amount += DELAY_STEP;
tries_counter == K?
display_set_long(sum_timer_ms / K);
leds_off();
active = 0;
_delay_ms(delay_amount);


начало
init_main( );
while(1)
key = keyboard_get_state();
active == 1?
Да
Нет
(key != 0) && (key <= 8)?
Да
Нет
key == led_line?
Да
Нет
timer_ms_buff = timer_ms;
buzzer_beep(BUZZER_DELAY);
display_set_long(timer_ms_buff);
results[(int) tries_counter] = timer_ms_buff;
sum_timer_ms += timer_ms_buff;
tries_counter++;
timer_ms = 0;
led_line = leds_random_line();
leds_update();
key == 9?
Да
Нет
display_set_long(0);
display_on = 1;
active = 1;
tries_counter = 0;
sum_timer_ms = 0;
timer_ms = 0;
led_line = leds_random_line();
(key == 12) && (tries_counter == K)?
Да
Нет
uart_send_data(results, K, sum_timer_ms / K);
А
Б
_delay_ms(KEYS_DELAY);


A
key == 9?
Да
Нет
display_on = 0;
display_off();
active = 0;
leds_off();
_delay_ms(OTHER_KEYS_DELAY);
(key == 10) && (delay_amount > MIN_DELAY)?
Да
Нет
delay_amount -= DELAY_STEP;
(key == 11) && (delay_amount < MAX_DELAY)?
Да
Нет
delay_amount += DELAY_STEP;
tries_counter == K?
Да
Нет
display_set_long(sum_timer_ms / K);
leds_off();
active = 0;
Б