Please enhance the following program by this specification:

The current states remain as they are the new states have to be incorperated correctly to the existing states. They are like a layer above the existing states.

There are two simple press buttons to be observed. Their status is: Pressed/Not Pressed. Those are the hardware buttons: ttps://www.bastelgarage.ch/m5stack-mini-dual-button-unit?search=m5stack%20mini%20dual%20button%20unit

Button connection to Arduino Nano

Red Button connected to D10

Blue Button connected to D11

Per default, when the program starts, the Game State is NO\_LED which means game is not in ATTRACT, GAME\_RUN, EFFECT\_ACTIVE state.

NO\_LED means the led stripe is off - dark

The following Events must be handled properly

1. Red Button Pressed toggles Game States between NO\_LED/ALL\_LED

ALL\_LED means the game can enter all states ATTRACT, GAME\_RUN, EFFECT\_ACTIVE

NO\_LED means game cannot enter any of those states ATTRACT, GAME\_RUN, EFFECT\_ACTIVE, the led stripe is off - dark

2. Blue Button pressed

If the blue button is pressed and the game is in state ALL\_LED this button toggles between

ALL\_LED\_ALL\_STATES -> game can enter all states ATTRACT, GAME\_RUN, EFFECT\_ACTIVE

ALL\_LED\_RUN\_ONLY -> game will immediatley enter GAME\_RUN state where the LED will be light with a constant RGB 128,128,128

IF the game is in state NO\_LED button press has no effect

3. Blue button long pressed, longer then one second game enters in state

SET\_BRIGHTNESS

when entering SET\_BRIGHTNESS state the led strip color is set to red

a counter starts after one second, the counter variable is called brightness.

The counter is incremented every 50ms until 255 is reached, then it starts again at one.

Every time the counter is increased the brightness of the LED stripe is set to the according brightness value

This continues until the button is released again. The current value is then saved.

When the button is released the games goes back to it's previous state

4. Red Button double click - two clicks within one second:

The game immediately goes to ALL\_LED state, the brightness is set to 255.