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# LAB 5

In the last Lab we implemented the System that was described in Lab 4. Our part was to implement the Master Node. The Master is the gamemaster and chose one of three colors (green, blue, red) and transmits a message via CAN to all other nodes. To visualize the chosen color, we used an RGB-LED.

## Pins:

|  |  |  |
| --- | --- | --- |
| **Name** | **Port** | **Pin** |
| button | P4[0] | 69 |
| Pin\_USR\_SW1 | P1[2] | 22 |
| Blue\_out | P6[5] | 7 |
| Green\_out | P6[4] | 6 |
| Red\_out | P12[5] | 5 |
| RX\_CAN | P2[5] | 1 |
| TX\_CAN | P2[6] | 2 |

## Code:

In an infinite for-loop, the main loop, we ask if a button (PIN\_USR\_SW1 or the external button) is pressed. If one of this button was pressed, we start the routine that lets the LED blink in different Colors and finally choses a random color. The chosen color, will be transmitted via CAN.

One of our problems was the random function. At first, we used the time as a seed for the random generator, but the seed was always the same and so the random numbers. Therefore, we implemented a for-loop before we enter the main loop. In this loop we increment a counter as long as the user don’t push one of the two buttons. In the next step this counter will be used as the seed for the random generator.