```
            .data
            .balign 4
red:        .int 3
green:      .int 7
blue:       .int 12
button:     .int 11
delay_time: .int 1000
error:      .asciz "Error in intitializing\n"
OUTPUT      = 1
INPUT       = 0

before_loop:.asciz "Before loop\n"
during_loop:.asciz "During Loop: %d\n"
r5_value:   .asciz "VALUE: %d\n"
result:     .word 0

            .text
            .global main
            .extern printf
            .extern wiringPiSetupPhys
            .extern pinMode
            .extern digitalWrite
            .extern digitalRead
            .extern delay

main:
    push    {r12, lr}
    bl      wiringPiSetupPhys
    mov     r1, #-1
    cmp     r0, r1
    bne     init
    ldr     r0, =error
    bl      printf
    b       exit


init:
    ldr     r0, =button
    ldr     r0, [r0]
    mov     r1, #INPUT
    bl      pinMode

    ldr     r4, =red
    ldr     r4, [r4]
    mov     r6, #1

@While loop
loop:
@digitalRead Setup for (pin)
    ldr     r0, =button
    ldr     r0, [r0]
    bl      digitalRead
    cmp     r0, r6
    bne     loop

@PinMode Setup for Light
lighton:
    mov     r0, r4
    mov     r1, #OUTPUT
    bl      pinMode
@digitalWrite Setup for (pin, 1)
    mov     r0, r4
    mov     r1, #1
    bl      digitalWrite

@delay(200)
```

```
67      ldr     r0, =delay_time
68      ldr     r0, [r0]
69      bl      delay
70  @digitalWrite Setup for (pin, 0)
71      mov     r0, r4
72      mov     r1, #0
73      bl      digitalWrite
74  colorLED:
75      cmp     r4, #3
76      beq     changeGreen
77      cmp     r4, #7
78      beq     changeBlue
79      cmp     r4, #12
80      beq     changeRed
81  changeGreen:
82      ldr     r4, =green
83      ldr     r4, [r4]
84      b       loop
85  changeBlue:
86      ldr     r4, =blue
87      ldr     r4, [r4]
88      b       loop
89  changeRed:
90      ldr     r4, =red
91      ldr     r4, [r4]
92      b       loop
93  exit:
94      pop {r12, pc}
95
```