CPE301 – SPRING 2019

Design Assignment 1A

Student Name: Ron Joshua Recrio

Student #: 5003825419

Student Email: recrio@unlv.nevada.edu

Primary Github address: https://github.com/recrio/submissions

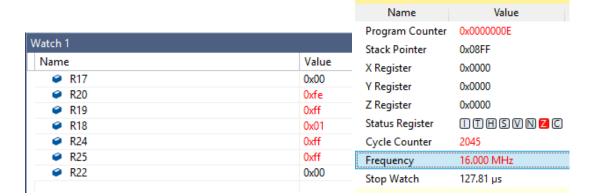
Directory: https://github.com/recrio/submissions/tree/master/DesignAssignments/DA1A

1. INITIAL/MODIFIED/DEVELOPED CODE OF TASK 1/A

```
.ORG 0
       CLR R17 ; Reg that holds 0
       CLR R20 ; Upper Byte Result Cleared
       CLR R19 ; Middle Byte Result Cleared CLR R18 ; Lower Byte Result Cleared
       LDI R24, 0xFF; Lower Byte Multiplicand = 255
       LDI R25, 0xFF; Upper Byte Multiplicand = 255
       LDI R22, 0xFF; Multiplier = 255
NOTDONE:
       CPI R22, 0; Compare multiplier to 0
       BREQ DONE; If multiplier is 0 then DONE
       ADD R18, R24; R18 = R18 + R24
       ADC R19, R25; R19 = R19 + R25 + Carry
       ADC R20, R17; R20 = R20 + R17 (0) + Carry
       DEC R22; R22 = R22 - 1
       BRNE NOTDONE; If R22 is not 0 then NOTDONE
DONE: JMP DONE; For Debugging
```

2. SCREENSHOTS OF EACH TASK OUTPUT (ATMEL STUDIO OUTPUT)

```
.ORG 0
   CLR R17 ; Reg that holds 0
   CLR R20 ; Upper Byte Result Cleared
   CLR R19 ; Middle Byte Result Cleared
   CLR R18 ; Lower Byte Result Cleared
   LDI R24, 0xFF; Lower Byte Multiplicand = 255
   LDI R25, 0xFF; Upper Byte Multiplicand = 255
   LDI R22, 0xFF; Multiplier = 255
NOTDONE:
   CPI R22, 0; Compare multiplier to 0
   BREQ DONE; If multiplier is 0 then DONE
   ADD R18, R24; R18 = R18 + R24
   ADC R19, R25; R19 = R19 + R25 + Carry
   ADC R20, R17; R20 = R20 + R17 (0) + Carry
   DEC R22; R22 = R22 - 1
   BRNE NOTDONE; If R22 is not 0 then NOTDONE
DONE: JMP DONE ; For Debugging
```



Processor Status

3. GITHUB LINK OF THIS DA

https://github.com/recrio/submissions/tree/master/DesignAssignments/DA1A

Student Academic Misconduct Policy

http://studentconduct.unlv.edu/misconduct/policy.html

"This assignment submission is my own, original work".

Ron Joshua Recrio