Software Development Tasks

- (#1) Create initial project
- (#2) Create basic software architecture template
    - ➢ Req: #1
- Establish PWM output
    - (#3) Add PWM config steps to PWMDriver
        - ➢ Req: #2
    - (#4) Implement PWMConfig structure
        - ➢ Req: #2
    - (#5) Tie together PWM Module with PWMConfig structure
        - ➢ Req: #4
- Establish Current inputs
    - (#6) Current Input: Add ADC config steps to MeasurementDriver
        - ➢ Req: #2
    - (#7) Config Measurement Timer
        - ➢ Req: #2
    - (#8) Implement System Measurement struct
        - ➢ Req: #2
    - (#9) Implement measurement ISR in MeasurementDriver
        - ➢ Req: #7, #8
- Establish Voltage inputs
    - (#10) Voltage Input: Add ADC config steps to MeasurementDriver
        - ➢ Req: #2
    - (#11) Add voltage readings to measurement ISR
        - ➢ Req: #9
- (#12) Finish start-up routines
    - Req: #3, #6, #10
- Implement SmoothingComponent
    - (#13) Get SmoothingComponent to retrieve system measurements
        - ➢ Req: #9, #11
    - (#14) SmoothingComponent post PWM configurations
        - ➢ Req: #4
    - (#15) Implement Smoothing logic
        - ➢ Req: #2

Schedule Table

Month	Week	Development Plan	Test & Demo Plan
Feb.	3	● Analysis and Requirements	
	10	● (#1) Create initial project	
	17	● (#2) Create basic software architecture template ● (#3) Add PWM config steps to PWMDriver	● Demo initial project
	24	● (#4) Implement PWMConfig structure ● (#5) Tie together PWM Module with PWMConfig structure	● Demo initial PWM signal
Mar.	2	● (#6) Add ADC config steps to MeasurementDriver ● (#7) Config Measurement Timer	● Test accuracy of PWM signal
	16	● (#8) Implement System Measurement struct ● (#9) Implement measurement ISR in MeasurementDriver	● Test ADC readings
	23	● (#10) Add ADC config steps to MeasurementDriver ● (#11) Add voltage readings to measurement ISR	● Demo basic ADC functionality
	30	● (#12) Finish start-up routines	● Test ADC to PWM operation with dummy smoothing functionality
Apr.	6	● (#13) Get Smoothing Component to retrieve system measurements ● (#14) Smoothing Component post PWM configurations	● Demo ADC to PWM operation with dummy smoothing functionality
	13	● (#15) Implement Smoothing logic	● Test Smoothing logic
	20	● (#15) Implement Smoothing logic ● Deadline buffer/additional features	● Test Smoothing logic ● Demo product

Timeline

Task	February				March				April		
	3-9	10-16	17-23	24-1	2-8	16-22	23-29	30-5	6-12	13-19	20-26
1	■										
2		■									
3			■								
4			■								
5				■							
6				■							
7				■							
8					■						
9					■						
10						■					
11						■					
12							■				
13								■			
14								■			
15									■	■	