Pseudocode for DAC\_Service

Module Functions:

InitTimer0

InitDAC

Module Variables:

MyPriority

sin[]

sin\_length

Sin\_index

Cmp\_val[]

Function:InitDACService

Params: Priority

Return: bool

Set MyPriority

InitTimer0

InitDAC

End InitDACService

Function: PostDACService

Params: ES\_Event\_t

Returns: bool

Post event to service

End PostDACService

Function: RunDACService

Params: ES\_Event\_t

Returns: ES\_Event\_t

End RunDACService

Function: getNextDAC

Params: none

Returns: uint8\_t

Increment sin\_index

if sin\_index is sin\_length, set to 0

return relevant sin DAC value

End getNextDAC

Function: EnableDAC

Params: none

Returns: none

set DAC1CON1 to getNextDAC value

clear timer 0 IF

enable timer 0 interrupt

enable timer 0

enable DAC1

End EnableDAC

Function: SendDibit

Params: uint8\_t value

Returns: none

Disable Timer0

set compare value to parameter

clear TMR value

clear TMR IF

enable TMR interrupt

enable TMR0

End SendDibit

Function: DisableDAC

Params: none

Returns: none

Set DAC1CON1 to 0

Disable DAC1

Disable tmr0 interrupt

disable tmr0

End DisableDAC

Private Function: InitTimer0

Params: none

Returns: none

Set to 8 bit time

Set prescale to 1:2

Set initial compare value to lowest dibit

End InitTimer0

Private Function: InitDAC

Params: none

Returns: none

use 1.024 as ref voltage

enable fixed voltage ref

Wait for periph to be ready

set positive ref voltage to be FVR

set first DAC value

set output to be RB7

enable DAC1

enable global and peripheral interrupts

End InitDAC