

## README:

- **Section 1:**

The submitted zip file contains the following items:

1. Readme This readme file
2. Report Report for this lab
3. Code Code folder containing the following project folders:
  1. Red LED blinking: It has the following file:
    - a. Main.asm It is the main file with the code for blinking of red LED.
  2. Interrupt generations: It has the following files:
    - a. Main.asm It has the code for using IRQA and IRQB interrupt routines.
    - b. DSP5685x\_vector.asm It has the vector table for interrupts.
  3. Timer interrupt : It has the following file:
    - a. Main.asm It has the code for using timer or counter as interrupt routine.
    - b. DSP5685x\_vector.asm It has the vector table for interrupts.
  4. MAC instruction count: It has the following files:
    - a. Main.asm It has the code for using timer as an instruction counter.
    - b. DSP5685x\_vector.asm It has the vector table for interrupts.

- **Section 2:**

The following functions:

Subroutine name	FinitlSr	Ftimer_int	FinitLED
Assumptions	-	-	-
Descriptions	To initialize interrupt priority levels.	To initialize and define the timer counter routines.	To initialize and set all LEDs to off state before starting the code.

- **Section 3:**

To create a new project open CodeWarrior IDE for Freescale DSP and click new. In the new window select DSP56800x New Project Wizard from the project section, enter the name of the project and select a location to store it and click ok. In the next window select DSP5685x from first column and DSP56858 from second column and then click next. Then select simple C for creating a C code project or Simple assembly for creating a assembly project and click next. Select large data model for a larger data memory model and click next.

The project window opens with a default main.c or main.asm (in the left side column click on the + before code folder). Replace the main file with the main file from the project folder. Only the C code runs in a C project and only assembly code works in assembly project. If an interrupt service routine is used, from the interrupt vectors folder in the right side, delete the DSP5685x\_vector.asm file and add the one given in project folder.

To build the project select Project from the menu bar and click on Make. To run the project select Run from the Project menu. Repeat it again to execute the code. Once the code is executed the variables can be viewed by right clicking on the variable name in the idm thread window that opens. In the same way the memory location can also be viewed.

To see the number of instructions the code takes, click the Idm settings from edit menu, select remote debugging from the left column and select simulator from drop down menu in the right. Before executing the code select DSP56800E from menu and reset the instruction count.