Main.c

Add this code to main.c

//asynchronous UART transmit function

**int** \_\_io\_putchar(**int** ch)

{

uint8\_t c[1];

c[0] = ch & 0x00FF;

HAL\_UART\_Transmit(&huart1, &\*c, 1, 10);

**return** ch;

}

//writing msg to com

**int** \_write(**int** file,**char** \*ptr, **int** len)

{

**int** DataIdx;

**for**(DataIdx= 0; DataIdx< len; DataIdx++)

{

\_\_io\_putchar(\*ptr);

ITM\_SendChar(\*ptr);

\*ptr++;

}

**return** len;

}

Syscalls.c

Add this code to beginning of syscalls.c file

**#define** DEMCR \*((**volatile** uint32\_t\*) 0xE000EDFCU )

/\* ITM register addresses \*/

**#define** ITM\_STIMULUS\_PORT0 \*((**volatile** uint32\_t\*) 0xE0000000 )

**#define** ITM\_TRACE\_EN \*((**volatile** uint32\_t\*) 0xE0000E00 )

**void** ITM\_SendChar(uint8\_t ch)

{

//Enable TRCENA

DEMCR |= ( 1 << 24);

//enable stimulus port 0

ITM\_TRACE\_EN |= ( 1 << 0);

// read FIFO status in bit [0]:

**while**(!(ITM\_STIMULUS\_PORT0 & 1));

//Write to ITM stimulus port0

ITM\_STIMULUS\_PORT0 = ch;

}