

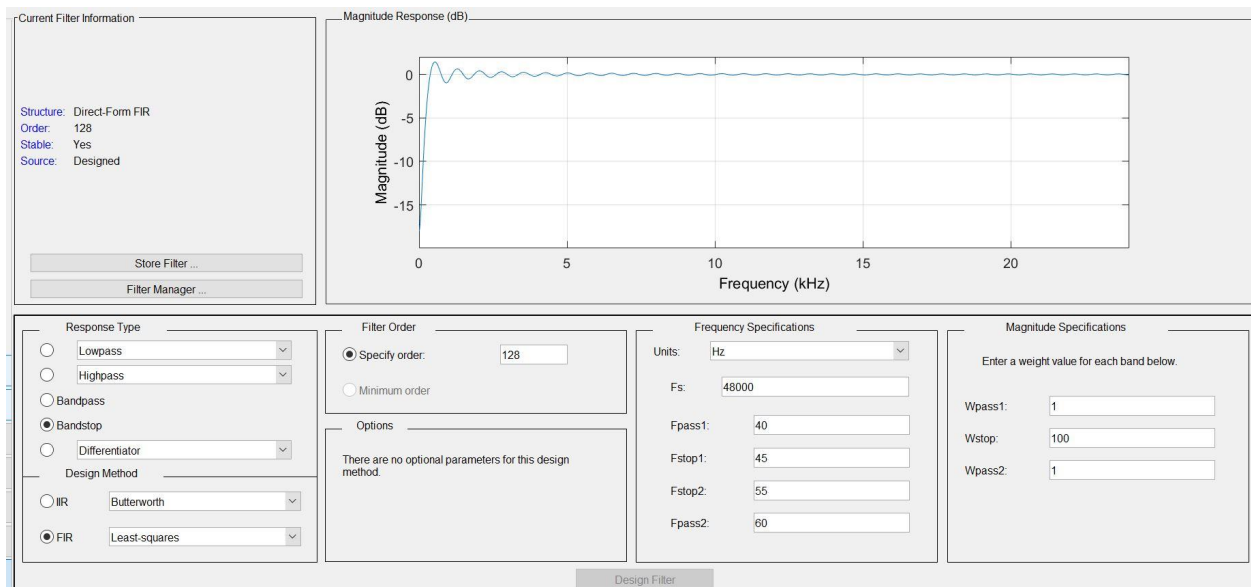
# Programmable Embedded Systems

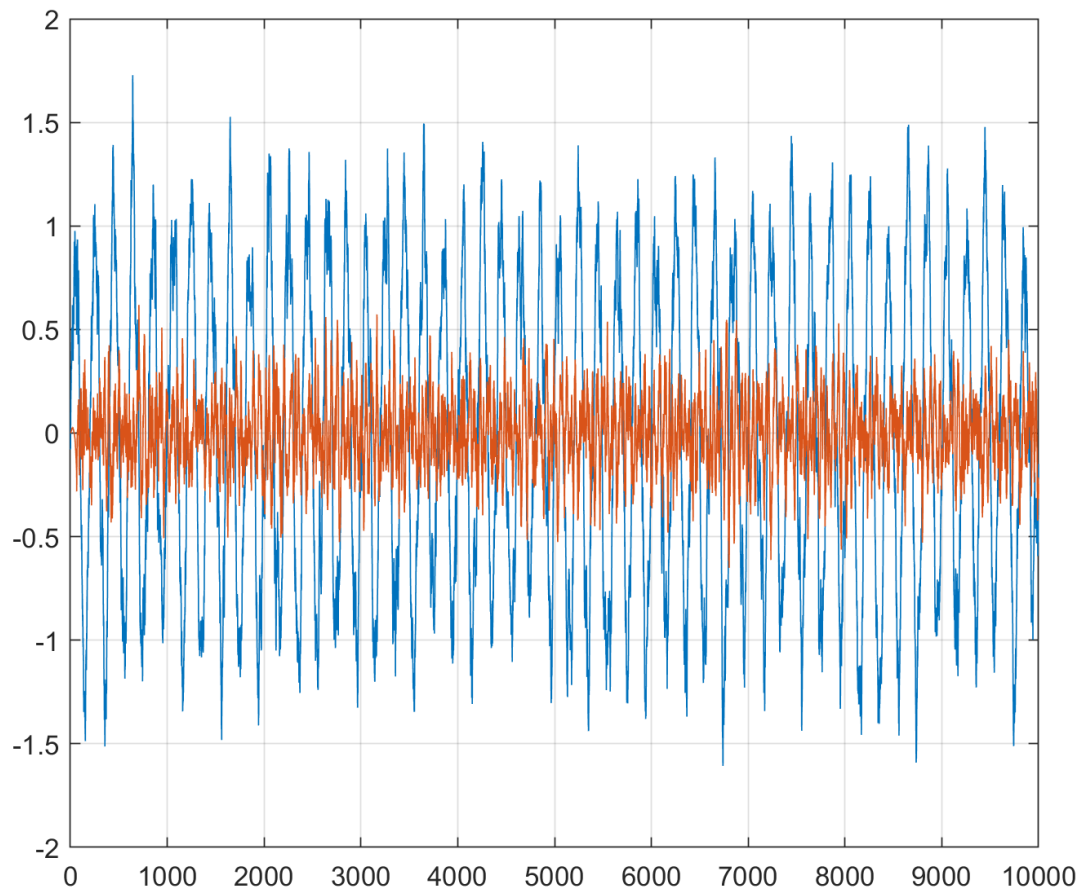
## Assignment 5

Submitted by  
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**18EE35014**

Matlab codes + fdatool file attached

### Filter

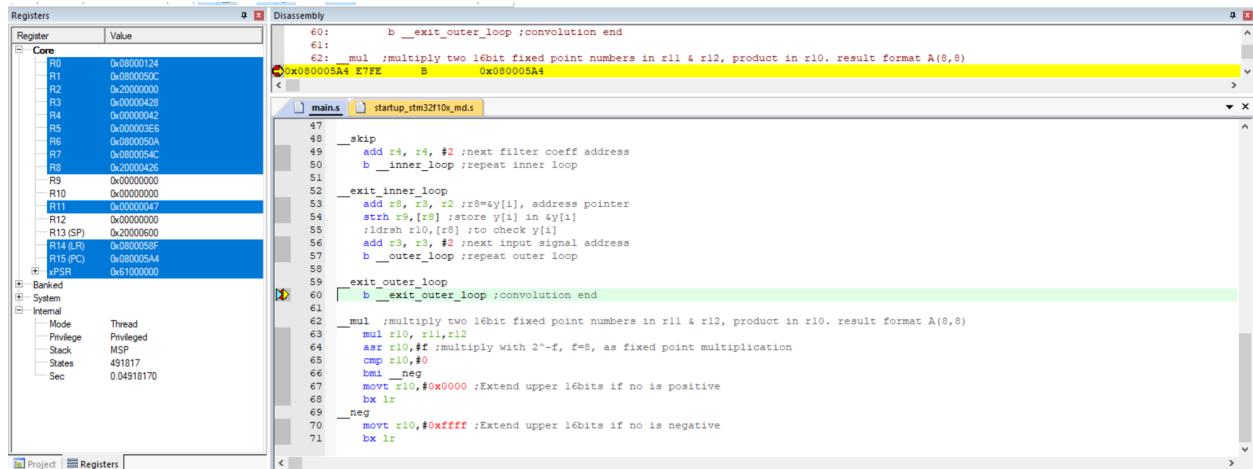




Saved the input and signal coefficients in hex, opened the filter convolution code of Gargi madam and changed the filter coefficients as well as input according to our data(hex conversion code attached in Assg5.m)

Ran the code

The debug output is



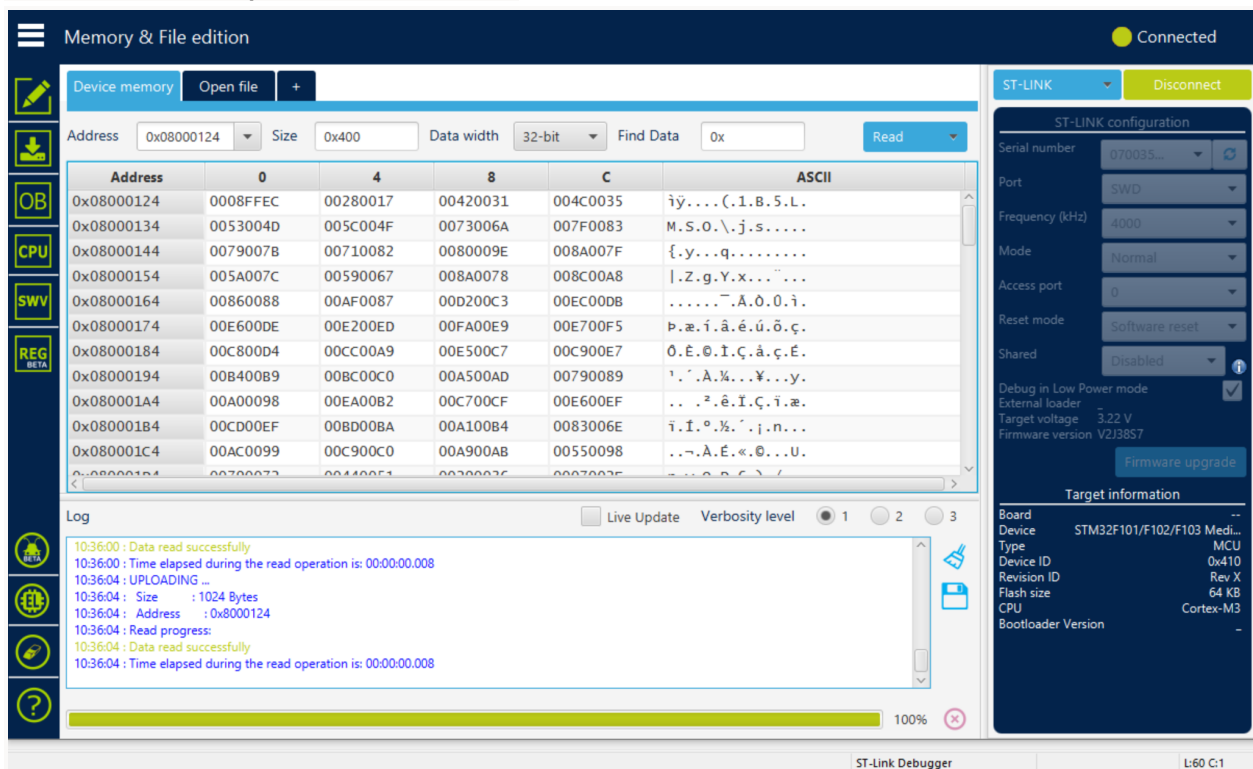
R0 has the starting address of the input signal

R1 has the address of the filter coefficients

R2 has the starting address of the output

R8 has the ending address of the output

Save bin files open is STM cube



Memory & File edition

Connected

Device memory

Open file

+

Address

0x20000000

Size

0x400

Data width

32-bit

Find Data

0x

Read

Address	0	4	8	C	ASCII
0x20000000	00000000	FFFF0000	FFD0FFE	FFBFFFC	.....yybyyyuy
0x20000010	FFFBFFFB	FFFAFFFB	FFDFFFA	0002FFFF	ÿÿÿÿÿÿÿÿÿÿÿÿ..
0x20000020	000B0006	00190011	00280020	00390030	.....(.0.9.
0x20000030	00460040	0057004C	005D0058	00650063	@.F.L.W.X.] .c.e.
0x20000040	006C0067	006F006F	006F006F	006C006C	g.l.o.o.o.o.l.l.
0x20000050	006C006A	006F006B	00720072	00800077	j.l.k.o.r.r.w...
0x20000060	00920086	00A3009A	00B300AC	00C200BA	.....f.-.º.À.
0x20000070	00D100CA	00D500D2	00D300D4	00D000CF	É.Ñ.Ò.Ó.Ô.Õ.İ.Ð.
0x20000080	00C800CC	00C200C6	00BC00BF	00B500B8	İ.Ê.Ë.Ä.Å.¸.¸.µ.
0x20000090	00AC00AE	00A300A6	009C00A3	009C009A	*.-.!.f.f.....
0x200000A0	00A600A0	00B100AB	00B900B5	00BC00BC	.!.«.±.µ.¹.¼.¼.

Log

Live Update

Verbosity level

1

2

3

10:35:06 : Address : 0x1ffff800

10:35:06 : Size : 16 Bytes

10:35:06 : UPLOADING ...

10:35:06 : Size : 1024 Bytes

10:35:06 : Address : 0x20000000

10:35:06 : Read progress:

10:35:06 : Data read successfully

10:35:06 : Time elapsed during the read operation is: 00:00:00.007

100%

ST-LINK

Disconnect

ST-LINK configuration

Serial number

070035...

Port

SWD

Frequency (kHz)

4000

Mode

Normal

Access port

0

Reset mode

Software reset

Shared

Disabled

Debug in Low Power mode

External loader

Target voltage

3.22 V

Firmware version

V2J3857

Firmware upgrade

Target information

Board

Device

Type

Device ID

Revision ID

Flash size

CPU

Bootloader Version

STM32F101/F102/F103 Medi...

MCU

0x410

Rev X

64 KB

Cortex-M3

-

Got the bin files and ran matlab\_reading\_stm32.mat which plots the following  
 Keil takes less input so only took the first few input readings

