

CmpE240
Sept. 7

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Note: 1st LPC1769 from 2022S
Semester, Waiting List.
CANVAS. Scott.

2nd LPC1768 pin-to-pin
Compatible. (Mbed)

a. Step 1. MCUXpresso IDE
1768 Binary Code.

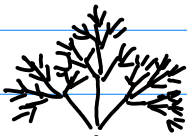
Step 2. "Firmware" Upload
the binary file to the
Flash. Need a prob

Step 3. Interactive Debugging.

3rd LPC1114 Digi-Key in Stock.
LPC1114

GPP/SPI, FLASH (ON-chip)

1/8 of the size
Comparing to LPC1768/9



Homework (0 pt)

1. Form A Team By Wednesday.
4-Person
2. Select/Finalize your target
platform. By the end of the week.

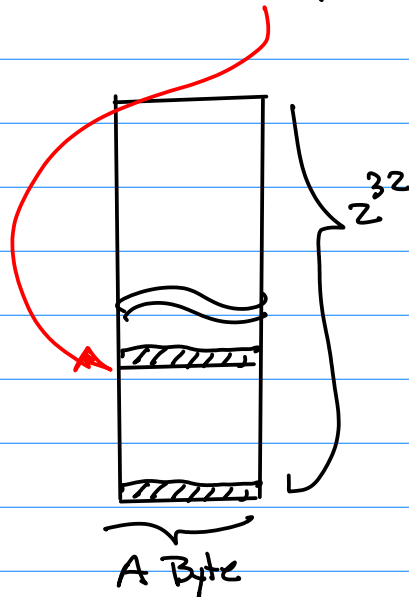
Example: Register File

} Special Purpose Registers
General Purpose Register

GPx CON
Prefix 3 Letters
for Port "x", x=0,1,2,3



GPx CON its address is 32 Bits,
it maps to the memory
map.



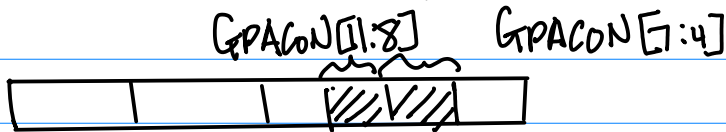
Note: The Task of Init & Config
Can be realized by using HLL
(High Level Language), C/C++,
to deposit A Binary Pattern to that
Memory Location (Addr. is a pointer)

QmpE240

Sept. 7

For Example for Samsung ARM-11.

Consider:
Power Up Address + Power Traces.
Booting.



GPxCON its address is 32 Bits,
it maps to the memory
map.

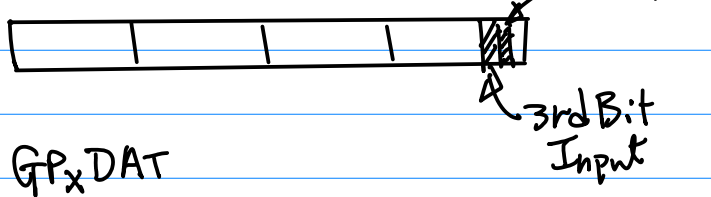
Design Requirements (Spec.)

1. 2nd Bit AS An Output
2. 3rd Bit AS An Input

To perform Init & Config.

GPACON[7:4] = 0001 = 0x1

GPACON[11:8] = 0000 = 0x0



GPACON[3:0] = 0x10

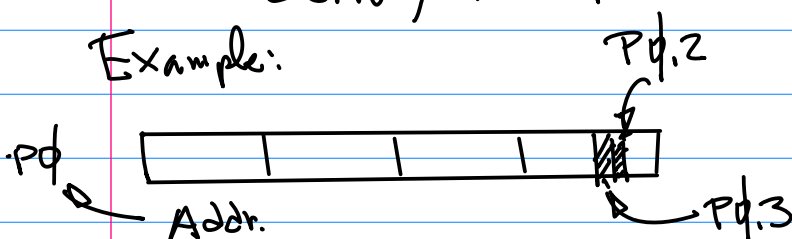
Sept. 12 (Monday)

1. Homework (2pts)
2. Special Purpose Register

Note: Target platform.

LC17ba, LC11C24

Example:



CMPE240 Sept. 12 (Monday)

Homework Due A week from this Wed.
Sample Code: On Github.

"Legs" Layout

LPC CPU

Protoboard Option 1.

Note:

Connectivity Table

CPU Pin	J2	Note
GPP/Pin 2	1A-?	Output $V_{CC} = I \cdot R$
GPP/Pin 3	1B-?	Input
GND	1A-?	GND.

3.3

10/17

CMOS

3.3V

$V_{CC} = I \cdot R + V_{LED} \dots (1)$

$I \approx 10 \text{ mA}$

$\approx 1.2 \text{ V}_{CC} \approx GPP \dots \text{zip}$

Materials:

- ① LPC 1769 OR 1724
- ② Resistors. $250 \sim 1 \text{ k}\Omega$
- ③ LED.
- ④

A. Output { "1" ON
"0" OFF

B. Input Testing { "1"
"0"

SW

B

1769

GPPx "1"

GPPy

R

LED

GND

1A

1B

1C

1D

1E

1F

1G

1H

1I

1J

1K

1L

1M

1N

1O

1P

1Q

1R

1S

1T

1U

1V

1W

1X

1Y

1Z

1AA

1AB

1AC

1AD

1AE

1AF

1AG

1AH

1AI

1AJ

1AK

1AL

1AM

1AN

1AO

1AP

1AQ

1AR

1AS

1AT

1AU

1AV

1AW

1AX

1AY

1AZ

1BA

1BB

1BC

1BD

1BE

1BF

1BG

1BH

1BI

1BJ

1BK

1BL

1BM

1BN

1BO

1BP

1BQ

1BR

1BS

1BT

1BU

1BV

1BW

1BX

1BY

1BZ

1CA

1CB

1CC

1CD

1CE

1CF

1CG

1CH

1CI

1CJ

1CK

1CL

1CM

1CN

1CO

1CP

1CQ

1CR

1CS

1CT

1CU

1CV

1CW

1CX

1CY

1CZ

1DA

1DB

1DC

1DD

1DE

1DF

1DG

1DH

1DI

1DJ

1DK

1DL

1DM

1DN

1DO

1DP

1DQ

1DR

1DS

1DT

1DU

1DV

1DW

1DX

1DY

1DZ

1EA

1EB

1EC

1ED

1EE

1EF

1EG

1EH

1EI

1EJ

1EK

1EL

1EM

1EN

1EO

1EP

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1FG

1FH

1FI

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1FN

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1FR

1FS

1FT

1FU

1FV

1FW

1FX

1FY

1FZ

1GA

1GB

1GC

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1GS

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1GX

1GY

1GZ

1HA

1HB

1HC

1HD

1HE

1HF

1HG

1HH

1HI

1HJ

1HK

1HL

1HM

1HN

1HO

1HP

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1LZ

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1MC

1MD

1ME

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1MG

1MH

1MI

1MJ

1MK

1ML

1MM

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1MQ

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1RP

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1VS

1VT

1VU

1VV

1VW

1VX

1VY

1VZ

1WA

1WB

1WC

1WD

1WE

1WF

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