

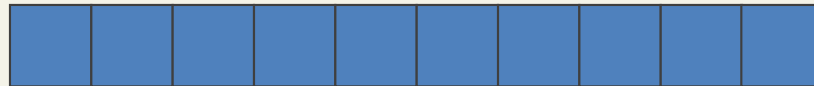
LAB 1 SIMPLE BANNER EXAMPLE

Programming Example

Displaying a rotating banner on the LCD screen

- Start by thinking about a smaller/simpler example:
10-character screen and 19-character message

The LCD screen



The message

W	e	l	c	o	m	e		t	o		C	P	R	E		2	8	8
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Shift characters right-to-left

Programming Example

What's the desired program behavior?

- First display “Welcome to” and wait
- Then “elcome to ” and wait
- Then “lcome to C” and wait
- Then “come to CP” and wait
- And so on...

This is simplified compared to Lab 1.

Programming Example

Give a general but precise description

First show characters 0-9 and wait

Then show characters 1-10 and wait

Then show characters 2-11 and wait

Then show characters 3-12 and wait

Etc.

Programming Example

Sketch the control flow of the program's behavior

- set starting position in message at 0

- loop forever

 - clear the screen

 - display 10 chars from the starting position

 - shift the starting position to the next position

 - wait for one second

- end loop

Programming Example

Specify some details to start writing code

“display 10 chars from the starting position”

“shift the starting position to the next position”