

CP316

Assembly Language Programming

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Introduction to the PIC Assembly Language

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sample organization

Program Template

sample organization

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meaning of “end” directive

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FSRs

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Branch Instructions

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Branch Instructions

bra vs. **goto**

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Branch Instructions

bra vs. **goto**

→ Section 2.9.2

\$ = current instruction

Branch Instructions

bra vs. **goto**

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\$ = current instruction

1 word instructions, except for **movff**, **goto**, **call**, **lfsr**

Branch Instructions

bra vs. **goto**

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\$ = current instruction

1 word instructions, except for **movff**, **goto**, **call**, **lfsr**

skip instructions

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Subroutines

call vs. **rcall**

Subroutines

call vs. **rcall**

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Subroutines

call vs. **rcall**

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return vs. **retlw**

hardware stack

Subroutines

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Subroutines (continued)

Subroutines (continued)

shadow registers

Subroutines (continued)

shadow registers

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Subroutines (continued)

shadow registers

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fast register stack

Subroutines (continued)

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Subroutines (continued)

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Subroutines (continued)

shadow registers

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Data in Program Memory

Data in Program Memory

tblrd vs. **lfsr**

Data in Program Memory

tblrd vs. **lfsr**

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Data in Program Memory

tblrd vs. **lfsr**

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tblptrl, **tblptrh**, **tblptru**

Data in Program Memory

tblrd vs. **lfsr**

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tblptrl, **tblptrh**, **tblptru**

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Other Instructions

logical instructions

Other Instructions

logical instructions

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Other Instructions

logical instructions

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rotate instructions; (**nc** vs. **c**)

Other Instructions

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rotate instructions; (**nc** vs. **c**)

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Timing Loops

Timing Loops

instruction time

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instruction time

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