

## PC-Relative Addressing Mode

Target address:

$$(PC+1) + \text{SEXT}(\text{PC Offset})$$

$$LD \quad DR = [\text{target address}]$$

#2)

$$x3100 : [x30EE] = R5$$

ST	SE:R5	PC offset 9
0011	101	1110 1101

$$\text{Target} = x30EE$$

$$PC+1 = x3101$$

$$x FFED$$

$$1111 \ 1111 \boxed{1110 \ 1101}$$



$$\#3) \quad [x30F3] = [x30F1] + [x30F2]$$

$$x3000: \quad R0 = [x30F1]$$

0010      000      011110000

LD      DR = R0

$$\underline{\text{Target}} = x30F1$$

$$\underline{PC+1 = x3001}$$

x00F0

$$x3001: \quad R1 = [x30F2]$$

0010      001      011110000

LD      DR = R1

$$\underline{\text{Target}} = x30F2$$

$$\underline{PC+1 = x3002}$$

x00F0

$$x3002: \quad R2 = R0 + R1$$

0001      010      000      0      00      001

ADD      DR = R2      SR1 = R0

SR2 = R1

$$x3003: \quad [x30F3] = R2$$

0011      010      01110111

ST      SR = R2

$$\underline{\text{Target}} = x30F3$$

$$\underline{PC+1 = x3004}$$

x00EF