PC	Instruction	Register Write	HEX Value	Why HEX changes
0	`D105` = MOVI #5 → R1	R1 = 0005	**0005**	MOVI writes register
1	`D205` = MOVI #5 → R2	R2 = 0005	**0005**	MOVI writes register
2	`01A2` = CMP R2,R1	(no write)	unchanged	CMP does not write
3	`8002` = BEQ +2	(no write)	unchanged	BEQ does not write
→ branch taken to PC=6				
6	`D103` = MOVI #3 → R1	R1 = 0003	**0003**	MOVI writes register
7	`D208` = MOVI #8 → R2	R2 = 0008	**0008**	MOVI writes register
8	`01A2` = CMP R2,R1	(no write)	unchanged	CMP does not write
9	`8A02` = BLO +2	(no write)	unchanged	BLO does not write
→ branch taken to PC=12				
12	`D30F` = MOVI #15 → R3	R3 = 000F	**000F**	MOVI writes register
13	`9E30` = JMP R3 (PC=15)	(no write)	unchanged	JMP does not write
15	`D80A` = MOVI #10 → R8	R8 = 000A	**000A**	MOVI writes register

After PC=15 the program enters the zero-filled memory