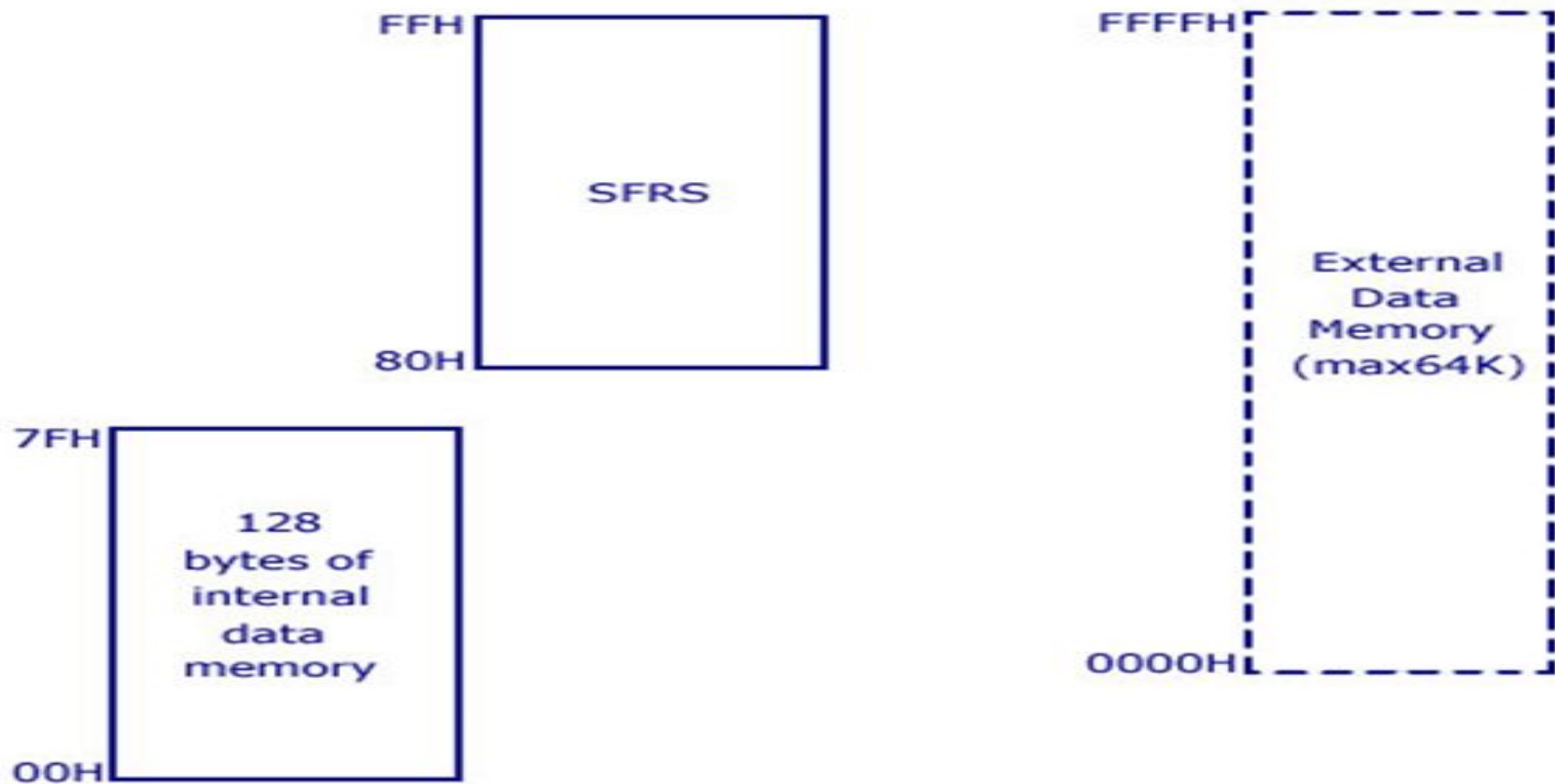


# Special Function Registers

A Closer Look

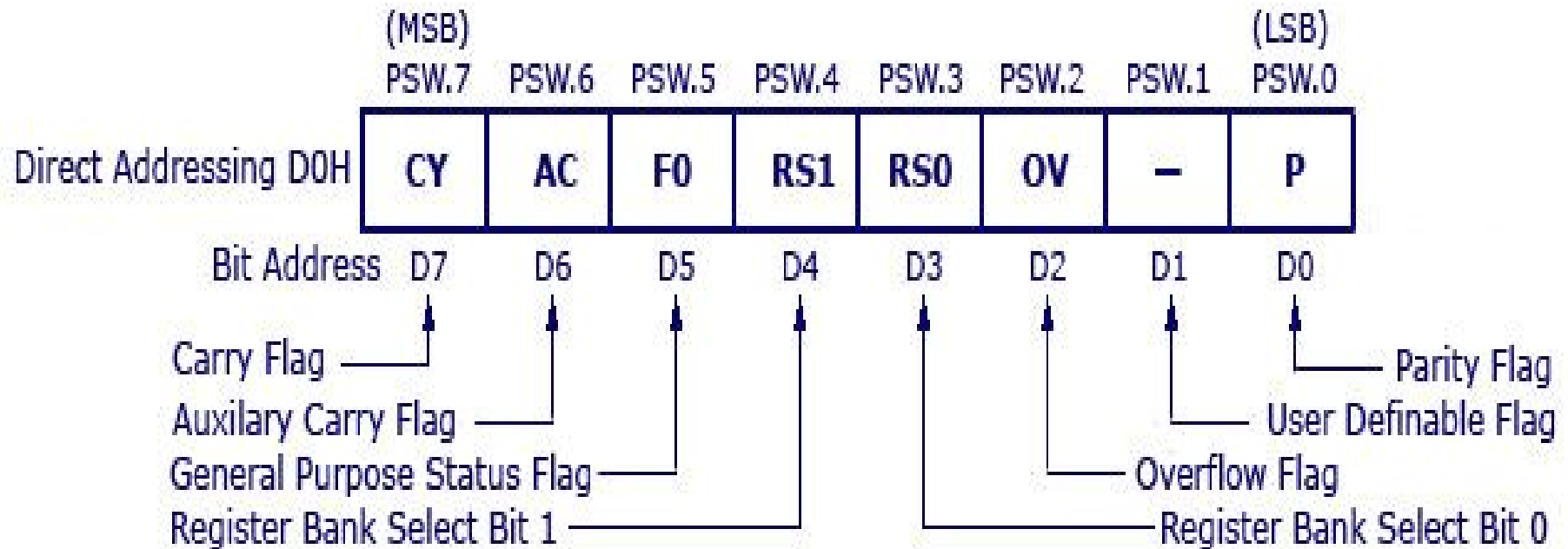
## Internal and External Data Memory of 8051



# SFR MAP for 8051

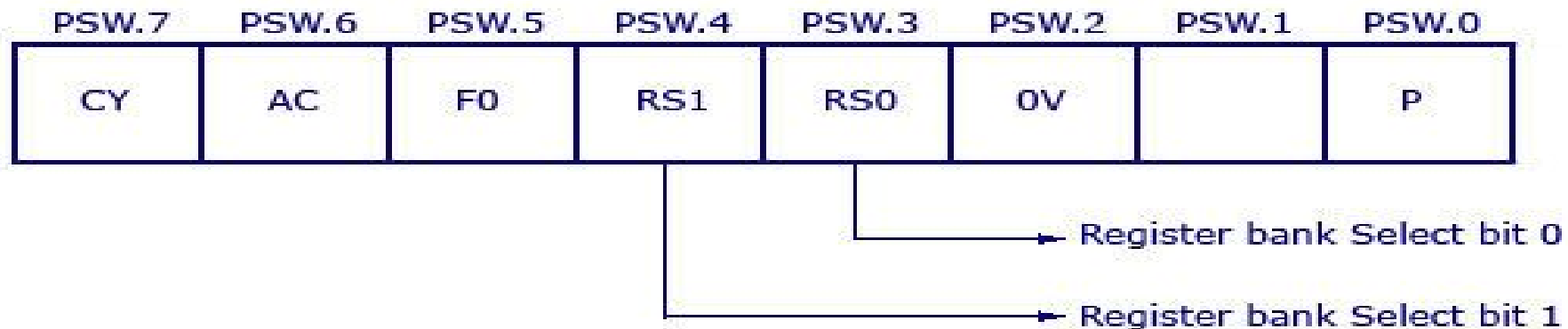
	FF	FE	FD	FC	FB	FA	F9	F8	F7	F6	F5	F4	F3	F2	F1	F0	
FF																<b>B</b>	F0
EF																<b>A</b>	E0
DF																<b>PS W</b>	D0
CF																	C0
BF																	B0
AF																	A0
9F																	90
8F																	80
	8F	8E	8D	8C	8B	8A	89	88	87	86	85	84	83	82	81	80	

# Processor Status Word



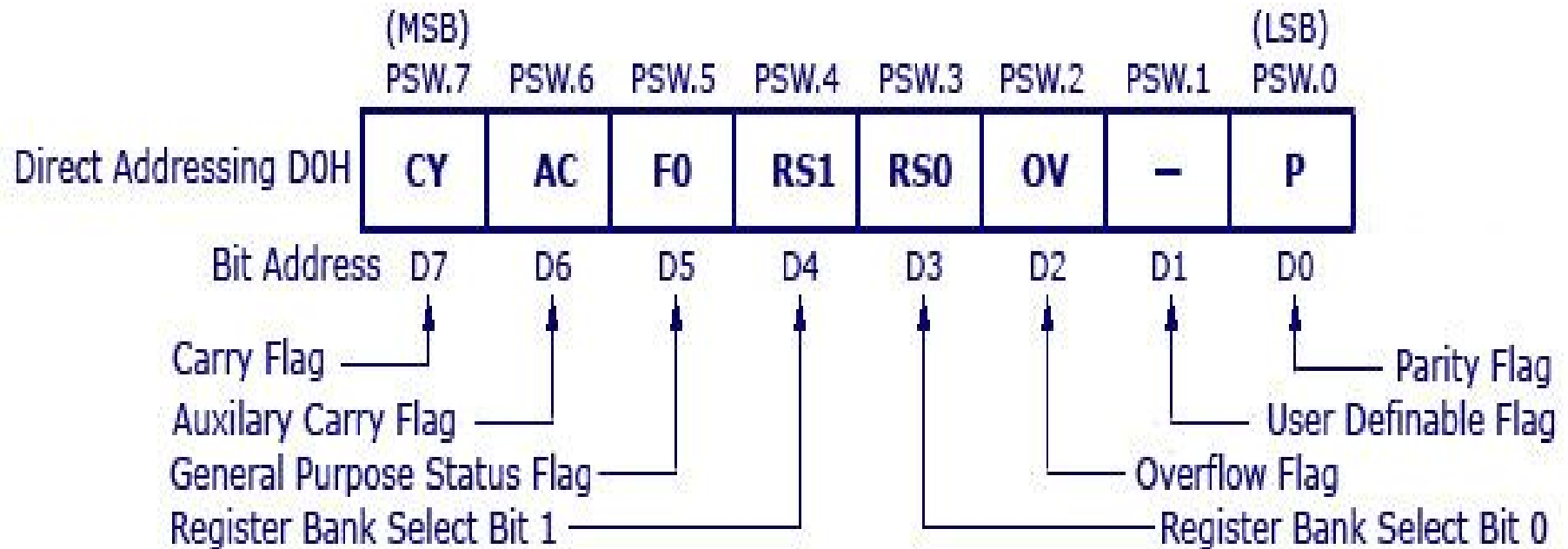
<b>Bit Number</b>	<b>Bit Symbol</b>	<b>Direct Address</b>	<b>Name</b>	<b>Function</b>
3	RS0	D3	Register Bank Select Bit 0	LSB of the register bank select bit
4	RS1	D4	Register Bank Select Bit 1	MSB of the register bank select bit

# Processor Status Word



RS1	RS0	Register Bank	Register Bank Status
0	0	0	Register Bank 0 is selected
0	1	1	Register Bank 1 is selected
1	0	2	Register Bank 2 is selected
1	1	3	Register Bank 3 is selected

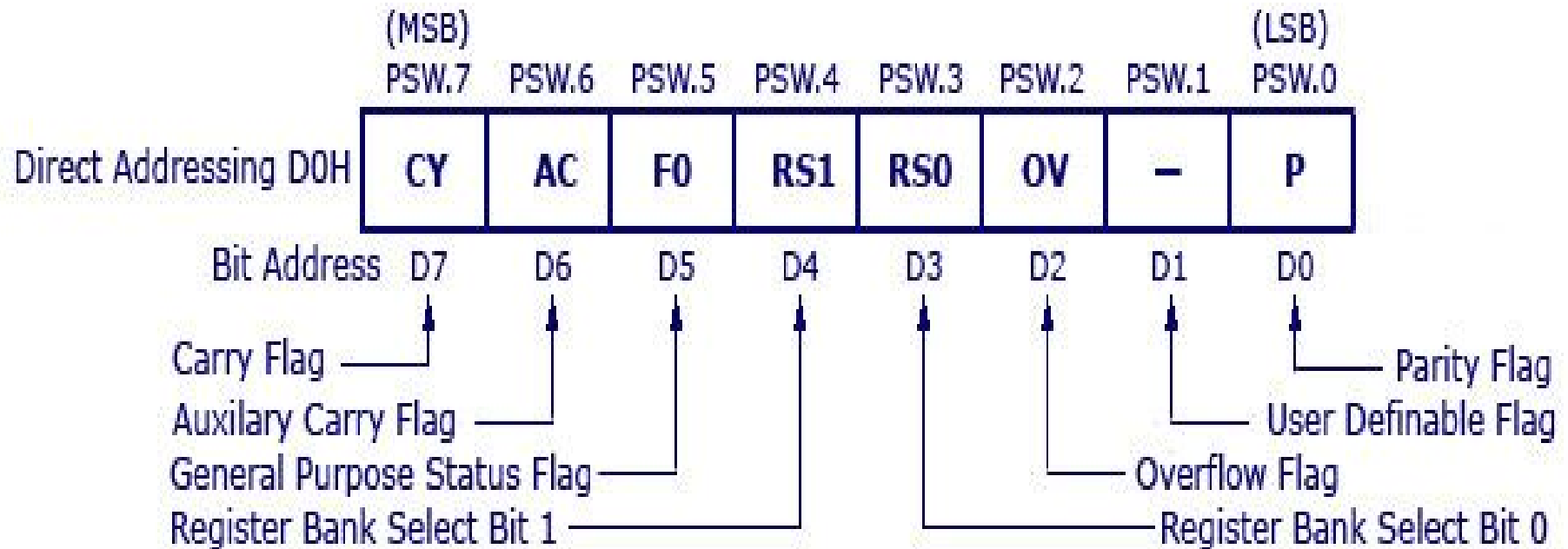
# Processor Status Word





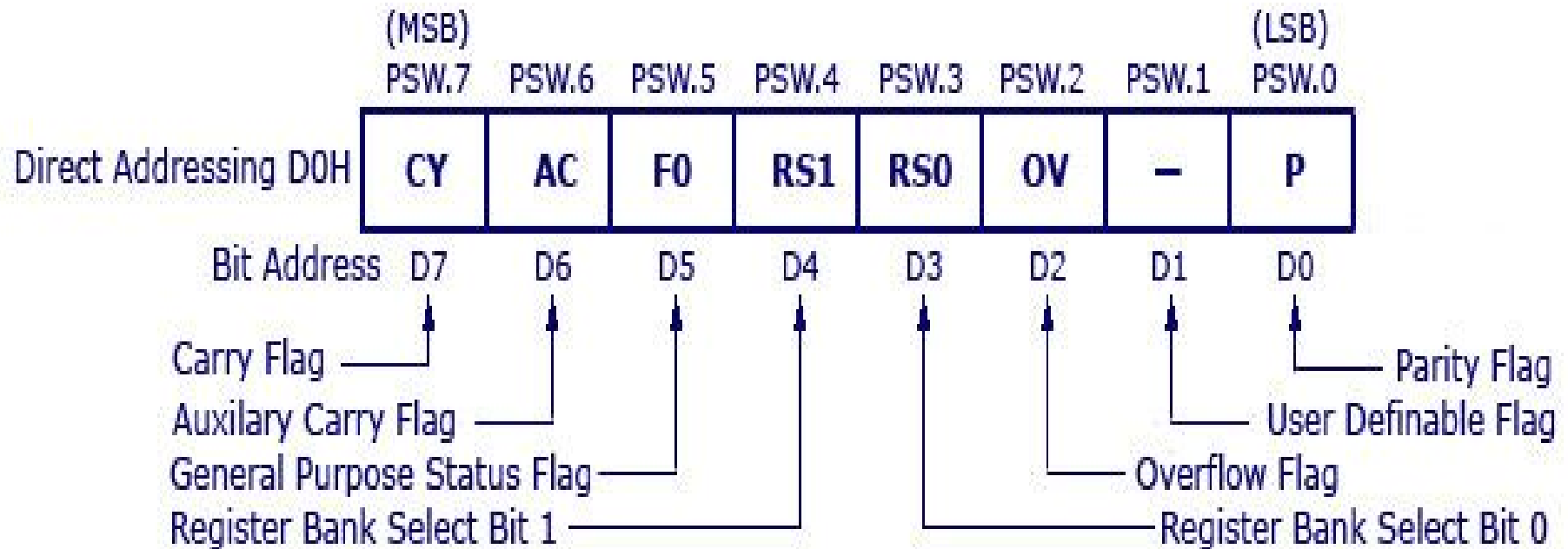
Bit Number	Bit Symbol	Direct Address	Name	Function
7	Cy	D7	Carry	Set: Data is coming out of the 7th bit Or Clear

# Processor Status Word



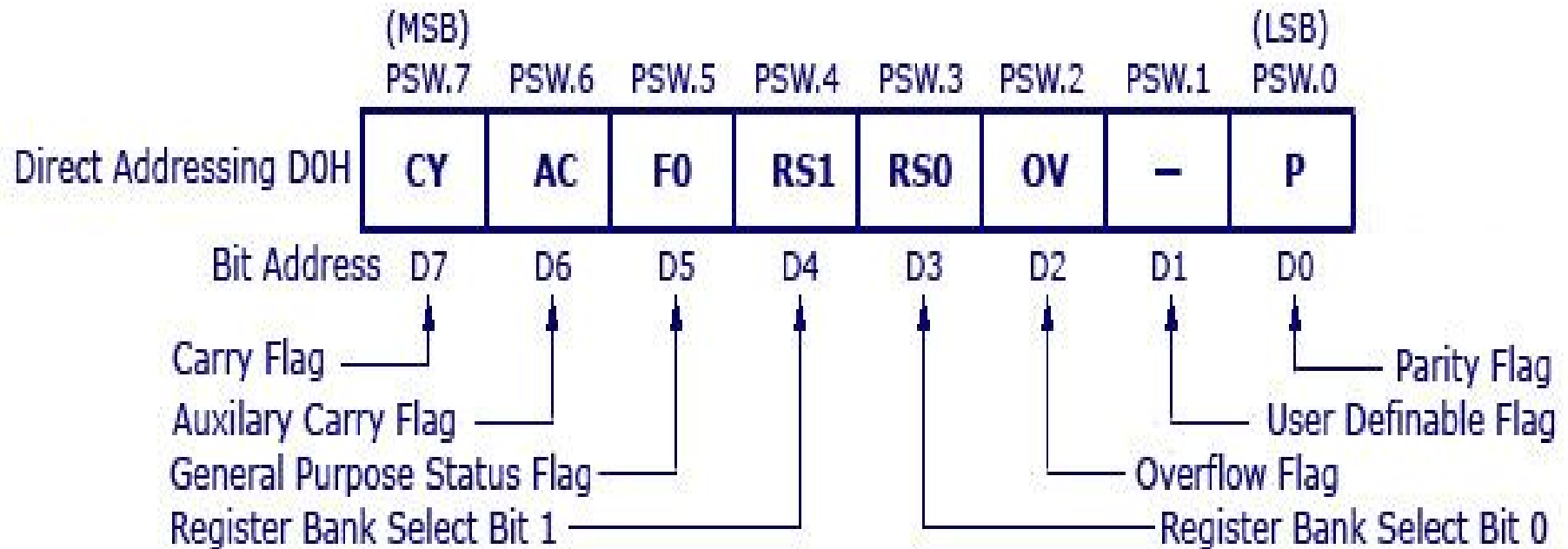
<b>Bit Number</b>	<b>Bit Symbol</b>	<b>Direct Address</b>	<b>Name</b>	<b>Function</b>
0	P	D0	Parity	Set: Acc has odd number of 1s after operation Or Clear

# Processor Status Word



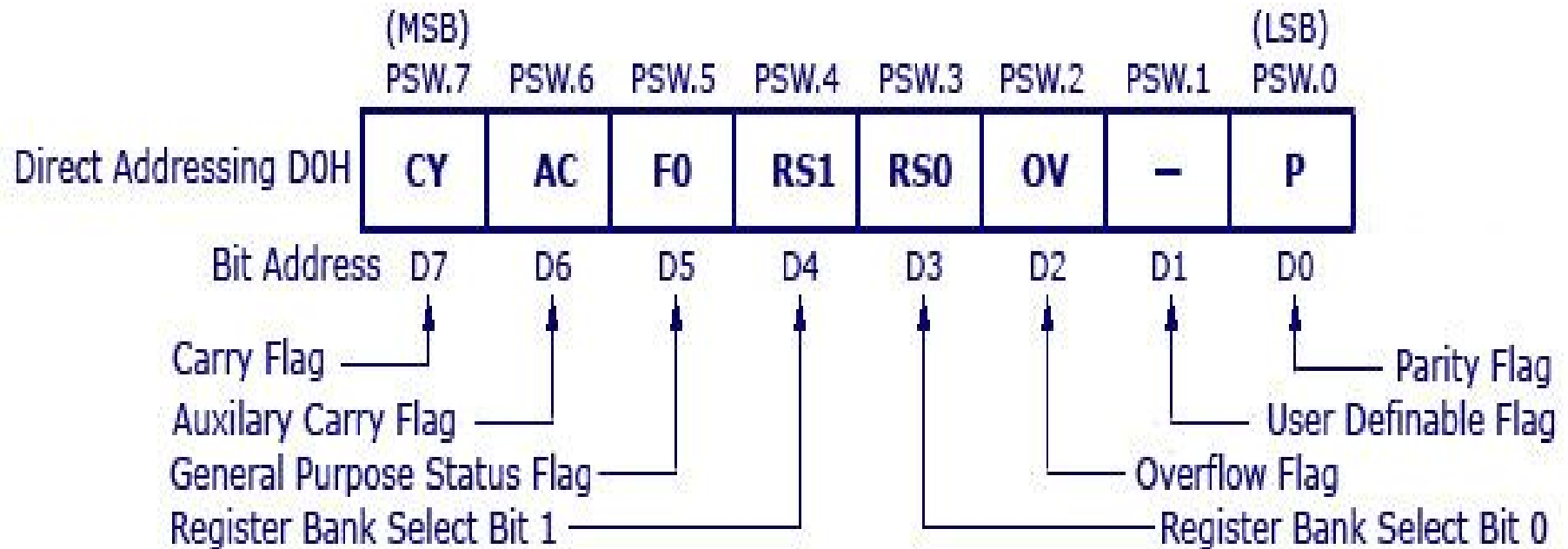
<b>Bit Number</b>	<b>Bit Symbol</b>	<b>Direct Address</b>	<b>Name</b>	<b>Function</b>
1	-	D1		User Definable Bit
5	F0	D5	Flag 0	User Definable Flag

# Processor Status Word



<b>Bit Number</b>	<b>Bit Symbol</b>	<b>Direct Address</b>	<b>Name</b>	<b>Function</b>
6	AC	D6	Auxiliary Flag	Set: Data is coming out of bit 3 to bit 4 of Acc during an arithmetic operation

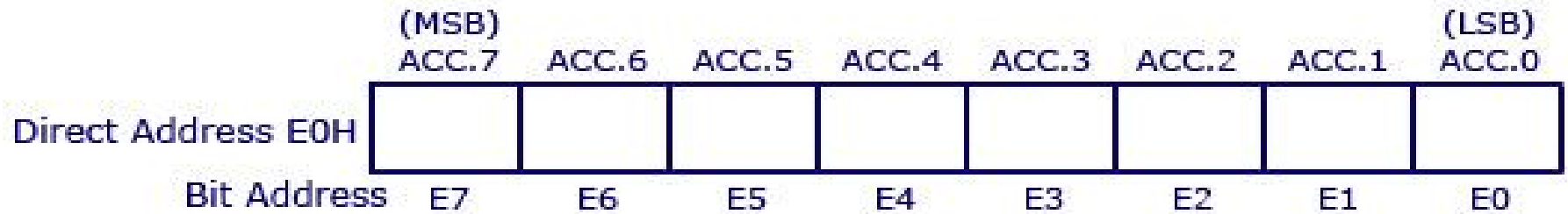
# Processor Status Word





Bit Number	Bit Symbol	Direct Address	Name	Function
2	OV	D2	Overflow	Set: Carry from 7 but not from 6 (or) Carry from 6 but not from 7

## Accumulator Register A



## Register B

(MSB)  
B.7

B.6

B.5

B.4

B.3

B.2

B.1

(LSB)  
B.0

Direct Address F0H

Bit Address

F7

F6

F5

F4

F3

F2

F1

F0