EVM Opcode Worksheet for SimpleStorage Bytecode

Decompiling Solidity with Pen and Paper

SimpleStorage Deployed Bytecode Worksheet

CBOR metadata begins at 0xa9 (`0xfe` / `INVALID`) and is not executable, so worksheet ends at 0xa9.

(data) rows = immediate operand bytes belonging to the preceding PUSH instruction.

PC (Hex)	Byte	Opcode / Mnemonic	Note	Stack at End	Memory at End
0x00	`60`	PUSH1 0x80			
0x01	`80`	(data) 0x80			
0x02	`60`	PUSH1 0x40			
0x03	`40`	(data) 0x40			
0x04	`52`	MSTORE			
0x05	`34`	CALLVALUE			
0x06	`80`	DUP1			
0x07	`15`	ISZERO			
0x08	`60`	PUSH1 0x0e			
0x09	`0e`	(data) 0x0e			
0x0a	`57`	JUMPI			
0x0b	`5f`	PUSH0			
0x0c	`5f`	PUSH0			
0x0d	`fd`	REVERT			
0x0e	`5b`	JUMPDEST			
0x0f	`50`	POP			
0x10	`60`	PUSH1 0x04			
0x11	`04`	(data) 0x04			
0x12	`36`	CALLDATASIZE			
0x13	`10`	LT			
0x14	`60`	PUSH1 0x30			
0x15	`30`	(data) 0x30			
0x16	`57`	JUMPI			

PC (Hex)	Byte	Opcode / Mnemonic	Note	Stack at End	Memory at End
0x17	5f	PUSH0			
0x18	35	CALLDATALOAD			
0x19	60	PUSH1 0xe0			
0x1a	e0	(data) 0xe0			
0x1b	1c	SHR			
0x1c	80	DUP1			
0x1d	63	PUSH4 0x60fe47b1			
0x1e	60	(data) 0x60			
0x1f	fe	(data) 0xfe			
0x20	47	(data) 0x47			
0x21	b1	(data) 0xb1			
0x22	14	EQ			
0x23	60	PUSH1 0x34			
0x24	34	(data) 0x34			
0x25	57	JUMPI			
0x26	80	DUP1			
0x27	63	PUSH4 0x6d4ce63c			
0x28	6d	(data) 0x6d			
0x29	4c	(data) 0x4c			
0x2a	e6	(data) 0xe6			
0x2b	3c	(data) 0x3c			
0x2c	14	EQ			
0x2d	60	PUSH1 0x45			
0x2e	45	(data) 0x45			
0x2f	57	JUMPI			
0x30	5b	JUMPDEST			
0x31	5f	PUSH0			
0x32	5f	PUSH0			
0x33	fd	REVERT			
0x34	5b	JUMPDEST			
0x35	60	PUSH1 0x43			
0x36	43	(data) 0x43			
0x37	60	PUSH1 0x3f			
0x38	3f	(data) 0x3f			
0x39	36	CALLDATASIZE			
0x3a	60	PUSH1 0x04			
0x3b	04	(data) 0x04			
0x3c	60	PUSH1 0x93			
0x3d	93	(data) 0x93			
0x3e	56	JUMP			

PC (Hex)	Byte	Opcode / Mnemonic	Note	Stack at End	Memory at End
0x3f	5b	JUMPDEST			
0x40	60	PUSH1 0x59			
0x41	59	(data) 0x59			
0x42	56	JUMP			
0x43	5b	JUMPDEST			
0x44	00	STOP			
0x45	5b	JUMPDEST			
0x46	5f	PUSH0			
0x47	54	SLOAD			
0x48	60	PUSH1 0x40			
0x49	40	(data) 0x40			
0x4a	51	MLOAD			
0x4b	90	SWAP1			
0x4c	81	DUP2			
0x4d	52	MSTORE			
0x4e	60	PUSH1 0x20			
0x4f	20	(data) 0x20			
0x50	01	ADD			
0x51	60	PUSH1 0x40			
0x52	40	(data) 0x40			
0x53	51	MLOAD			
0x54	80	DUP1			
0x55	91	SWAP2			
0x56	03	SUB			
0x57	90	SWAP1			
0x58	f3	RETURN			
0x59	5b	JUMPDEST			
0x5a	5f	PUSH0			
0x5b	81	DUP2			
0x5c	90	SWAP1			
0x5d	55	SSTORE			
0x5e	60	PUSH1 0x40			
0x5f	40	(data) 0x40			
0x60	51	MLOAD			
0x61	81	DUP2			
0x62	81	DUP2			
0x63	52	MSTORE			
0x64	7f	PUSH32			
0x65	94	(data) 0x94			
0x66	55	(data) 0x55			

PC (Hex)	Byte	Opcode / Mnemonic	Note	Stack at End	Memory at End
0x67	95	(data) 0x95			
0x68	7c	(data) 0x7c			
0x69	3b	(data) 0x3b			
0x6a	77	(data) 0x77			
0x6b	d1	(data) 0xd1			
0x6c	d4	(data) 0xd4			
0x6d	ed	(data) 0xed			
0x6e	07	(data) 0x07			
0x6f	1e	(data) 0x1e			
0x70	2b	(data) 0x2b			
0x71	46	(data) 0x46			
0x72	9d	(data) 0x9d			
0x73	d7	(data) 0xd7			
0x74	7e	(data) 0x7e			
0x75	37	(data) 0x37			
0x76	fc	(data) 0xfc			
0x77	5d	(data) 0x5d			
0x78	fd	(data) 0xfd			
0x79	3b	(data) 0x3b			
0x7a	4d	(data) 0x4d			
0x7b	44	(data) 0x44			
0x7c	dc	(data) 0xdc			
0x7d	8a	(data) 0x8a			
0x7e	99	(data) 0x99			
0x7f	7c	(data) 0x7c			
0x80	c9	(data) 0xc9			
0x81	7c	(data) 0x7c			
0x82	7b	(data) 0x7b			
0x83	3d	(data) 0x3d			
0x84	49	(data) 0x49			
0x85	90	SWAP1			
0x86	60	PUSH1 0x20			
0x87	20	(data) 0x20			
0x88	01	ADD			
0x89	60	PUSH1 0x40			
0x8a	40	(data) 0x40			
0x8b	51	MLOAD			
0x8c	80	DUP1			
0x8d	91	SWAP2			
0x8e	03	SUB			

PC (Hex)	Byte	Opcode / Mnemonic	Note	Stack at End	Memory at End
0x8f	90	SWAP1			
0x90	a1	LOG1			
0x91	50	POP			
0x92	56	JUMP			
0x93	5b	JUMPDEST			
0x94	5f	PUSH0			
0x95	60	PUSH1 0x20			
0x96	20	(data) 0x20			
0x97	82	DUP3			
0x98	84	DUP5			
0x99	03	SUB			
0x9a	12	SLT			
0x9b	15	ISZERO			
0x9c	60	PUSH1 0xa2			
0x9d	a2	(data) 0xa2			
0x9e	57	JUMPI			
0x9f	5f	PUSH0			
0xa0	5f	PUSH0			
0xa1	fd	REVERT			
0xa2	5b	JUMPDEST			
0xa3	50	POP			
0xa4	35	CALLDATALOAD			
0xa5	91	SWAP2			
0xa6	90	SWAP1			
0xa7	50	POP			
0xa8	56	JUMP			
0xa9	fe	INVALID (metadata boundary)			