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| **Opcode** | **Description** |
| 0NNN | Execute machine language subroutine at address NNN |
| 00E0 | Clear the screen |
| 00EE | Return from a subroutine |
| 1NNN | Jump to address NNN |
| 2NNN | Execute subroutine starting at address NNN |
| 3XNN | Skip the following instruction if the value of register VX equals NN |
| 4XNN | Skip the following instruction if the value of register VX is not equal to NN |
| 5XY0 | Skip the following instruction if the value of register VX is equal to the value of register VY |
| 6XNN | Store number NN in register VX |
| 7XNN | Add the value NN to register VX |
| 8XY0 | Store the value of register VY in register VX |
| 8XY1 | Set VX to VX OR VY |
| 8XY2 | Set VX to VX AND VY |
| 8XY3 | Set VX to VX XOR VY |
| 8XY4 | Add the value of register VY to register VX Set VF to 01 if a carry occurs Set VF to 00 if a carry does not occur |
| 8XY5 | Subtract the value of register VY from register VX Set VF to 00 if a borrow occurs Set VF to 01 if a borrow does not occur |
| 8XY6 | Store the value of register VY shifted right one bit in register VX Set register VF to the least significant bit prior to the shift |
| 8XY7 | Set register VX to the value of VY minus VX Set VF to 00 if a borrow occurs Set VF to 01 if a borrow does not occur |
| 8XYE | Store the value of register VY shifted left one bit in register VX Set register VF to the most significant bit prior to the shift |
| 9XY0 | Skip the following instruction if the value of register VX is not equal to the value of register VY |
| ANNN | Store memory address NNN in register I |
| BNNN | Jump to address NNN + V0 |
| CXNN | Set VX to a random number with a mask of NN |
| DXYN | Draw a sprite at position VX, VY with N bytes of sprite data starting at the address stored in I Set VF to 01 if any set pixels are changed to unset, and 00 otherwise |
| EX9E | Skip the following instruction if the key corresponding to the hex value currently stored in register VX is pressed |
| EXA1 | Skip the following instruction if the key corresponding to the hex value currently stored in register VX is not pressed |
| FX07 | Store the current value of the delay timer in register VX |
| FX0A | Wait for a keypress and store the result in register VX |
| FX15 | Set the delay timer to the value of register VX |
| FX18 | Set the sound timer to the value of register VX |
| FX1E | Add the value stored in register VX to register I |
| FX29 | Set I to the memory address of the sprite data corresponding to the hexadecimal digit stored in register VX |
| FX33 | Store the binary-coded decimal equivalent of the value stored in register VX at addresses I, I+1, and I+2 |
| FX55 | Store the values of registers V0 to VX inclusive in memory starting at address I I is set to I + X + 1 after operation |
| FX65 | Fill registers V0 to VX inclusive with the values stored in memory starting at address I I is set to I + X + 1 after operation |