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| --- | --- | --- | --- |
| Type | Instruction | OP | Funct |
| Immediate | Load | 000001 | - |
| Store | 000010 | - |
| Add (ADD) | 000011 | - |
| Subtract (SUB) | 000100 | - |
| Logic shift right (LSR) | 000101 | - |
| Logic shift left (LSL) | 000110 | - |
| Rotate shift right (RSR) | 000111 | - |
| Rotate shift left (RSL) | 001000 | - |
| Move (MOV) | 001001 | - |
| Multiply (MUL) | 001010 | - |
| Divide (DIV) | 001011 | - |
| Modulo (MOD) | 001100 | - |
| And (AND) | 001101 | - |
| Or (OR) | 001110 | - |
| Xor (XOR) | 001111 | - |
| Not (NOT) | 010000 | - |
| Compare (CMP) | 010001 | - |
| Increment (INC) | 010010 | - |
| Decrement (DEC) | 010011 | - |
| Branch | Branch if zero (BRZ) | 100001 | - |
| Branch if negative (BRN) | 100010 | - |
| Branch if carry (BRC) | 100011 | - |
| Branch if overflow (BRO) | 100100 | - |
| Branch always (BRA) | 100101 | - |
| Call procedure (JMP) | 100110 | - |
| Return from procedure (RET) | 100111 | - |
| Halt | HLT | 111111 | - |
| Read From Acc | Move from Acc in X/Y | 000000 | 01001 |