# r-type instructions

add/and/or/slt/sub rd, rs, rt

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| op  6 bits | rs 5 bits | rt 5 bits | rd 5 bits | shamt 5 bits | funct 6 bits |
| 000000 |  |  |  | 00000 |  |

funct field:

* add: 100000
* and: 100100
* or: 100101
* slt: 101010
* sub: 100010

# i-type instructions

lw/sw rt, imm($rs)

beq rs, rt, imm

|  |  |  |  |
| --- | --- | --- | --- |
| op  6 bits | rs 5 bits | rt 5 bits | immediate 16 bits |
|  |  |  |  |

op field:

* lw: 101011
* sw: 100011
* beq: 000100 (immediate is the number of instructions beyond the next one)

# j-type instructions

|  |  |
| --- | --- |
| op  6 bits | target address 26 bits |
| 000010 |  |

The target address field is the actual address divided by 4.