MIPS Assembly File

What we have learned

R-type instructions - register addressing

```
ADD
SUB
OR
AND
XOR
NOR
```

I-Type instructions - immediate addressing

```
ADDI
ANDI
ORI
XORI
```

I-type - unsigned 16 bit immediate

```
ADDIU
ANDIU
```

I-type instructions - 2 registers, 16 bit immediate (base-displacement addressing)

```
LW
SW
LH/SH
LB/SB
LHU, LBU
```

General format

```
.text

.globl main
```

```
main:
        # instructions here

.data
# allocation of memory
```

MIPS Directives

Directive	Meaning
`align n`	Align next datum on 2^n boundary
`.asciiz str`	Place the null-terminated string str in memory
`.byte b1,b2,..bn`	Place the n byte values in memory
`.data`	Switch to the data segment
`.double d1,d2,..dn`	Place the n double-precision value in memory
`.float f1,f2,..,fn`	Place the n single-precision value in memory
`.global sym`	The label sym can be referenced in other files
`.half h1, h2,..hn`	Place the n half-word values in memory
`.space n`	Allocated n bytes of space
`.text`	Switch to the text segment
`.word w1, w2,...wn`	Place the n word value in memory

For the register types visit Mips Registers