

SRP16 Reference ISA Simulator Manual

v0.1.0

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Ch 1. Introduction

srp16sim is the default reference ISA simulator for SRP16. It supports .dhex file format for simulation, lets you debug and set breakpoints and step through your program.

1.1. Command line usage

```
srp16sim DHEXFILE
```

You can use -s flag in srp16asm to assemble SRP16 assembly programs into .dhex file the simulator requires,

```
srp16asm test.asm -s test.dhex
```

Ch 2. Simulator Commands

2.1. step Command

Steps through a single instruction.

2.2. reg command

Lists contents of all registers.

2.3. bp command

Sets breakpoint on a particular line.

Syntax:

```
bp "FILENAME" LINENO
```

2.4. run command

Executes/run the program until breakpoint is reached.

2.5. rmbp command

Remove a breakpoint.

Syntax:

```
rmbp "FILENAME" LINENO
```

2.6. mem Command

Prints contents of memory.

Syntax:

```
mem[STARTING-ADDR:ENDING-ADDR] or mem[ADDRESS]
```

2.7. line command

Prints the current line the simulator is in.

2.8. Printing symbols

The simulator can also accept symbol names and print them. Typing `r0` would print the contents of the `r0` register, typing `mptr` would print the contents of the `mptr` register. You can also use this feature to find out addresses of labels in an assembly program. List of default symbols:

- `r0-r63`
- `a, mptr, pc, ir, sp`
- `flag, carry`

2.9. exit command

Terminates the simulation.