1 Basics

1.1 Introduction

This instruction set is designed for people who want to create operating systems and learn system programming. The main goal is to keep it simple and well documented to avoid undefined behaviours.

1.2 Registers

The instruction set features 17 registers in total. Each register has a size of 64 bits and some of them are *hardwired*.

Registers		
Mnemonic	Description	Identifier
zero	Hardwired zero	0000
pc	Program counter	0001
sb	Stack base	0010
sp	Stack pointer	0011
tid	Thread ID	0100
pgp	Page table pointer	0101
thp	Trap handler pointer	0110
tca	Trap cause	0111
ra	Return address	1000
gp1	General purpose register 1	1001
gp2	General purpose register 2	1010
gp3	General purpose register 3	1011
gp4	General purpose register 4	1100
gp5	General purpose register 5	1101
gp6	General purpose register 6	1110
gp7	General purpose register 7	1111

Table 1: Registers table

1.3 Instructions

MOVRR		
Opcode	Destination	Source
00000000	register	register