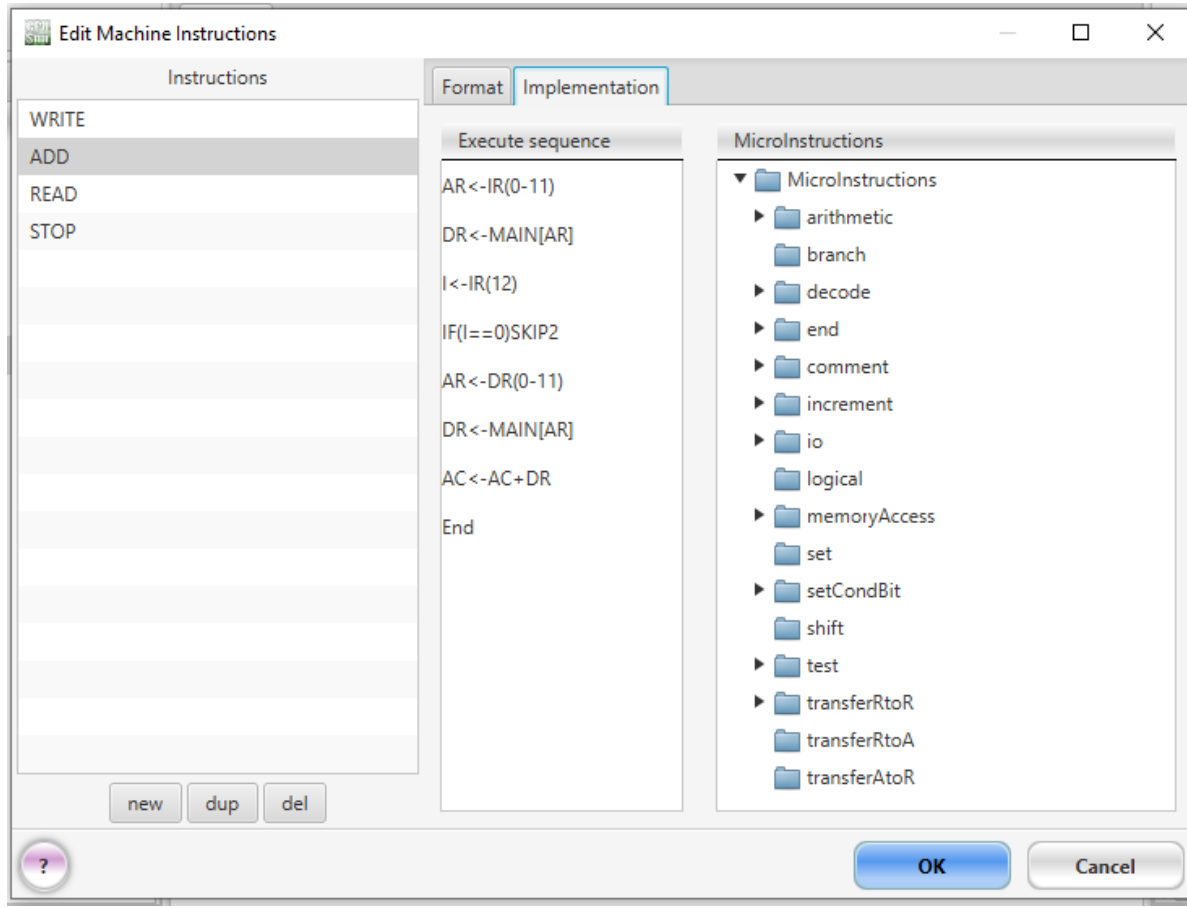


# CSA Lab Assignment

## Implementation of ADD



## Microinstructions

### TransferRtoR

Type of Microinstruction: TransferRtoR					
name	source	srcStartBit	dest	destStartBit	numBits
AR <- DR(0-11)	DR	0	AR	0	12
AR <- IR(0-11)	IR	0	AR	0	12
AR <- PC	PC	0	AR	0	12
I <- IR(12)	IR	12	I	0	1

## Arithmetic

Edit Microinstructions

Type of Microinstruction: Arithmetic

name	type	source1	source2	destination	overflowBit	carryBit
AC<-AC+DR	ADD	AC	DR	AC	(none)	(none)

## Test

Edit Microinstructions

Type of Microinstruction: Test

name	register	start	numBits	comparison	value	omission
IF(I==0)SKIP2	I	0	1	EQ	0	2

## MemoryAccess

Edit Microinstructions

Type of Microinstruction: MemoryAccess

name	direction	memory	data	address
AR<-MAIN[AR]	read	MAIN	AR	AR
DR<-MAIN[AR]	read	MAIN	DR	AR
R<-MAIN[AR]	read	MAIN	IR	AR

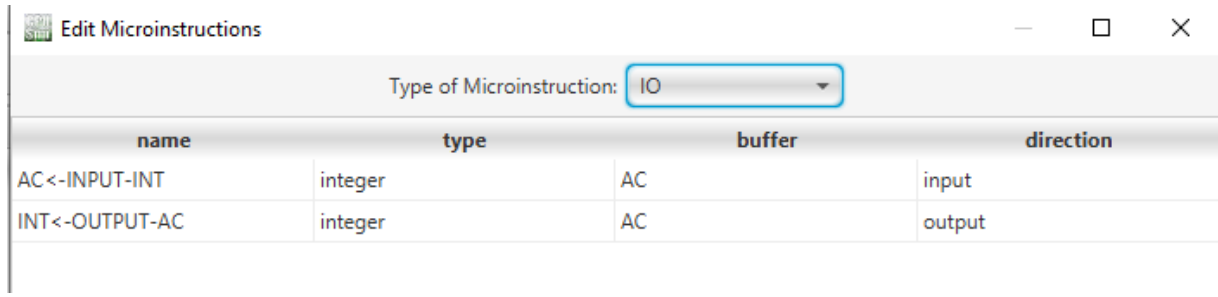
## Increment

Edit Microinstructions

Type of Microinstruction: Increment

name	register	overflowBit	carryBit	delta
INCR-PC	PC	(none)	(none)	1

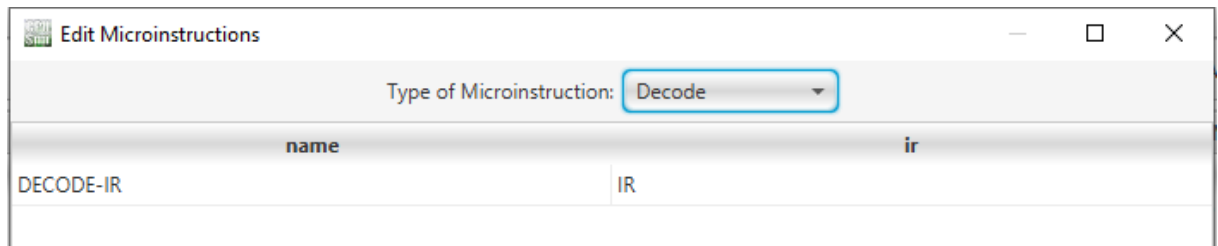
## IO



The screenshot shows a window titled "Edit Microinstructions" with a dropdown menu set to "IO". Below the menu is a table with four columns: name, type, buffer, and direction.

name	type	buffer	direction
AC<-INPUT-INT	integer	AC	input
INT<-OUTPUT-AC	integer	AC	output

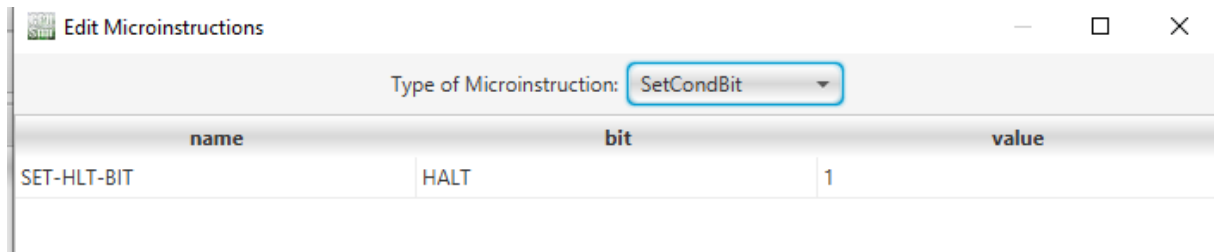
## Decode



The screenshot shows a window titled "Edit Microinstructions" with a dropdown menu set to "Decode". Below the menu is a table with two columns: name and ir.

name	ir
DECODE-IR	IR

## SetConBit



The screenshot shows a window titled "Edit Microinstructions" with a dropdown menu set to "SetConBit". Below the menu is a table with three columns: name, bit, and value.

name	bit	value
SET-HLT-BIT	HALT	1

Harsh Bamotra

AC-1216