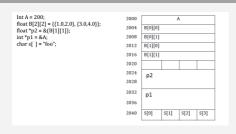


# 2035 E1 Cheat Sheet by theninja111 via cheatography.com/18862/cs/1981/

#### Vocah

Three MIPS steps: Fetch, Decode, Execute C Compiler is preprocessor and translator Linker assembles all functions and make final exe Loader loads program into memory

### Memory Allocation



#### Swap

 (7 pts) Write a MIPS code fragment that adds the value 0x4FA2C3 to register \$1 and puts the result in \$2. Modify only registers \$1 and \$2. (You may use hexadecimal immediate values.) For maximum credit, include comments.

Label	Instruction	Comment
	lui \$2, 0x4F	# load upper 16 bits
	ori \$2, \$2, 0xA2C3	# load rest of constant
	add \$2, \$2, \$1	# add it to \$1

### Values after

| x = 7, y = 7, and z = 2|if  $(z = x < y) \{ x += 3; y -= 1; \}$ else x = y++;x = 7, y = 8, z = 0

### Constant Type

29LU = unsigned long integer

"t" = string

-39.54Lf = long double

7hd = short integer

### Values

(p1 = 2000)(\*p1 = 200)(&p1 = 2032)(p2 = 2016)'p2 = 4)(&p2 = 2024)(&(s[1]) = 2041)(s+3) = 0)

#### Loop Array C

int A[]; int i = 0; do  $\{p = p*A[i]; i++;\}$  while (A[i]);

## Swap MIPS



### Loop C to Mips

	Sum = D; while (N!= Sum + N = N	- NS1:
Label	lostraction	Consensal
	oddi \$2, \$0, 0	# Sun = 0;
Loop:	beq \$1,\$0,Exit	# exit if N == 0
	and \$3, \$1, 1	# \$3: N51
	odd \$2,\$2,\$3	# Sun +:N&1;
	arl \$1,\$1,1	#N+N»I
	j Loop	# continue looping
fixit:	1	



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