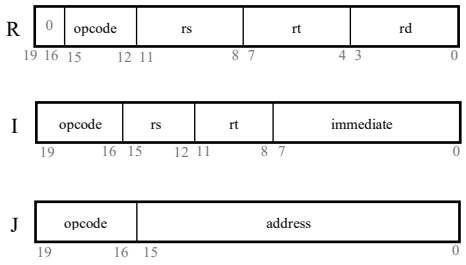
CAGD Reference Data

CORE INSTRUCTION SET

NAME, MNEMONIC		FOR-MAT	OPERATION	OPCODE
Add	add	R	R[rd] = R[rs] + R[rt]	0000
Addi	addi	I	R[rd] = R[rs] + 0	0001
Subtract	sub	R	R[rd] = R[rs] - R[rt]	0010
Multiply	mul	R	R[rd] = R[rs] * R[rt]	0011
Branch On Equal	beq	I	If(R[rs]==R[rt]) PC= BranchAddr	0100
Branch On Not Equal	bnq	I	If(R[rs]!=R[rt]) PC=BranchAddr	0101
Branch Less Than	blt	I	If(R[rs]<R[rt]) PC=Label	0110
Branch Greater Than	bgt	I	If(R[rs]>R[rt]) PC=Label	0111
Branch Greater Than Or Equal	bgte	I	If(R[rs]>=R[rt]) PC=Label	1000
Branch Less Than Or Equal To Zero	bgtz	I	If(R[rs]<R[rt]) PC=Label	1001
Jump	j	J	PC = JumpAddr	1010
Input	in	I		1011
Output	out	I		1100
Load Word	lw	I		1101
Save word	sw	I		1110

BASIC INSTRUCTION FORMATS



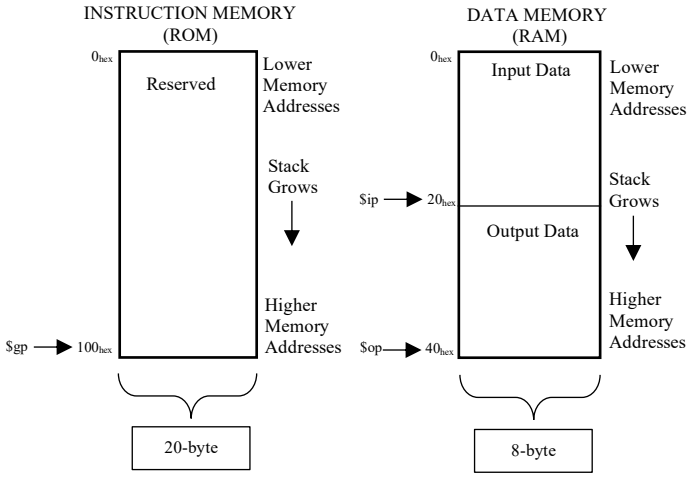
REGISTER NAME. NUMBER, USE

NAME	NUMBER	USE
$r0-$r7	0-7	Temporaries
$at	8	Assembler Temporary
$ip	9	Pointer for Input
$op	10	Pointer for Output
$gp	11	Global Pointer
$0	12	Zero

OPCODES, BASE CONVERSION, ASCII SYMBOLS

CAGD Opcode (15:12)	Binary	Decimal	Hexadecimal	ASCII Character
add	0000	0	0	NUL
addi	0001	1	1	SOH
sub	0010	2	2	STX
mul	0011	3	3	ETX
beq	0100	4	4	EOT
bnq	0101	5	5	ENQ
blt	0110	6	6	ACK
bgt	0111	7	7	BEL
bgte	1000	8	8	BS
bgtz	1001	9	9	HT
j	1010	10	a	LF
in	1011	11	b	VT
out	1100	12	c	FF

MEMORY ALLOCATION



CAGD Refence card ("Green Card")

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