Opcod Instructions Set

-Dahatonde Sagar Chimanbapu (16111)

ModR/M Instructions:

r8	al	bl	cl	dl	ah	bh	ch	dh
r16	ax	bx	cx	dx	sp	bp	si	di
r32	eax	ebx	ecx	edx	esp	ebp	esi	edi
In digit	0	1	2	3	4	5	6	7
In binary	000	001	010	011	100	101	110	111

Effective Address	**Mod**	**R/M**	**Value of ModR/M Byte (in Hexadecimal)**							
[eax]	00	000	00	08	10	18	20	28	30	38
[ebx]		001	01	09	11	19	21	29	31	39
[ecx]		010	02	0A	12	1A	22	2A	32	3A
[edx]		011	03	0B	13	1B	23	2B	33	3B
[--][--] 1		100	04	0C	14	1C	24	2C	34	3C
disp32 2		101	05	0D	15	1D	25	2D	35	3D
[esi]		110	06	0E	16	1E	26	2E	36	3E
[edi]		111	07	0F	17	1F	27	2F	37	3F
[eax]+disp8 3	01	000	40	48	50	58	60	68	70	78
[ebx]+disp8		001	41	49	51	59	61	69	71	79
[ecx]+disp8		010	42	4A	52	5A	62	6A	72	7A
[edx]+disp8		011	43	4B	53	5B	63	6B	73	7B
[--][--]+disp8		100	44	4C	54	5C	64	6C	74	7C
[ebp]+disp8		101	45	4D	55	5D	65	6D	75	7D
[esi]+disp8		110	46	4E	56	5E	66	6E	76	7E
[edi]+disp8		111	47	4F	57	5F	67	6F	77	7F
[eax]+disp32	10	000	80	88	90	98	A0	A8	B0	B8
[ebx]+disp32		001	81	89	91	99	A1	A9	B1	B9
[ecx]+disp32		010	82	8A	92	9A	A2	AA	B2	BA
[edx]+disp32		011	83	8B	93	9B	A3	AB	B3	BB
[--][--]+disp32		100	84	8C	94	9C	A4	AC	B4	BC
[ebp]+disp32		101	85	8D	95	9D	A5	AD	B5	BD
[esi]+disp32		110	86	8E	96	9E	A6	AE	B6	BE
[edi]+disp32		111	87	8F	97	9F	A7	AF	B7	BF
eax/ex/al	11	000	C0	C8	D0	D8	E0	E8	F0	F8
ebx/bx/bl		001	C1	C9	D1	D9	E1	E9	F1	F9
ecx/cx/cl		010	C2	CA	D2	DA	E2	EA	F2	FA
edx/dx/dl		011	C3	CB	D3	DB	E3	EB	F3	FB
esp/sp/ah		100	C4	CC	D4	DC	E4	EC	F4	FC
ebp/bp/bh		101	C5	CD	D5	DD	E5	ED	F5	FD
esi/si/ch		110	C6	CE	D6	DE	E6	EE	F6	FE
edi/di/dh		111	C7	CF	D7	DF	E7	EF	F7	FF

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MOV - Opcode Instructions

88	Mov r8,r8
89	Mov r16,r16
89	Mov r32,r32
A0	Mov r8,al
A1	Mov r16,ax
A1	Mov r32,eax
8A	Mov r8,m8
8B	Mov r16,m16
8B	Mov r32,m32
B0+Rd id	Mov r8,i8
B8+Rd id	Mov r16,i16
B8+Rd id	Mov r32,i32
A2	Mov m8,al
A3	Mov m16,ax
A3	Mov m32,eax
88	Mov m8,r8
89	Mov m16,r16
89	Mov m32,r32
C6	Mov m8,i8
C7	Mov m16,i16
C7	Mov m32,i32

PUSH - Opcode Instructions

FF	push r16/m16
FF	push r32/m32
50+Rr id	push r16
50+Rr id	push r32
6A	push i08
68	push i26
68	push i32

POP - Opcode Instructions

8F	push r16/m16
8F	push r32/m32
58+Rr id	push r16
58+Rd id	push r32

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ADD - Opcode Instructions

00	add r8,r8
01	add r16,r16
01	add r32,r32
04	add al,i8
05	add ax,i16
05	add eax,i32
02	add r8,m8
03	add r16,m16
03	add r32,m32
80	add r8,i8
83	add r16,i16
83	add r32,i32
00	add m8,r8
01	add m16,r16
01	add m32,r32
80	add m8,i8
83	add m16,i16
83	add m32,i32

CALL - Opcode Instructions

E8	call rel16
E8	call rel32