Memory Location	Machine code: Instr (Or Immediate number)		TEMP	Binary code
0 1 2 3 4 5	Reserved (Trap Code Table Entry) Reserved (Machine fault Table Entry) Reserved (PC+1 for Trap) Reserved (HALT) Reserved (Machine Fault) Reserved (HALT) LDX IX0,MEM[21]	Reserved		00000000000000000000000000000000000000
8 9 10 11 12 13 14 15 16 17 18	JMA IX0,14 (AFTER THE INSTR, THE SPACE USE AS SWAP) 0 (RUNNING STACK DEPTH, DEFAULT 0) RUNNING STACK SPACE BELOW(INCLUDING THIS LINE)	Running Stack Space: to store PC for each subroutine.	Direct Addressing Location	00000000000000000000000000000000000000
19 20 21 22 23 24 25 26 27 28 29	0 1000 210 177 65535 145 105 500 20 67 swap space		DO NOT WASTE FOR INSTR!	0000000000000000000000000000000011111010

30	swap space			0000000000000000
31	32			000000000100000
32	LDR R0,MEM[8]			0000010000001000
33	AIR R0,1			0001100000000001
34	STR R0,MEM[8]		i	0000100000001000
35	LDA R0,9	SAVE PC(R3) TO	•	0000110000001001
36	AMR R0, MEM[8]	RUNNING	!	0001000000001000
37	STR R0,MEM[7]	STACK	i	0000100000000111
38	LDX IX2,MEM[7]		i	1010010011000111
39	STR R3,IX2,0		ļ	0000101111000000
40	SIR R1,30		i	0001110100011110
41	SIR R1,18			0001110100010010
42	LDX IX0,MEM[31]		Subroutine 1:	1010010001011111
43	JGE R1, IX0, 13		CHECK IF R1 IS '0' '9'(ASCII)	0100010101001101
44	HALT		IF NOT, HALT	0000000000000000
45	SIR R1,10		IF IS, RETURN	0001110100001010
46	JGE R1,IX0, 12		NORMALLY	0100010101001100
47	AIR R1,10		WITH NO	0001100100001010
48	AIR R1,18		RETURN VALUE	0001100100010010
49	AIR R1,30			0001100100011110
50	LDA R0,9		i	0000110000001001
51	AMR R0, MEM[8]		•	0001000000001000
52	STR R0,MEM[7]	RETURN PC(R3)	!	0000100000000111
53	LDX IX2,MEM[7]	TO	i	1010010011000111
54	LDR R3,IX2,0	RUNNING	•	0000011111000000
55	LDR R0,MEM[8]	STACK		0000010000001000
56	SIR R0,1			0001110000000001
57	STR R0,MEM[8]			0000100000001000
58	RFS			0011110000000000
59	LDR R0,MEM[8]			0000010000001000
60	AIR R0,1		!	0001100000000001
61	STR R0,MEM[8]			0000100000001000

62	LDA R0,9	SAVE PC(R3) TO	0000110000001001
63	AMR R0, MEM[8]	RUNNING	0001000000001000
64	STR R0,MEM[7]	STACK	0000100000000111
65	LDX IX2,MEM[7]		1010010011000111
66	STR R3,IX2,0		0000101111000000
67	IN R1,KEYBOARD		1111010100000000
68	LDA R0,10		0000110000001010
69	LDX IX0,MEM[31]		1010010001011111
70	TRR R0,R1		0101100001000000
71	JCC CC(3), IX0,12		0011001101001100
72	JSR IX0,0		0011100001000000
73	SIR R1,30		0001110100011110
74	SIR R1,18		0001110100010010
75	STR R1,MEM[30]		0000100100011110
76	IN R1,KEYBOARD		1111010100000000
77	LDA R0=10		0000110000001010
78	TRR R0,R1	Subroutine 2:	0101100001000000
79	LDX IX0,MEM[28]	READ A NUMBER	1010010001011100
80	JCC CC(3), IX0,29	FROMIO	0011001101011101
81	LDX IX0,MEM[31]	CHECK IF LEGIT	1010010001011111
82	JSR IX0,0	CONVERT TO	0011100001000000
83	SIR R1,30	INTEGER	0001110100011110
84	SIR R1,18	STORE TO	0001110100010010
85	STR R1,MEM[29]	MEM[30]	0000100100011101
86	LDR R0,MEM[30]		0000010000011110
87	LDA R2=10		0000111000001010
88	MLT R0,R2		0101000010000000
89	LDX IX0,MEM[31]		1010010001011111
90	JNE R0,IX0,12		0010110001001100
91	AMR R1,MEM[29]		0001000100011101
92	JCC CC(0),IX0,12		0011000001001100
93	STR R1,MEM[30]		0000100100011110

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94	LDX IX0,MEM[28]		3	1010010001011100
95	JMA IX0,9		Ì	0011010001001001
96	LDA R0,9			0000110000001001
97	AMR R0, MEM[8]			0001000000001000
98	STR R0,MEM[7]	DETUDNING(D3)	ì	0000100000000111
99	LDX IX2,MEM[7]	RETURN PC(R3) TO		1010010011000111
100	LDR R3,IX2,0	RUNNING		0000011111000000
101	LDR R0,MEM[8]	STACK	i	0000010000001000
102	SIR R0,1	Smer		0001110000000001
103	STR R0,MEM[8]		ļ	0000100000001000
104	RFS			0011110000000000
105	LDR R0,MEM[8]			0000010000001000
106	AIR R0,1			0001100000000001
107	STR R0,MEM[8]			0000100000001000
108	LDA R0,9	SAVE PC(R3) TO		0000110000001001
109	AMR R0, MEM[8]	RUNNING		0001000000001000
110	STR R0,MEM[7]	STACK		0000100000000111
111	LDX IX2,MEM[7]			1010010011000111
112	STR R3,IX2,0			0000101111000000
113	LDX IX0,MEM[31]			1010010001011111
114	JSR IX0,27		Subroutine 3:	0011100001011011
115	LDR R0,MEM[27]		READ 20	0000010000011011
116	AMR R0,MEM[26]		NUMBERS	0001000000011010
117	STR R0,MEM[7]		SAVE TO	0000100000000111
118	LDX IX0,MEM[7]		MEM[500~520] SAVE IN REVERSE	1010010001000111
119	LDR R0,MEM[30]		ORDER	0000010000011110
120	STR R0,IX0,0		THAT IS:	0000100001000000
121	LDR R0,MEM[27]		THE 1ST	0000010000011011
122	SIR R0,1		NUMBER	0001110000000001
123	STR R0,MEM[27]		READED	0000100000011011
124	LDX IX0,MEM[25]		SAVE TO	1010010001011001
125	JNE R0,IX0,8		MEM[520]	0010110001001000

126	LDA R0,9			0000110000001001
127	AMR R0, MEM[8]			0001000000001000
128	STR R0,MEM[7]	DETURN DC(D2)		0000100000000111
129	LDX IX2,MEM[7]	RETURN PC(R3) TO		1010010011000111
130	LDR R3,IX2,0	RUNNING		0000011111000000
131	LDR R0,MEM[8]	STACK		0000010000001000
132	SIR R0,1	3 men		0001110000000001
133	STR R0,MEM[8]			0000100000001000
134	RFS			0011110000000000
135	LDR R0,MEM[8]			0000010000001000
136	AIR R0,1			0001100000000001
137	STR R0,MEM[8]		3	0000100000001000
138	LDA R0,9	SAVE PC(R3) TO	ì	0000110000001001
139	AMR R0, MEM[8]	RUNNING	3	0001000000001000
140	STR R0,MEM[7]	STACK		0000100000000111
141	LDX IX2,MEM[7]		1	1010010011000111
142	STR R3,IX2,0			0000101111000000
143	STR R2,MEM[7]		Į.	0000101000000111
144	SMR R1,MEM[7]			0001010100000111
145	LDX IX0,MEM[24]			1010010001011000
146	JGE R1, IX0, 12		. i	0100010101001100
147	AMR R1,MEM[7]	RESTORE THE VALUE OF R1	Cubroutino 4.	0001000100000111
148	LDA R0,9		Subroutine 4: COMPARE R1,R2	0000110000001001
149	AMR R0, MEM[8]		IF R1 IS BIGGER	0001000000001000
150	STR R0,MEM[7]	RETURN PC(R3)	RETURN O(RO)	0000100000000111
151	LDX IX2,MEM[7]	TO	IF R2 IS BIGGER	1010010011000111
152	LDR R3,IX2,0	RUNNING	OR EQUAL	0000011111000000
153	LDR R0,MEM[8]	STACK	RETURN 1(RO)	0000010000001000
154	SIR R0,1			0001110000000001
155	STR R0,MEM[8]			0000100000001000
156	RFS(IMM=1)	R2 IS BIGGER,R0=1		0011110000000001
157	AMR R1,MEM[7]	RESTORE THE VA	i	0001000100000111

:	158	LDA R0,9		0000110000001001
i	159	AMR R0, MEM[8]		0001000000001000
•	160	STR R0,MEM[7]	DETUDNING(D2)	0000100000000111
ļ	161	LDX IX2,MEM[7]	RETURN PC(R3) TO	1010010011000111
i	162	LDR R3,IX2,0	RUNNING	0000011111000000
Ī	163	LDR R0,MEM[8]	STACK	0000010000001000
ļ	164	SIR R0,1	SIMER	0001110000000001
i	165	STR R0,MEM[8]		0000100000001000
<u> </u>	166	RFS(IMM=0)	R1 IS BIGGER,R0=0	0011110000000000
Ī	167	LDR R0,MEM[8]		0000010000001000
•	168	AIR R0,1		0001100000000001
	169	STR R0,MEM[8]	RETURN PC(R3)	0000100000001000
i	170	LDA R0,9	TO	0000110000001001
:	171	AMR R0, MEM[8]	RUNNING	0001000000001000
ļ	172	STR R0,MEM[7]	STACK	0000100000000111
i	173	LDX IX2,MEM[7]		1010010011000111
į	174	STR R3,IX2,0		0000101111000000
Į	175	LDA R0,20		0000110000010100
i	176	STR R0,MEM[27]		0000100000011011
	177	LDR R0,MEM[26]		0000010000011010
i	178	AMR R0,MEM[27]		0001000000011011
:	179	STR R0,MEM[7]		0000100000000111
ļ	180	LDX IX0,MEM[7]		1010010001000111
i	181	LDR R1,IX0,0		0000010101000000
i	182	LDR R2,MEM[30]		0000011000011110
į	183	LDX IX0,MEM[25]		1010010001011001
i	184	JSR IX0,30		0011100001011110
	185	LDX IX0,MEM[22]		1010010001010110
į	186	JZ R0,IX0,15		0010100001001111
	187	STR R1,MEM[7]		0000100100000111
I	188	SMR R2,MEM[7]		0001011000000111
i	189	STR R2,MEM[7]		0000101000000111

100	L D.V. IVO MENTOOT		1010010001010110
190	LDX IX0,MEM[22]		1010010001010110
191	JMA IX0,20	Subroutine 5:	0011010001010100
192	STR R2,MEM[7]	REVERSE	0000101000000111
193	SMR R1,MEM[7]	VISITING	0001010100000111
194	STR R1,MEM[7]	MEM500~520]	
195	LDX IX0,MEM[22]	FIND THE	1010010001010110
196	JMA IX0,20	NEAREST	0011010001010100
197	LDR R1,MEM[23]	NUMBER	0000010100010111
198	LDR R2,MEM[7]	OF MEM[30]	0000011000000111
199	LDX IX0,MEM[25]	PLACE IT TO	1010010001011001
200	JSR IX0,30	MEM[29]	0011100001011110
201	LDX IX0,MEM[21]		1010010001010101
202	JNE R0,IX0,0		0010110001000000
203	STR R2,MEM[23]		0000101000010111
204	LDR R0,MEM[26]		0000010000011010
205	AMR R0,MEM[27]		0001000000011011
206	STR R0,MEM[7]		0000100000000111
207	LDX IX0,MEM[7]		1010010001000111
208	LDR R1,IX0,0		0000010101000000
209	STR R1,MEM[29]		0000100100011101
210	LDR R0,MEM[27]		0000010000011011
211	SIR R0,1		0001110000000001
212	STR R0,MEM[27]		0000100000011011
213	LDX IX0,MEM[22]		1010010001010110
214	JGE R0,IX0,0		0100010001000000
215	LDA R0,9		0000110000001001
216	AMR R0, MEM[8]		0001000000001000
217	STR R0,MEM[7]	DETUDAL DO(D2)	0000100000000111
218	LDX IX2,MEM[7]	RETURN PC(R3)	1010010011000111
219	LDR R3,IX2,0	TO RUNNING	0000011111000000
220	LDR R0,MEM[8]	STACK	0000010000001000
221	SIR R0,1	STACK	0001110000000001
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222	STR R0,MEM[8]		000010000001000
223	RFS	<u>.</u>	0011110000000000
224	LDX IX0,MEM[25]	CALL READ_20_NUMBER	1010010001011001
225	JSR IX0,0		0011100001000000
226	LDX IX0,MEM[31]	CALL READ_A_NUMBER	1010010001011111
227	JSR IX0,27		0011100001011011
228	LDX IX0,MEM[24]	CALL FIND_NUMBER	1010010001011000
229	JSR IX0,22		0011100001010110
230	LDX IX0,MEM[21]		1010010001010101
231	JMA IX0,23		0011010001010111
232			0000000000000000
233	LDR R0,MEM[29]		0000010000011101
234	LDA R2,10		0000111000001010
235	DVD R0,R2		0101010010000000
236	LDR R2,MEM[19]		0000011000010011
237	AIR R2,1		0001101000000001
238	STR R2,MEM[19]		0000101000010011
239	LDR R2,MEM[20]		0000011000010100
240	AMR R2,MEM[19]		0001001000010011
241	STR R2,MEM[7]		0000101000000111
242	LDX IX0,MEM[7]		1010010001000111
243	AIR R1,30	MAIN	0001100100011110
244	AIR R1,18		0001100100010010
245	STR R1,IX0,0		0000100101000000
246	LDX IX0,MEM[21]		1010010001010101
247	JNE R0,IX0,24		0010110001011000
248	LDR R0,MEM[20]		0000010000010100
249	AMR R0,MEM[19]		0001000000010011
250	STR R0,MEM[20]		0000100000010100
251	LDX IX0,MEM[20]	READ NUMBER REVERSE ORDER	1010010001010100
252	LDR R0,IX0,0		0000010001000000
253	OUT R0,PRINTER	Print the result to the consle display	1111100000000001

254 255 256 257 258 259 260 261 262	LDR R0,MEM[20] SIR R0,1 STR R0,MEM[20] LDR R0,MEM[19] SIR R0,1 STR R0,MEM[19] LDX IX0,MEM[18] JNE R0,IX0,0 HALT	0000010000010100 000111000000001 00001000000
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