

MACRO 47(113) 03:12 10-SEP-75 PAGE 8  
ERROR HANDLER, READY, COMPACTIFICATION, NEW, CLEAR, MAIN

26350				18101 OF ERROR MESSAGE
26350		QUTCHR		1TYPE 1T
26340		DAD	0	ADD IN ERROR CODE
26360		MOV	A,M	1GET FIRST ERROR CHARACTER
26380		QUTCHR		1TYPE 1T
26400		CHRGRT		1GET 2ND CHARACTER OF ERROR CODE
26420		QUTCHR		1TYPE 1T
26440		LXI	H,ERR>	1GET POINTER TO " ERROR"
26460	ERRFIN:	CALL	STROUT	1TYPE 1T

MACRO 47(113) 03:12 10-SEP-75 PAGE 8-1  
ERROR HANDLER, READY, COMPACTIFICATION, NEW, CLEAR, MAIN

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29020      PUSH      PSW          ;SAVE STATUS INDICATOR FOR 1ST CHARACTER
29040      CALL      LINGET       ;READ IN A LINE #

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1972	002200*	000000	003642*				
1973	002201*	000000	002174*				
1974	002202*	001000	000325	29060	PUSH	D	ISAVE LINE #
1975	002203*	001000	000315	29080	CALL	CRUNCH	ICRUNCH THE LINE DOWN
1976	002204*	000000	002233*				
1977	002205*	000000	002200*				
1978	002206*	001000	000107	29100	MOV	B,A	IA#B AFTER CRUNCH, (B,C)=CHAR COUNT FOR NODEL
1979	002207*	001000	000321	29120	POP	D	IRESTORE LINE #
1980	002210*	000000	000361	29140	POP	PSW	IWAS THERE A LINE #?
1981	002211*	001000	000322	29160	JNC	GONE	IF NOT ITS A DIRECT STATEMENT
1982	002212*	000000	003370*				
1983	002213*	000000	002204*				
1984	002214*	001000	000325	29180	PUSH	D	
1985	002215*	001000	000305	29200	PUSH	B	ISAVE LINE # AND CHARACTER COUNT
1986	002216*	001000	000327	29220	CHRGET		IREMEMBER IF THIS LINE IS
1987	002217*	001000	000365	29240	PUSH	PSW	IBLANK SO WE DON'T INSERT IT
1988	002220*	001000	000315	29260	CALL	FNOLIN	IGET A POINTER TO THE LINE
1989	002221*	000000	002371*				
1990	002222*	000000	002212*				
1991	002223*	001000	000305	29280	PUSH	B	ISAVE THE POINTER
1992				29300	IFC	LENGTH=2,<	
1993	002224*	001000	000334	29320	CC	DEL*	IDDELETE THE LINE
1994	002225*	000000	011271*				
1995	002226*	000000	002221*				
1996				29340	IFN	LENGTH=2,<	
1997				29360	JNC	NODEL	IND MATCH SO DON'T DELETE
1998				29380	XCHG		I[0,E] NOW HAS THE POINTER TO THE LINE
1999				29400			IBEYOND THIS ONE
2000				29420	LHLD	VARTAB	ICOMPACTIFYING TO VARTAB
2001				29440	LDAX	D	
2002				29460	STAX	B	ISHOVING DOWN TO ELIMINATE A LINE
2003				29480	INX	B	
2004				29500	INX	D	
2005				29520	COMPAR		
2006				29540	JNC	MLOOP	IDONE COMPACTIFYING?
2007				29560	MOV	M,B	
2008				29580	MOV	L,C	
2009				29600	INX	H	INEN VARTAB
2010				29620	SHLD	VARTAB*	
2011	002227*	001000	000321	29640	POP	D	IPOP POINTER AT PLACE TO INSERT
2012	002230*	001000	000361	29660	POP	PSW	ISEE IF THIS LINE HAD
2013				29680			ANYTHING ON IT
2014	002231*	001000	000312	29700	JZ	FINI	IF NOT DON'T INSERT
2015	002232*	000000	002276*				
2016	002233*	000000	002225*				
2017	002234*	001000	000652	29720	LHLD	VARTAB	ICURRENT END
2018	002235*	000000	001621*				
2019	002236*	000000	002232*				
2020	002237*	001000	000343	29740	XTML		I[0,L]=CHARACTER COUNT, VARTAB
2021				29760			IONTO THE STACK
2022	002240*	001000	000301	29780	POP	B	I[B,C]=OLD VARTAB
2023	002241*	001000	000011	29800	DAD	B	
2024	002242*	001000	000345	29820	PUSH	H	ISAVE NEW VARTAB

2025	002243*	001000	000315	29840	CALL	BLTU	
2026	002244*	000000	002205*				
2027	002245*	000000	002235*				
2028	002246*	001000	000341	29860	POP	H	IPOP OFF VARTAB
2029	002247*	001000	000642	29880	SHLD	VARTAB	IUPDATE VARTAB
2030	002250*	000000	011621*				
2031	002251*	000000	002244*				
2032	002252*	001000	000353	29900	XCHG		
2033	002253*	001000	000164	29920	MOV	M,H	IFFOUL CHEAD WITH NON-ZERO LINK
2034	002254*	001000	000043	29940	INX	H	ISD IT DOESN'T THINK
2035				29960			ITHE LINK IS THE
2036				29980			END OF THE PROGRAM
2037	002255*	001000	000043	30000	INX	H	
2038	002256*	001000	000321	30020	POP	D	IGET LINE # OFF STACK
2039	002257*	001000	000163	30040	MOV	M,E	
2040	002260*	001000	000043	30060	INX	H	IPUT DOWN LINE #
2041	002261*	001000	000162	30080	MOV	M,D	
2042	002262*	001000	000043	30100	INX	H	
2043							
2044	002263*	001000	000021	30140	LXI	D,BUF	IMOVE LINE FROM BUF TO PROGRAM AREA
2045	002264*	000000	001431*				
2046	002265*	000000	002250*				
2047	002266*	001000	000032	30160	MLOOPRI	LDAX	D
2048				30180			INDON TRANSFERING LINE
2049	002267*	001000	000167	30200	MOV	M,A	IFIN FROM BUF
2050	002270*	001000	000043	30220	INX	H	
2051	002271*	001000	000023	30240	INX	D	
2052	002272*	001000	000027	30260	ORA	A	IZERO MARKS THE END
2053	002273*	001000	000302	30280	JNZ	MLOOPH	
2054	002274*	000000	002266*				
2055	002275*	000000	002264*				
2056	002276*	001000	000315	30300	FINI:	CALL	RUNC
2057	002277*	000000	002237*				IDDO CLEAR & SET UP STACK
2058	002300*	000000	002274*				
2059				30320			
2060	002301*	001000	000043	30340	INX	H	IFALSO SETS [H,L] TO [TXTTAB]-1
2061				30360			
2062				30380			I CHEAD GOES THROUGH PROGRAM STORAGE AND FIXES
2063				30400			I UP ALL THE LINKS, THE END OF EACH
2064				30420			I LINE IS FOUND BY SEARCHING FOR THE ZERO AT THE END,
2065				30440			I THE DOUBLE ZERO LINK IS USED TO DETECT THE END OF THE PROGRAM
2066				30460			
2067	002302*	001000	000124	30480	CHEAD:	MOV	D,H
2068	002303*	001000	000155	30500		MOV	E,L
2069	002304*	001000	000176	30520		MOV	A,H
2070	002305*	001000	000043	30540		INX	H
2071	002306*	001000	000026	30560		ORA	M
2072	002307*	001000	000312	30580	JZ	MAIN	IDONE
2073	002310*	000000	002165*				
2074	002311*	000000	002277*				
2075	002312*	001000	000043	30600	INX	H	IFFIX H TO START OF TEXT
2076	002313*	001000	000043	30620	INX	H	
2077	002314*	001000	000043	30640	INX	H	

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2078 002315* 001000 000257 30660 XRA A ;SEARCHING FOR A ZERO IN MEMORY
2079 002316* 001000 000276 30660 CZLOOP: CMP M ;TO MARK THE END OF THIS LINE
2080 002317* 001000 000043 30700 INX H ;BUMP POINTER
2081 002320* 001000 000302 30720 JNZ CZLOOP ;END OF LINE
2082 002321* 000000 002316*
2083 002322* 000000 002310*
2084 002323* 001000 000353 30740 XCHG ;SWITCH TEMP
2085 002324* 001000 000163 30760 MOV M,E ;100 FIRST BYTE OF FIXUP
2086 002325* 001000 000043 30780 INX H ;ADVANCE POINTER
2087 002326* 001000 000162 30800 MOV M,D ;2ND BYTE OF FIXUP
2088 002327* 001000 000353 30820 XCHG ;AND BACK AGAIN
2089 002330* 001000 000303 30840 JMP CHEAD ;KEEP CHAINING TIL DONE
2090 002331* 000000 002302*
2091 002332* 000000 002321*
2092
2093
2094
2095
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2097
2098 002333* 001000 000021 30860 IFB LENGTH=2,<
2099 002334* 000000 000000* 30880 ;
2100 002335* 000000 002331* 30900 ; SCNLIN SCANS A LINE RANGE OF
2101 002336* 001000 000525 31000 ; THE FORM ## OR # OR ## OR ## OR BLANK
2102 002337* 001000 000312 31020 ; AND THEN FINDS THE FIRST LINE IN THE RANGE
2103 002340* 000000 002334* 30960 ;
2104 002341* 000000 002334* 30980 SCNLIN: LXI D,SCODE ;ASSUME START LIST AT ZERO
2105 002342* 001000 000321 31040 POP D ;WE ARE GOING TO GRAB A #
2106 002343* 001000 000315 31060 CALL LINGET ;GET A LINE #, IF NONE, RETURNS ZERO
2107 002344* 000000 003642*
2108 002345* 000000 002340*
2109 002346* 001000 000325 31080 PUSH D ;SAVE FIRST
2110 002347* 001000 000312 31100 JZ ONELIN ;IF ONLY # THEN DONE,
2111 002350* 000000 002365*
2112 002351* 000000 002344*
2113 002352* 001000 000317 31120 SYNCHK MINUTK ;MUST BE A DASH,
2114 002353* 000000 000251
2115 002354* 001000 000021 31140 ALLST: LXI D,SCODE+065529 ;ASSUME MAX END OF RANGE
2116 002355* 000000 177771*
2117 002356* 000000 002350*
2118 002357* 001000 000304 31160 CNZ LINGET ;GET THE END OF RANGE
2119 002360* 000000 003642*
2120 002361* 000000 002355*
2121 002362* 001000 000302 31180 JNZ SNERR ;MUST BE TERMINATOR
2122 002363* 000000 000724*
2123 002364* 000000 002360*
2124 002365* 001000 000353 31200 ONELIN: XCHG ;[M,L] = FINAL
2125 002366* 001000 000321 31220 POP D ;GET INITIAL IN (0,E)
2126 002367* 001000 000345 31240 XTHL ;PUT MAX ON STACK, RETURN ADDR TO [M,L]
2127 002370* 001000 000345 31260 PUSH M> ;SAVE RETURN ADDRESS BACK
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2131 31340 ; THERE ARE THREE POSSIBLE RETURNS!
2132 31360 ;
2133 31380 ;
2134 31400 ; 1) ZERO FLAG SET, CARRY NOT SET, LINE NOT FOUND,
2135 31420 ; NO LINE IN PROGRAM GREATER THAN ONE SOUGHT,
2136 31440 ; [B,C] POINTS TO TWO ZERO BYTES AT END OF PROGRAM,
2137 31460 ; [M,L]=[B,C]
2138 31480 ;
2139 31500 ; 2) ZERO, CARRY SET,
2140 31520 ; [B,C] POINTS TO THE LINK FIELD IN THE LINE
2141 31540 ; WHICH IS THE LINE SEARCHED FOR,
2142 31560 ; [M,L] POINTS TO THE LINK FIELD IN THE NEXT LINE,
2143 31580 ;
2144 31600 ; 3) NON-ZERO, CARRY NOT SET,
2145 31620 ; LINE NOT FOUND, [B,C] POINTS TO LINE IN PROGRAM
2146 31640 ; GREATER THAN ONE SEARCHED FOR,
2147 31660 ; [M,L] POINTS TO THE LINK FIELD IN THE NEXT LINE,
2148 31680 ;
2149 002371* 001000 000052 31680 FNOLIN: LHLD TATTAB ;GET POINTER TO START OF TEXT
2150 002372* 000000 002363*
2151 002374* 001000 000104 31700 LOOP: MOV B,M ;IF EXITING BECAUSE OF END OF PROGRAM,
2152 31720 ;SET [B,C] TO POINT TO DOUBLE ZEROES,
2153 002375* 001000 000115 31740 MOV C,L ;
2154 002376* 001000 000176 31760 MOV A,M ;
2155 002377* 001000 000043 31780 INX H ;GET WORD POINTER TO
2156 002400* 001000 000266 31800 ORA M ;BUMP POINTER
2157 002401* 001000 000053 31820 DCX H ;GET 2ND BYTE
2158 002402* 001000 000310 31840 RZ ;GO BACK
2159 002403* 001000 000305 31860 PUSH B ;IF ZERO THEN DONE
2160 002404* 001000 000367 31880 PUSHM ;PUSH LINK
2161 002405* 001000 000367 31900 PUSHM ;PUSH BINARY LINE #
2162 002406* 001000 000341 31920 POP H ;PUSH HERE
2163 002407* 001000 000367 31940 COMPAR [D,E] TO [M,L]
2164 002410* 001000 000341 31960 POP H ;GET LINK
2165 002411* 001000 000301 31980 POP B ;GET POINTER TO THIS LINE IN [B,C]
2166 002412* 001000 000077 32000 CMC ;TURN CARRY ON
2167 002413* 001000 000310 32020 RZ ;EQUAL RETURN
2168 002414* 001000 000077 32040 CMC ;MAKE CARRY ZERO
2169 002415* 001000 000320 32060 RNC ;NO MATCH RETURN (GREATER)
2170 002416* 001000 000303 32080 JMP LOOP ;KEEP LOOPING
2171 002417* 000000 002374*
2172 002420* 000000 002372*
2173
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2177 002421* 001000 000300 32100 ;
2178 002422* 001000 000052 32120 ; THE "NEW" COMMAND CLEARS THE PROGRAM TEXT AS WELL
2179 002423* 000000 001617* 32140 ; AS VARIABLE SPACE
2180 002424* 000000 002417* 32160 ;
2181 32200 SCRTCH: RNZ ;MAKE SURE THERE IS A TERMINATOR
2182 32240 SCRTCH: LHLD TATTAB
2183 32260 IFB LENGTH=2,<

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2184 002425* 001000 000315 32280 CALL TUFF> TURN OFF TRACE, SET [A]=0.
2185 002426* 000000 003605*
2186 002427* 000000 002423*
2187 002430* 001000 000167 32300 MOV M,A ;SAVE AT END OFF TEXT
2188 002431* 001000 000043 32320 INX M,A ;BUMP POINTER
2189 002432* 001000 000167 32340 MOV M,A ;SAVE ZERO
2190 002433* 001000 000043 32360 INX M,A ;BUMP POINTER
2191 002434* 001000 000042 32380 SHLD VARTAB ;NEW START OF VARIABLE
2192 002435* 000000 001621*
2193 002436* 000000 002426*
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2196 002437* 001000 000052 32400 IFE LENGTH,<
2197 002440* 000000 001617* 32420 RUN: MNZ> ;CHECK FOR A TERMINATOR
2198 002441* 000000 002435* 32440 RUNC: LMLD TATTAB ;POINT AT THE START OF TEXT
2199 002442* 001000 000055 32460 DCX M
2200
2201
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2207 002443* 001000 000042 32480
2208 002444* 000000 001603* 32500 ;
2209 002445* 000000 002446* 32520 ; CLEARC IS A SUBROUTINE WHICH INITIALIZES THE VARIABLE AND
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2214 002451* 001000 000042 32540 ; ARRAY SPACE BY RESETTING ARYTAB (THE END OF SIMPLE VARIABLE SPACE)
2215 002452* 000000 001573* 32560 ; AND STREND (THE END OF ARRAY STORAGE), IT FALLS INTO STKINI
2216 002453* 000000 002447* 32580 ; WHICH RESETS THE STACK, [M,L] IS PRESERVED.
2217 002454* 001000 000315 32600 IFE STRING,<CLEARC>
2218 002455* 000000 003446* 32620 CLEARC: SHLD TEMP ;SAVE [M,L] IN TEMP
2219 002456* 000000 002452*
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2227 002457* 001000 000052 32640 IFN STRING,<
2228 002458* 000000 001621* 32660 LMLD MEMSIZ ;FREE UP STRING SPACE
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2237 002470* 001000 000301 32940 STKINI: POP B ;GET RETURN ADDRESS HERE
2238 002471* 001000 000052 32960 LMLD STKTOP ;[M,L] POINTER TO END OF MEMORY
2239 002472* 000000 001615*
2240 002473* 000000 002460*
2241 002474* 001000 000571 32980
2242 002475* 001000 000041 33000 IFN SPHL STRING,<
2243 002476* 000000 001551* 33020 LXI M,TEMPST
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