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250 * =====
251 *** ERROR HANDLER ***
252 * =====
253 *
254 *
255 *****
256 * ERROR HANDLING *
257 *****
258 *
259 * Produces an error message and other information
260 * about errors.
261 *
262 * Entry: A: Error message number.
263 *         BC: Latest position in EBUF or textbuffer.
264 * Exit:  If during input: Restart input statement.
265 *         If during encoding: Back to ELINA (C93C)
266 *                                     for handling.
267 *         Else: Restart Basic (direct mode).
268 *
269 D9F5 47      ERROR    MOV     B,A          Save error pointer
270 D9F6 AF      XRA     A
271 D9F7 323101 STA     :0131      Set output screen/RS232
272 D9FA CDE4CE CALL    :CEE4      Select ROM bank 0
273 D9FD 0000    DBL     :0000
274 D9FF 00      NOP
275 DA00 00      NOP
276 DA01 3A1B01 LDA     :011B      Get RUNF
277 DA04 B7      ORA     A
278 DA05 C23DDA JNZ     :DA3D      If run-time error
279 DA08 C364DA JMP     :DA64      If compile-time error
280 *
281 * ENTRYPOINTS TO ERROR ROUTINES:
282 *
283 DA0B 3E17    ERRSN   MVI     A,:17
284 DA0D C3F5D9 JMP     :D9F5      Run 'SYNTAX ERROR'
285 *
286 DA10 3E13    ERRORM  MVI     A,:13
287 DA12 C3F5D9 JMP     :D9F5      Run 'OUT OF MEMORY'
288 *
289 DA15 3E09    ERRRA   MVI     A,:09
290 DA17 C3F5D9 JMP     :D9F5      Run 'NUMBER OUT OF RANGE'
291 *
292 DA1A 3E14    ERRTM   MVI     A,:14
293 DA1C C3F5D9 JMP     :D9F5      Run 'TYPE MISMATCH'
294 *
295 DA1F 3E03    ERROV   MVI     A,:03
296 DA21 C3F5D9 JMP     :D9F5      Run 'OVERFLOW'
297 *
298 DA24 3E06    ERRDO   MVI     A,:06
299 DA26 C3F5D9 JMP     :D9F5      Run 'DIVISION BY ZERO'
300 *
301 DA29 3E05    ERRBS   MVI     A,:05
302 DA2B C3F5D9 JMP     :D9F5      Run 'SUBSCRIPT ERROR'
303 *
304 DA2E 3E00    ERRNF   MVI     A,:00
305 DA30 C3F5D9 JMP     :D9F5      Run 'NEXT WITHOUT FOR'
306 *
307 DA33 3E12    ERREL   MVI     A,:12
308 DA35 C3F5D9 JMP     :D9F5      Run 'ERROR LINE RUN'
309 *
310 DA38 3E08    ERRLS   MVI     A,:08
311 DA3A C3F5D9 JMP     :D9F5      Run 'STRING TOO LONG'

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312 *
313 *****
314 * RUN-TIME ERROR *
315 *****
316 *
317 DA3D CD50DA ERRRU CALL :DA50 Print error message
318 DA40 3A1701 LDA :0117 Get RDIPL
319 DA43 B7 ORA A
320 DA44 C24DDA JNZ :DA4D Jump if running inputs
321 DA47 CD75DA CALL :DA75 else: Print 'IN LINE <nr>'
322 DA4A C314C8 JMP :CB14 Re-enter BASIC
323
324 * If error in input:
325
326 DA4D C350E3 ERT10 JMP :E350 (0) Back to restart input
327 *
328 *****
329 * PRINT ERROR MESSAGE *
330 *****
331 *
332 * Entry: B: Error message number.
333 * Exit: BC preserved, AFDEHL corrupted.
334 *
335 DA50 CD55DD ERRMS CALL :DD55 Cursor to begin (next) line
336 DA53 78 MOV A,B Get error number
337 DA54 2194DA LXI H,:DA94 Base of list error messages
338 DA57 B7 ADD A Multiply error nr *2
339 DA58 5F MOV E,A and save offset
340 DA59 1600 MVI D,:00
341 DA5B 19 DAD D Calculate table addr.
342 DA5C 5E MOV E,M ) Get addr of message
343 DA5D 23 INX H ) in DE
344 DA5E 56 MOV D,M )
345 DA5F EB XCHG and in HL
346 DA60 CDD4DA CALL :DAD4 Print error message
347 DA63 C9 RET
348 *
349 *****
350 * COMPILE-TIME ERROR *
351 *****
352 *
353 * Handles errors in direct mode. Only an error
354 * message is printed. Control is passed back to
355 * ELINA (C93C) except if it is an error during
356 * encoding of a stored line.
357 *
358 * Entry: A: Error number.
359 * C: Points to last read character on
360 * input line.
361 * Exit: To Basic interpreter.
362 *
363 DA64 3A2201 ERRCD LDA :0122 Get ERSFL
364 DA67 FE01 CPI :01 Error during encoding?
365 DA69 CA57C9 JZ :C957 Then handle error
366
367 * Error in direct command:
368
369 DA6C CD50DA CALL :DA50 Print error message
370 DA6F CD5EDD CALL :DD5E Print car.ret
371 DA72 C323C8 JMP :CB23 Restart interpreter
372 *

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374 *****
375 * PRINT LINE NUMBER IN WHICH ERROR OCCURED *
376 *****
377 *
378 * Prints car.ret if current line is a direct command
379 * Else, prints 'IN LINE <linenr>' and car.ret.
380 *
381 * Entry: None.
382 * Exit: ABCDEHL preserved. F corrupted.
383 *       Z=1: direct command.
384 *
385 DA75 E5      MSGIL   PUSH   H
386 DA76 F5      PUSH   PSW
387 DA77 2A0001  LHLD   :0100      Get start current line
388 DA7A 7C      MOV    A,H
389 DA7B B5      ORA    L          Check if 0
390 DA7C F5      PUSH   PSW
391 DA7D CABFDA  JZ     :DABC      If direct, print car.ret
392 DAB0 CDFFDA  CALL   :DAFF      Else, print 'IN LINE'
393 DAB3 7FDB    DBL   :DB7F
394 DAB5 7E      MOV    A,M      ) Get line nr in HL
395 DAB6 23      INX    H          )
396 DAB7 6E      MOV    L,M      )
397 DAB8 67      MOV    H,A      )
398 DAB9 CDB4EF  CALL   :EFB4      (0) Print line number
399 DABC CD5EDD  MIL10  CALL   :DD5E      Print car.ret
400 DABF F1      POP    PSW
401 DA90 E1      POP    H
402 DA91 7C      MOV    A,H
403 DA92 E1      POP    H
404 DA93 C9      RET
405 *
406 *****
407 * ERROR MESSAGES INDIRECTION TABLE *
408 *****
409 *
410 * The address points to the location where the
411 * string with the error messages can be found.
412 * Between brackets the error number.
413 *
414 * Run-time errors:
415 ERITB
416 DA94 1CDC    E?NF   DBL   :DC1C      (00) NEXT WITHOUT FOR
417 DA96 2CDC    E?RG   DBL   :DC2C      (01) RETURN WITHOUT GOSUB
418 DA98 33DC    E?OD   DBL   :DC33      (02) OUT OF DATA
419 DA9A 3EDC    E?OV   DBL   :DC3E      (03) OVERFLOW
420 DA9C 50DC    E?US   DBL   :DC50      (04) UNDEFINED LINE NUMBER
421 DA9E 5CDC    E?BS   DBL   :DC5C      (05) SUBSCRIPT ERROR
422 DAA0 68DC    E?D0   DBL   :DC68      (06) DIVISION BY ZERO
423 DAA2 95DC    E?OS   DBL   :DC95      (07) OUT OF STRING SPACE
424 DAA4 9DDC    E?LS   DBL   :DC9D      (08) STRING TOO LONG
425 DAA6 D8DC    E?RA   DBL   :DCDB      (09) NUMBER OUT OF RANGE
426 DAA8 B2DC    E?IN   DBL   :DCB2      (0A) INVALID NUMBER
427 DAAA FADC    E?L00  DBL   :DCFA      (0B) LOADING ERROR 0
428 DAAC FEDC    E?L01  DBL   :DCFE      (0C) LOADING ERROR 1
429 DAAE 02DD    E?L02  DBL   :DD02      (0D) LOADING ERROR 2
430 DAB0 06DD    E?L03  DBL   :DD06      (0E) LOADING ERROR 3
431 DAB2 F1DC    E?UA   DBL   :DCF1      (0F) UNDEFINED ARRAY
432 DAB4 C2DC    E?NC   DBL   :DCC2      (10) COLOUR NOT AVAILABLE
433 DAB6 B7DC    E?OF   DBL   :DCB7      (11) OFF SCREEN
434 DAB8 12DD    E?EL   DBL   :DD12      (12) ERROR LINE RUN
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436          * Compile/Run-time errors:
437
438 DABA 47DC      E?OM   DBL   :DC47      (13) OUT OF MEMORY
439 DABC 8ADC      E?TM   DBL   :DC8A      (14) TYPE MISMATCH
440 DABE D6DC      E?LN   DBL   :DCD6      (15) LINE NUMBER OUT OF
      .          RANGE
441
442 DAC0 38DC      E?SO   DBL   :DC38      (16) STACK OVERFLOW
443
444          * Compile-time errors:
445
446 DAC2 23DC      E?SN   DBL   :DC23      (17) SYNTAX ERROR
447 DAC4 79DC      E?ID   DBL   :DC79      (18) COMMAND INVALID
448 DAC6 A9DC      E?CN   DBL   :DCA9      (19) CAN'T CONT
449 DAC8 E3DC      E?TC   DBL   :DCE3      (1A) LINE TOO COMPLEX
450 DACA 47DC      E?ST   DBL   :DC47      (1B) OUT OF MEMORY
451          *
452          *****
453          * WAIT; part of RTALK (OEC6D) *
454          *****
455          *
456          * Entry: HL: Wait time.
457          *
458 DACC 2B        RTK20   DCX   H           Wait time -1
459 DACD 7C        MOV    A,H
460 DACE B5        ORA    L
461 DACF C2CCDA   JNZ    :DACC      If not ready
462 DAD2 EB        XCHG
463 DAD3 C9        RET           Parameter ptr in HL
464          *
465          *
466          *
467 DAD4          END

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*****
* S Y M B O L   T A B L E *
*****

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CKI10	D9C2	CLKEI	D9DB	CLKINT	D9A9	E?BS	DA9E
E?CN	DAC6	E?D0	DAA0	E?EL	DAB8	E?ID	DAC4
E?IN	DAA8	E?LN	DABE	E?L00	DAAA	E?L01	DAAC
E?L02	DAAE	E?L03	DAB0	E?LS	DAA4	E?NC	DAB4
E?NF	DA94	E?OD	DA98	E?OF	DAB6	E?OM	DABA
E?OS	DAA2	E?OV	DA9A	E?RA	DAA6	E?RG	DA96
E?SN	DAC2	E?SO	DAC0	E?ST	DACA	E?TC	DAC8
E?TM	DABC	E?UA	DAB2	E?US	DA9C	ERITB	DA94
ERRBS	DA29	ERRC0	DA64	ERRD0	DA24	ERREL	DA33
ERRLS	DA38	ERRMS	DA50	ERRNF	DA2E	ERRDM	DA10
ERROR	D9F5	ERROV	DA1F	ERRRA	DA15	ERRRU	DA3D
ERRSN	DA0B	ERRTM	DA1A	ERT10	DA4D	INTCH	D977
INTINI	D8FB	INTRM	D9CD	INTSU	D91E	ITMPL	D96B
KBD1	D973	KBEI	D988	KBIS	D99D	MIL10	DAB0
MSGIL	DA75	RTK20	DACC	SNDDI	D98F	SNDEI	D996
SNDIS	D9A3	SPINT	D9E2	VCS10	D94C	VCS20	D963
VECSU	D949						