NOTE: DOESN’T ACCOUNT FOR ASSEMBLER DIRECTIVES (~~LTORG~~, RESB/W, BYTE/WORD, EQU, ~~BASE~~)

~~NOTE: DOESN’T ACCOUNT FOR LITERALS~~

NOTE: This is for the text record

NOTE: Keep tab of Base register value?

1. Read in the first 6 chars:
   1. This is the value of the PROGCTR
2. Read in the next 2 chars:
   1. This is the number of bytes in the current text record -> note: doesn’t seem to be important
3. Check if there is a literal at the current value of PROGCTR; If there is
   1. Write out LTORG && continue reading in half bytes until the literal pool is no more
   2. Continue (i.e. start loop over);
   3. NOTE: the LITTAB length is in half bytes – so this tells you the amount of chars to read in but remember to only add (length / 2) to the PROGCTR
4. Read in the next 2 chars:
   1. (this might be a good place to check if there is an absolute value at PROGCTR location; if there is: it will either be a WORD/BYTE ass. directive OR EQU ass. directive)
   2. Convert to binary
      1. Set the last 2 chars to 0
   3. Convert back to hex
   4. Look up opcode
   5. Determine format
      1. if (f1 || f2):
         1. act accordingly
      2. if (f3 || f4):
         1. set n & i flags
         2. see: 4
5. Read in next char:
   1. Convert to binary
      1. Set the respective flags
   2. Check e flag position to see if extended (i.e. f4) or not
      1. If(f3):
         1. Read in next 3 chars
      2. If(f4):
         1. Read in next 5 chars
   3. Determine DISPLACEMENT/Address
      1. If opcode is LDB set Base variable to address
      2. If displacement starts with an ‘F’ it’s a negative value; flip the bits and add one
         1. To calculate TA: TA = PC/BASE – DISP **instead of** TA = DISP. + PC/BASE
6. OUTPUT TIME (this should probably be its own class):
   1. Symbol Column:
      1. Lookup PROGCTR in SYMTAB: if there’s a symbol at the current address print it out
   2. Opcode Column:
      1. If(f4):
         1. Print “+”
      2. Print mnemonic/opcode
         1. If the opcode is “LDB,” make sure to print out “BASE <opcode>” after the current line
   3. Operand Column:
      1. If(immediate addressing)
         1. Print out “#”
      2. Else If(indirect addressing)
         1. Print out “@”
      3. Print out TA/Address
         1. If(DISPLACEMENT/Address) is in the SYMTAB: print out its symbol
         2. If(INDEXED): Print out “, X” after the operand
7. Increase the PROGCTR

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Outputting RESW/RESB/WORD/BYTE

NOTE: RESW/B DO NOT PRODUCE OBJECT CODE, WHILE WORD/BYTE DOES

1. WORD/BYTE will be flagged as absolute in SYMTAB
   1. RESB/W will be relative