3. [20 points] Typescript and screenshots

3.1  [2 points] Typescript for compilation

Turn in a typescript showing compilation of your code using the provided [Makefile](https://drive.google.com/open?id=1zPrrxw7e_qoD95ZUqtcyZW_FFwMz13FW).  You should use the following two commands (Note: $ is the prompt displayed by the shell and is not part of the command that you type.)  The first one deletes all the compiled files so it forces a rebuild if you have compiled before. The second one compiles it.

$ **make clean**

$ **make**

It should show actual compilation, warning, or error messages.  Note that not all warnings are errors.  The compiler should generate several testcoop.\* files with different extensions:

* the .hex file can be opened directly in EdSim51
* the .map file shows the mapping of the symbols to their addresses after linking

Script started on Thu Oct 29 21:43:29 2020

[1m[7m%[27m[1m[0m

]2;mittyu@Mittyus-MacBook-Pro: ~/Desktop/BD3/OS/107034024- ppc1]1;..07034024-ppc1  
[0m[27m[24m[J[01;32m➜ [36m107034024-ppc1[00m [01;34mgit: ([31mmaster[34m) [33m✗[00m [K[?1h=[?2004hscript typescript[17Dexit [13Dmake clean[?1l>[?2004l

]2;make clean]1;makerm \*.hex \*.ihx \*.lnk \*.lst \*.map \*.mem \*.rel \*.rst \*.sym  
rm: \*.ihx: No such file or directory  
rm: \*.lnk: No such file or directory

make: \*\*\* [clean] Error 1

[1m[7m%[27m[1m[0m

]2;mittyu@Mittyus-MacBook-Pro: ~/Desktop/BD3/OS/107034024- ppc1]1;..07034024-ppc1  
[0m[27m[24m[J[01;31m➜ [36m107034024-ppc1[00m [01;34mgit: ([31mmaster[34m) [33m✗[00m [K[?1h=[?2004hmake clean[10Dscript typescript[17Dexit [13Dmake[?1l>[?2004l

]2;make]1;makesdcc -c testcoop.c  
testcoop.c:51: warning 158: overflow in implicit constant conversion sdcc -c cooperative.c  
cooperative.c:197: warning 85: in function ThreadCreate unreferenced function argument : 'fp'  
sdcc -o testcoop.hex testcoop.rel cooperative.rel  
[1m[7m%[27m[1m[0m

]2;mittyu@Mittyus-MacBook-Pro: ~/Desktop/BD3/OS/107034024- ppc1]1;..07034024-ppc1  
[0m[27m[24m[J[01;32m➜ [36m107034024-ppc1[00m [01;34mgit: ([31mmaster[34m) [33m✗[00m [K[?1h=[?2004heexit[?1l>[?2004l

]2;exit]1;exit

Script done on Thu Oct 29 21:43:36 2020

3.2  [18 points] Screenshots and explanation

Look up the addresses for your symbols (i.e., functions, variables, etc) in the file testcoop.map.  Set one or more breakpoints in EdSim51’s assembly code window after you have assembled it.

* Take one screenshot before each ThreadCreate call.  Explain how the stack changes.
  + Graphical user interface

    Description automatically generated
* Take one screenshot when the Producer is running. How do you know? Graphical user interface

  Description automatically generated
* Take one screenshot when the Consumer is running. How do you know? A picture containing graphical user interface

  Description automatically generated