3.1 [2 points] Typescript for compilation

Turn in a typescript showing compilation of your code using a modified Makefile (same as for cooperative except the file names are changed to the preemptive version). 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 testpreempt.* files with different extensions:

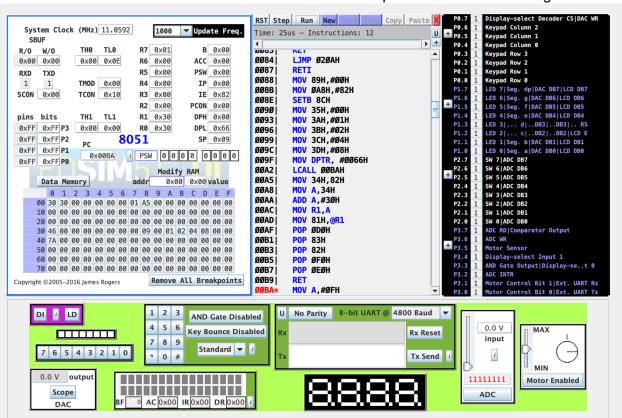
- the .hex file can be opened directly in EdSim51
- the .map file shows the mapping of the symbols to their addresses after linking

```
typescript.txt
Script started on Mon Nov 9 18:59:20 2020
[1m[7m%[27m[1m[0m
]2;mittyu@Mittyus-MacBook-Pro: ~/Desktop/BD3/0S/myProject/107034024-
ppc2]1;..07034024-ppc2
[0m[27m[24m[J[01;32m→ [36m107034024-ppc2[00m [01;34mgit:([31mmaster[34m)
[33mx[00m [K[?1h=[?2004hmmake cleam n[?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/myProject/107034024-
ppc2]1;..07034024-ppc2
[0m[27m[24m]J[01;31m \rightarrow [36m107034024-ppc2[00m]01;34mqit:([31mmaster[34m)])]]
[33mx[00m [K[?1h=[?2004hmmake[?1l>[?2004l
]2;make]1;makesdcc -c testpreempt.c
testpreempt.c:54: warning 158: overflow in implicit constant conversion
sdcc -c preemptive.c
preemptive.c:208: warning 85: in function ThreadCreate unreferenced function
argument : 'fp'
sdcc -o testpreempt.hex testpreempt.rel preemptive.rel
[1m[7m%[27m[1m[0m
]2;mittyu@Mittyus-MacBook-Pro: ~/Desktop/BD3/OS/myProject/107034024-
ppc2]1;..07034024-ppc2
[0m[27m[24m[J[01;32m→ [36m107034024-ppc2[00m [01;34mgit:([31mmaster[34m)
[33mx[00m [K[?1h=[?2004heexit[?1l>[?2004l
l2:exitl1:exit
Script done on Mon Nov 9 18:59:37 2020
```

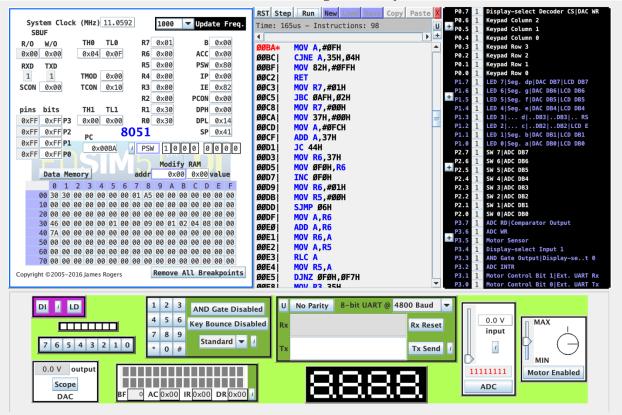
3.2 [18 points] Screenshots and explanation

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

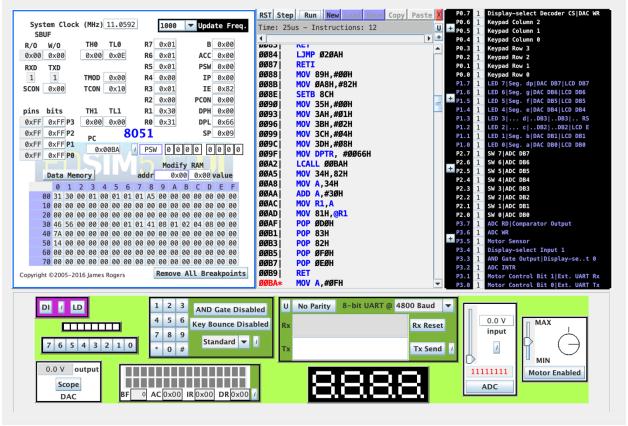
Take one screenshot before each ThreadCreate call. Explain how the stack changes.



Take one screenshot when the Producer is running. How do you know?



• Take one screenshot when the Consumer is running. How do you know?



How can you tell that the interrupt is triggering on a regular basis?