

APRIL 2, 2021

**GTU Department of Computer Engineering
CSE312/CSE504 - Spring 2021
Homework 1 Report(README)**

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1 System Requirements

In order to run spim you need to install followings;

- ▶ Flex and Bison.
- ▶ include exceptions.s file to the "usr/share/spim" directory.

2 Running Spim

Note: I provide the makefile with source codes if you use it, it will compile both spim and shell.c file. Therefore you don't have to use it. You can run shell based program in 5 different ways;

- ▶ Compile shell.c then just run "./shell".
- ▶ run "./spim -file "shell.asm" (assembly version of shell.c file).
- ▶ run "./spim -file "shellHelp.asm" (original shell file with infinite loop).
- ▶ run "./spim" then type read "shellHelper.asm" then type run.
- ▶ run "./spim" then type read "shell.asm" then type run.

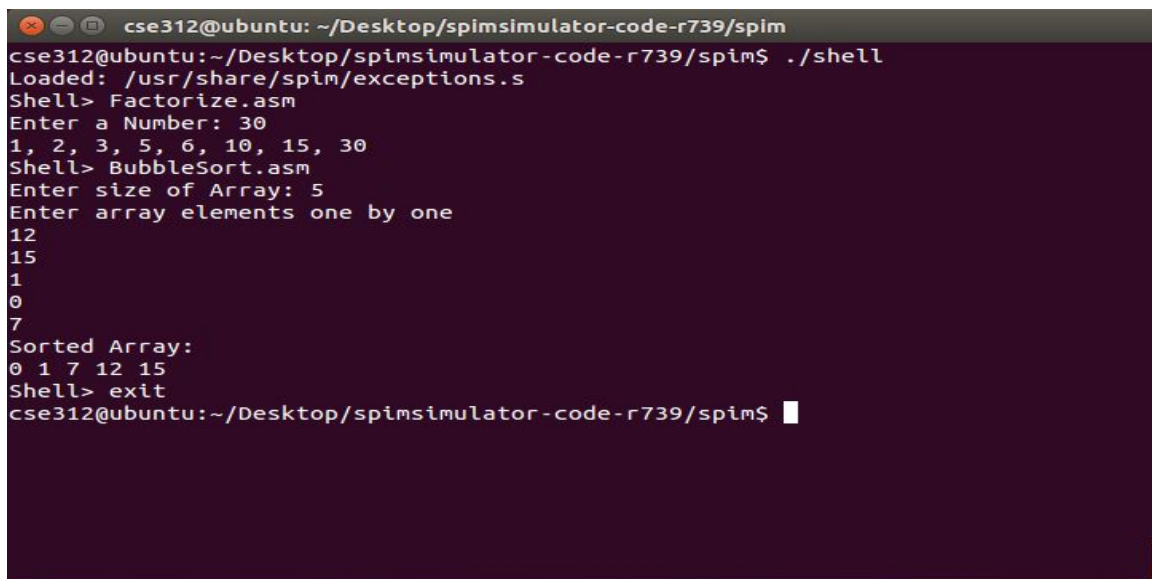
2.1 Running asm files in spim

In order to run .asm file by using my shell after doing one of above just type filename.asm For example; run "./shell" then type BubbleSort.asm

In order to create process **context switching** was made by using some memory handling codes from mem.cpp file in spim source code.

In order to stop shell just type **exit**.

A simple **test result** is following;



```
cse312@ubuntu: ~/Desktop/spimsimulator-code-r739/spim
cse312@ubuntu:~/Desktop/spimsimulator-code-r739/spim$ ./shell
Loaded: /usr/share/spim/exceptions.s
Shell> Factorize.asm
Enter a Number: 30
1, 2, 3, 5, 6, 10, 15, 30
Shell> BubbleSort.asm
Enter size of Array: 5
Enter array elements one by one
12
15
1
0
7
Sorted Array:
0 1 7 12 15
Shell> exit
cse312@ubuntu:~/Desktop/spimsimulator-code-r739/spim$
```

Figure 1