SignalLab – Answer Document

**Experiments**

Perform the following experiments.

1. Run the program in the foreground enter ctrl-c four times.   
   $ ./catch\_signals  
   Ok, let's go, kill me (3950) if you can!  
   ctrl-c
2. Run the program in the background and enter the kill -2 <pid> command four times in the current terminal window.  
   $ ./catch\_signals &  
   Ok, let's go, kill me (3950) if you can!  
   $ kill -2 3950
3. Run the program in the background and enter the kill -2 <pid> command four times in another terminal window.  
   $ ./catch\_signals &  
   **Another terminal window**  
   Ok, let's go, kill me (3950) if you can!  
   $ kill -2 3950
4. Run the program in the background and use your my\_kill program four times in another terminal window.  
   $ ./catch\_signals &  
   **Another terminal window**  
   Ok, let's go, kill me (3950) if you can!  
   $ ./my\_kill 3950
5. Look up kill and sigaction using the man command.

**Experiments**

Perform the following experiments.

1. Run the program with the default action.
2. Run the program with the signal handler that catches the divide by 0.

**Experiments**

1. Run the program in one shell and kill it from another shell using kill -2. Observe which process killed you. Is the PID printed the PID of the shell issuing the kill command.
2. Run the program in one shell and kill it from another shell using your my\_kill program. Observe which process killed you. Is the PID printed the PID of the shell issuing the kill command.

**Questions**

1. Describe what a signal is in your own words.
2. Pick several specific signals and describe them.
3. Describe how to catch a signal.
4. When catching a signal, can a process determine who sent it? If so how?
5. How is a signal related to interrupts?

Submissions

1. Submit a copy/paste run log showing you ran the code to verify the experiment questions and also did some other experiments.
2. Submit answers to the questions.