**requirements:**

1. Linux distro to use: CentOS 6.x (version 6.4, 6.5, 6.6 or 6.7 is OK)
   * hint: use VirtualBox
     + <http://virtualboxes.org/images/centos/>
     + CentOS minimal
2. commit your code to [GitHub](https://guides.github.com/activities/hello-world/) and do it regularly. send me the link to your repo as soon as it’s up.

**first part: BASH**

hint:

[user@server ~]# **free**

[user@server ~]# **TOTAL\_MEMORY=$( free | grep Mem: | awk '{ print $2 }' )**

[user@server ~]# **echo $TOTAL\_MEMORY**

script name: memory\_check

1. create a bash script that will check memory usage. It requires 3 parameters
   * -c : critical threshold (percentage)
   * -w : warning threshold (percentage)
   * -e : email address to send the report (see Bonus below)
   * NOTE: the parameters must not be positional. Sample invocation:
     + bash$ **./memory\_check -c 90 -w 60 -e** [**email@mine.com**](mailto:email@mine.com)
     + bash$ **./memory\_check -e** [**email@mine.com**](mailto:email@mine.com) **-w 60 -c 90**
     + *hint:* ***getopts***

*The sample invocations will return warning if memory usage is greater than or equal to 60% or total memory (but less than 90%). If usage is greater than 90%, it will return critical (and will use the email address to send more info - see Bonus below).*

* + If no parameters were supplied, script should tell the user the required parameters
  + script must ensure that critical threshold is always greater than the warning threshold, otherwise, print the required parameters

1. the script will exit with the following values
   * 2 : used memory is greater than or equal to critical threshold
   * 1 : used memory is greater than or equal to warning threshold but less than the critical threshold
   * 0 : used memory is less than warning threshold
   * *hint:* ***exit***
2. [Bonus] if used memory is greater than or equal to critical threshold, the script must send the top 10 processes (with process ids) that use a lot of memory to the specified email address
   * subject of the email must be in this format: “YYYYMMDD HH:MM memory check - critical”
   * YYYYMMDD HH:MM - year, month date, hour minute (e.g. 20140801 22:16)