UNIX SCRIPTING ACTIVITIES

REFRESHER 1

Create a bash script that will segregate files in a directory and list them to text files according to their filetype.

- **HINT:** Use Loops, AWK, FIND
- Create the following files in the /tmp/refresher **[not included in your script]**
    - XX_SAMPLE_FILE_1.xml   XX_SAMPLE_FILE_2.xml
      XX_SAMPLE_FILE_3.yml   XX_SAMPLE_FILE_4.yml
      XX_SAMPLE_FILE_5.yml   XX_SAMPLE_FILE_6.doc
      XX_SAMPLE_FILE_7.doc   XX_SAMPLE_FILE_8.config
      XX_SAMPLE_FILE_9.config   XX_SAMPLE_FILE_10.config
- Segregate and list their filenames in a text file named after their file type. In this case, there are **4 file types**, therefore there are **4 output text files**. These text files, are **created using your script**. Every time the script runs, it will **recreate** these text files before segregating the other files.
    - NOTE: The text files must have this permission **-rw-rw-rw-**

SCORING:

Criteria	Points	Score
Use of commands specified in the HINT	5	
Create 10 files	5	
Create/Recreate Segregation text files	12	
Change permission of text files	4	
Segregate files and list them into the text files	24	
TOTAL	**50**	

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REFRESHER 2

- Create a shell script to print a chessboard on screen.
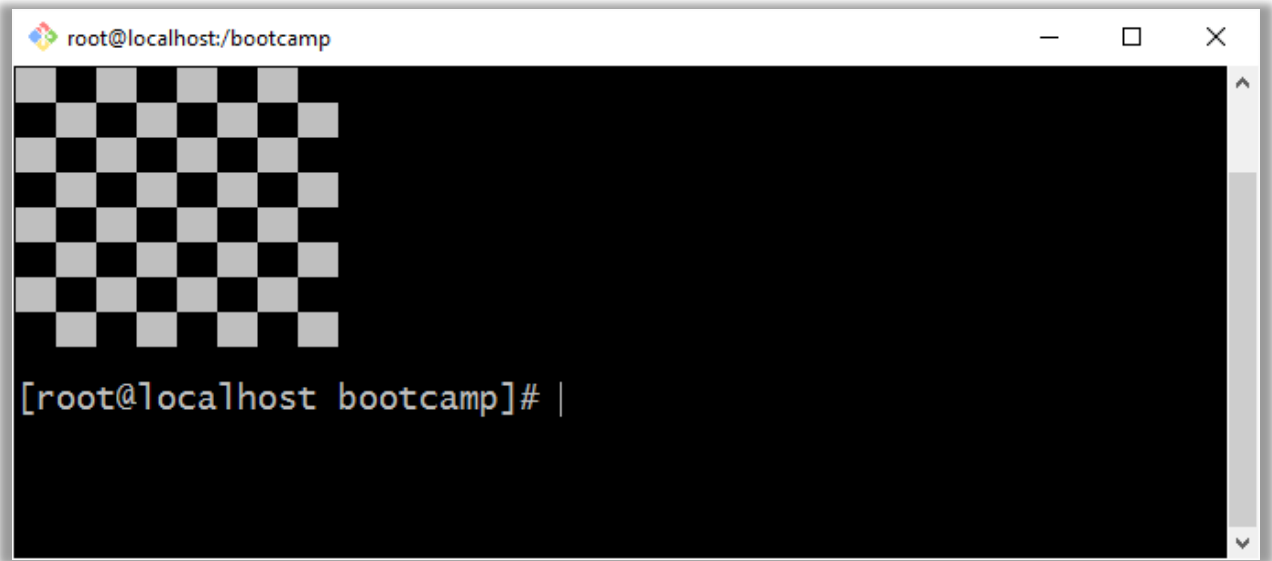
HINT: "\033[47m", "\033[40m", "\033[0m" and Loop

SCORING:

Criteria	Points	Score
Use of commands specified in the HINT	5	
Complete the activity | Unfinished work	15 | 5	
TOTAL	**20**	

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ACTIVITY

- Create a bash script **[memory_check]** that will check MEMORY USAGE. It requires 3 parameters
    - -c : Critical Threshold (percentage)
    - -w : Warning Threshold (percentage)
    - -e : email address to send the report
    - If no parameters were supplied, the script should tell the user the required parameters in this format

    USAGE: ./memory_check -c [Critical Threshold] -w [Warning Threshold] -e [email address]

    - Script must ensure that CT is always greater than the WT, otherwise print again the USAGE.
    - NOTE: Parameters should not be positional
    - **HINT**: FREE, GREP, GETOPTS, AWK
- The script must display the following values:
    - TOTAL MEMORY
    - `USED MEMORY
    - CRITICAL VALUE
    - WARNING VALUE

sample output →

```
TOTAL MEMORY = 468632
USED MEMORY = 105608
CRITICAL VALUE [25%] = 117158
WARNING VALUE [15%] = 70295
```

- The script will exit with the following values:
    - 0, if **used memory** is **less than** the Warning Value
    - 1, if **used memory** is **less than** the Critical Value but **greater than or equal** to Warning Value
    - 2, if **used memory** is **greater than or equal** to Critical Value
    - **HINT:** EXIT

SCORING:

Criteria	Points	Score
Use of commands specified in the HINT	5	
Make the script accepts parameter	10	
Parameters are not positional	20	
Display the necessary output (includes USAGE, and values in Step 2)	15	
Correct computations	20	
Exit on right exit code	10	
TOTAL	**80**	

BONUS (20 pts):

- If the exit code of memory_check is 2, display the top 10 processes that are using most of the memory in this format: *PID   %MEM   COMMAND.*
  HINT: PS, AWK

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