

## ICS 2305: SYSTEMS PROGRAMMING

**Assignment for the Class of 23<sup>RD</sup> October to be submitted via efore midnight of 31<sup>th</sup> OCT 2023. Please do not send after deadline**

**The subject of the Email should be: ICS2305ASS4: YourStudentNumber: YourName**

**Zip all your .sh Files in one Zipped file**

### Background

**In the class page under**

**general resource there are several Linux scripting resources which as earlier advised you have been working on and reading. This assignment is on UNIX /Linux shell scripting**

[https://piazza.com/class/profile/get\\_resource/lmj5w5p2hsg358/lmj5w707ug338r](https://piazza.com/class/profile/get_resource/lmj5w5p2hsg358/lmj5w707ug338r)

### Questions

1. Write the shell script that reads 5 numbers from the keyboard and print their sum
2. Write a Shell script that reads the text in a text file called JUAYetu.txt and outputs number of characters (exclusive of white spaces ) in that textfile
3. UNIX allows users to be in groups based on their access levels. Write a shell script that given a person's uid, tells you how many times that person is logged on to the system
4. Write a Shell Script that counts the number of empty folders in a directory (with size=0) and outputs the list of those folders and the time created.
5. Write a script that will convert all of the .bmp files in a given directory into .jpeg files. The user should be prompted to enter the file path. The output after conversion should give us the number of images converted
6. Nmap is a network mapper software that can show data about network traffic such as showing the IP address of all devices your machine is connected to . This can be done using bash Script as well. Write a bash Script that scan network for hosts attached to an IP address. The script should show if the host is up
7. Department Chairman of Computing has heard about your Unix shell scripting Prowess in creating mail merge service, he wants your services to invite students to a 3<sup>rd</sup> Year Projects webinar . The department wants to send the invitation letter below to a webinar addressed to each student personally.

"Inviting the you as our computing student to our 3<sup>rd</sup> Year Projects on innovation incubation scheduled Monday 23<sup>rd</sup> October from **10:00 A.M.** The Zoom link for joining in on Friday is as given below. We shall also broadcast the webinar on our youtube channel. Youtube link:

<https://youtu.be/ONVTA7LKMIIs>

The chairman has a text file that contains the names of the persons and the email of persons they want to send to. Implement this mail merge in linux bash and should work with all popular browsers.