HIT172 Operating Systems and Applications

Lab Assessment 03

Value: 30%

Submission Deadline: *25th May, 2025; 23:59 (Darwin Time)*

Submission Format

> **In the Cover Page, along with your Full Name and ID, you must also mention your Campus (Sydney, External or Darwin as per your enrolment)**

For each of the tasks, you should take the screenshot of your computer display while solving the exercises and paste the image in the doc\docx file. You should also write briefly at the end of each screenshot explaining its purpose and finally summarize your understanding of the whole task (what you have done and how) that you completed.

Submit the document in PDF format, in case you can't find anyway to convert it to PDF, then submit in doc\docx format. Remember submitting in PDF, keeps the formatting\fonts etc. of your document in place and the overall presentation remains nice and intact.

Online research is allowed for all the tasks.

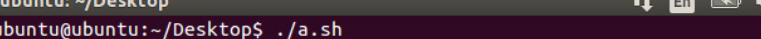**TASK-01: BASH Scripting - 1**   **10**

Write a program using 'While Loop' that will accept 7 integers from user within the range of 7 to 70 and will calculate Sum of all the inputted numbers. If the user enters any other value within 100 (inclusive) that doesn't fall into the range of 7-70 (inclusive), an appropriate error message should be shown and the program should ask for an input again. However, if the inputted value exceeds 100, the program should terminate without asking for any other input from the user.

Attach the clear screenshots showing the complete code for each of the programs. Also, summary of each the key steps are also required.

TASK-02: BASH Scripting - 2   **10**

Write a program to create a dataset of information containing name and state of the applicants of Raffle Draw program. The records will all be saved in a file that will have a name in line with your student ID. For example S298900.txt. A maximum number of 20 applicant's information can be recorded and minimum is 1. If the entered number crosses either side of the limit, an error message should be displayed asking to re-enter the name. Once a valid name is given in the input, the State information should be collected. Here all states are accepted excluding Canberra. If Canberra is given, again a message has to be displayed asking for a re-entry. So once both name and state are given as per the rule, the information should be recorded in the text file and the program should move on to the next applicant. The next applicant's information should be recorded in the same file after the previous applicant.

Check the Screenshot below to understand the flow:

```
ubuntu@ubuntu: ~/Desktop                          ↑↓ En ▭ ◀)) 1:46 AM
ubuntu@ubuntu:~/Desktop$ ./a.sh
Welcome to the Raffle Draw Program. Enter the number of People participating:
22
Number of people must be 1-20 (inclusive), Re-enter:
```

```
ubuntu@ubuntu: ~/Desktop                          ↑↓ En ▭ ◀)) 1:48 AM ⚙
ubuntu@ubuntu:~/Desktop$ ./a.sh
Welcome to the Raffle Draw Program. Enter the number of People participating:
22
Number of people must be 1-20 (inclusive), Re-enter:
3
Enter Name (max 30 chars):
Jake jon
Enter State (note: this program is for people outside 'Canberra'):
NSW
Enter Name (max 30 chars):
Name toooooooooooooooooooooooooooooooooooooooLoooooooooooooooooooooooooooonggg
Name too Long - Re-enter (max 30 chars):
```

```
ubuntu@ubuntu: ~/Desktop                          ↑↓ En ▭ ◀)) 1:52 AM
ubuntu@ubuntu:~/Desktop$ ./a.sh
Welcome to the Raffle Draw Program. Enter the number of People participating:
22
Number of people must be 1-20 (inclusive), Re-enter:
3
Enter Name (max 30 chars):
Jake jon
Enter State (note: this program is for people outside 'Canberra'):
NSW
Enter Name (max 30 chars):
Name toooooooooooooooooooooooooooooooooooooooLoooooooooooooooooooooooooooonggg
Name too Long - Re-enter (max 30 chars):
Jesmine Noir
Enter State (note: this program is for people outside 'Canberra'):
Canberra
Canberra is not allowed at this moment - Re-enter State:
```

```
ubuntu@ubuntu: ~/Desktop                          ↑↓ En ▭ ◀)) 1:54 AM
ubuntu@ubuntu:~/Desktop$ ./a.sh
Welcome to the Raffle Draw Program. Enter the number of People participating:
22
Number of people must be 1-20 (inclusive), Re-enter:
3
Enter Name (max 30 chars):
Jake jon
Enter State (note: this program is for people outside 'Canberra'):
NSW
Enter Name (max 30 chars):
Name toooooooooooooooooooooooooooooooooooooooLoooooooooooooooooooooooooooonggg
Name too Long - Re-enter (max 30 chars):
Jesmine Noir
Enter State (note: this program is for people outside 'Canberra'):
Canberra
Canberra is not allowed at this moment - Re-enter State:
TAS
Enter Name (max 30 chars):
Hamid ZaZai
Enter State (note: this program is for people outside 'Canberra'):
VIC
All  3  Records have been Saved
ubuntu@ubuntu:~/Desktop$
```
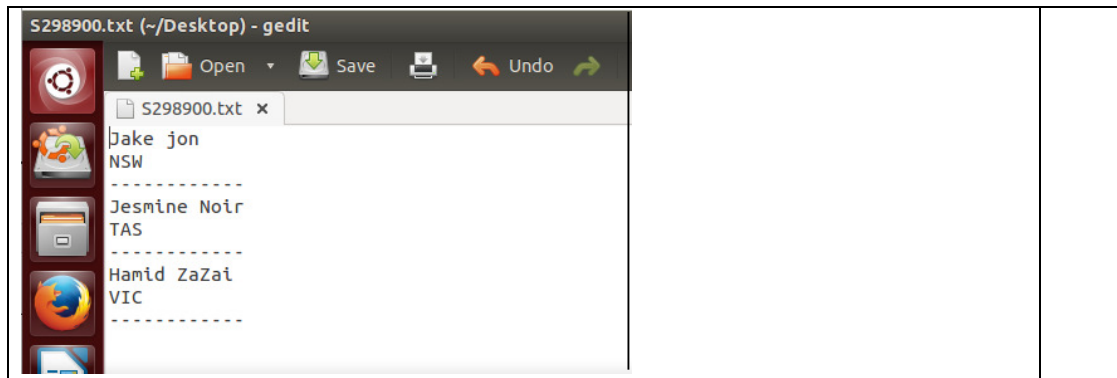
All parts of the program should be appropriately summarized in your answer file (not in the program itself). The Complete Code has to be attached with your answer and all the necessary screenshots of the program in action have to be provided.

TASK-03:   6

Your manager has requested you to setup 3 standalone Windows 10 (Enterprise edition) computers at one of divisions in your company; the computers each need to be configured according to the security policy for the organization. The following list shows the policies. Configure these in any of the VMs.

Note: execute the command '**secpol**' from run dialog box to open up the relevant dialog box, all of the below policies can be configured there.

- ✓ Passwords has to be at least 9 characters.
- ✓ A user may change their password once a day.
- ✓ Passwords must be changed every 105 days.
- ✓ User will have to provide a unique password for a minimum of 5 changes of the password.
- ✓ Users will be locked out of the computer after 4 failed attempts and must delay any further attempt for at least 15 minutes for the lookout counter to reset.
- ✓ User will automatically be logged out after 20 minutes of inaction
- ✓ Rename the Administrator account with your StudentID, eg: *S298900*.

TASK-04: 4

Create a *Software Restriction Policy* (SRP) that will disallow execution of application by all users except the Administrator.

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