Lab Sheet-6

1. Create a file demowith the following contents

       Student Alice Essentials 20 PSAT 22 Maths 34 Cultural 25 English 70
       Student Bob Essentials 23 PSAT 21 Maths 32 Cultural 18 English 94
       Student Boby Essentials 43 PSAT 31 Maths 22 Cultural 8 English 93
       Student Clara Essentials 18 PSAT 16 Maths 27 Cultural 12 English 45
       Student Dirck Essentials 25 PSAT 23 Maths 48 Cultural 25English 98Student
       Eve Essentials 8 PSAT 6 Maths 12 Cultural 13 English 5

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat >demo <<eof
heredoc> Student Alice Essentials 20 PSAT 22 Maths 34 Cultural 25 English 70
heredoc> Student Bob Essentials 23 PSAT 21 Maths 32 Cultural 18 English 94
heredoc> Student Boby Essentials 43 PSAT 31 Maths 22 Cultural 8 English 93
heredoc> Student Clara Essentials 18 PSAT 16 Maths 27 Cultural 12 English 45
heredoc> Student Dirck Essentials 25 PSAT 23 Maths 48 Cultural 25English 98
heredoc> Student Eve  Essentials 8 PSAT 6 Maths 12 Cultural 13 English 5
heredoc> eof

┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo
Student Alice Essentials 20 PSAT 22 Maths 34 Cultural 25 English 70
Student Bob Essentials 23 PSAT 21 Maths 32 Cultural 18 English 94
Student Boby Essentials 43 PSAT 31 Maths 22 Cultural 8 English 93
Student Clara Essentials 18 PSAT 16 Maths 27 Cultural 12 English 45
Student Dirck Essentials 25 PSAT 23 Maths 48 Cultural 25English 98
Student Eve  Essentials 8 PSAT 6 Maths 12 Cultural 13 English 5
```

2. Find the marks obtained by Clara in all the subjects

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | grep  -i clara | cut -d" " -f2,3,4,5,6,7,8,9,10,11,12
Clara Essentials 18 PSAT 16 Maths 27 Cultural 12 English 45
```

3. Print the marks for essentials in the increasing order

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f4 | sort -n
Essentials
18
20
23
25
43
```

4. Find the maximum marks scored in PSAT

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f6 | sort -nr | head -1
31
```

5. Find the minimum marks obtained in Cultural

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f10 | sort -n | head -2 | grep 8
8
```

6. Save the marks obtained by all the students in maths into a file and display it in the terminal using a single command

```
┌──(gautamrajesh007㊼kali)-[~]
└─$ cat demo | cut -d" " -f8 | tee demo2
34
32
22
27
48
12
```

7. Print the first 3 letters of all student names.

```
┌──(gautamrajesh007㊼kali)-[~]
└─$ cat demo | cut -d" " -f2 | cut -c1-3
Ali
Bob
Bob
Cla
Dir
Eve
```

8. Print the contents of the file demo in the terminal with all alphabets in capital letters.

```
┌──(gautamrajesh007㊼kali)-[~]
└─$ cat demo | tr [a-z] [A-Z]
STUDENT ALICE ESSENTIALS 20 PSAT 22 MATHS 34 CULTURAL 25 ENGLISH 70
STUDENT BOB ESSENTIALS 23 PSAT 21 MATHS 32 CULTURAL 18 ENGLISH 94
STUDENT BOBY ESSENTIALS 43 PSAT 31 MATHS 22 CULTURAL 8 ENGLISH 93
STUDENT CLARA ESSENTIALS 18 PSAT 16 MATHS 27 CULTURAL 12 ENGLISH 45
STUDENT DIRCK ESSENTIALS 25 PSAT 23 MATHS 48 CULTURAL 25 ENGLISH 98
STUDENT EVE ESSENTIALS 8 PSAT 6 MATHS 12 CULTURAL 13 ENGLISH 5
```

9. Print all student names after deleting the letter 'a'

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f2 | tr -d a
Alice
Bob
Boby
Clr
Dirck
Eve
```

10. Count the number of lines, words and characters in demo file after removing the letter 'S'

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | tr -d S | wc -lwc
      6      72     387
```

11. Find the number of students with their names containing the letter a, e or i

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f2 | grep -E 'a|e|i' --count
4
```

12. Find the marks of students whose names starts with 'b' (case insensitive)

```
┌──(gautamrajesh007㉿kali)-[~]
└─$ cat demo | cut -d" " -f2,3,4,5,6,7,8,9,10,11,12 | grep -i b
Bob Essentials 23 PSAT 21 Maths 32 Cultural 18 English 94
Boby Essentials 43 PSAT 31 Maths 22 Cultural 8 English 93
```

13. Find the names of students whose names starts with 'b' and ends with 'y'
    (case insensitive)

```
┌──(gautamrajesh007⊛kali)-[~]
└─$ cat demo | cut -d" " -f2 | grep -i ^b | grep -i y$
Boby
```