**CSE321- Lab Assignment 01 & 02**

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**Linux Commands**

mehnaz\_ara@fazal-20301295:~/Desktop$ touch 20301295\_1.txt 20301295\_2.txt 20301295\_3.txt 20301295\_4.txt

mehnaz\_ara@fazal-20301295:~/Desktop$ mkdir MehnazAraFazal1 MehnazAraFazal2

mehnaz\_ara@fazal-20301295:~/Desktop$ mv 20301295\_1.txt MehnazAraFazal1

mehnaz\_ara@fazal-20301295:~/Desktop$ mv 20301295\_2.txt MehnazAraFazal1

mehnaz\_ara@fazal-20301295:~/Desktop$ mv 20301295\_3.txt MehnazAraFazal1

mehnaz\_ara@fazal-20301295:~/Desktop$ cp ./MehnazAraFazal1/20301295\_1.txt ./MehnazAraFazal2

mehnaz\_ara@fazal-20301295:~/Desktop$ cp ./MehnazAraFazal1/20301295\_2.txt ./MehnazAraFazal2

mehnaz\_ara@fazal-20301295:~/Desktop$ mkdir MehnazAraFazal3

mehnaz\_ara@fazal-20301295:~/Desktop$ cp -r MehnazAraFazal1 MehnazAraFazal3

mehnaz\_ara@fazal-20301295:~/Desktop$ cd MehnazAraFazal3

mehnaz\_ara@fazal-20301295:~/Desktop/MehnazAraFazal3$ ls -la

total 12

drwxrwxr-x 3 mehnaz\_ara mehnaz\_ara 4096 Oct 31 23:05 .

drwxr-xr-x 5 mehnaz\_ara mehnaz\_ara 4096 Oct 31 23:04 ..

drwxrwxr-x 2 mehnaz\_ara mehnaz\_ara 4096 Oct 31 23:05 MehnazAraFazal1

mehnaz\_ara@fazal-20301295:~/Desktop/MehnazAraFazal3$ chmod -R 555 MehnazAraFazal1

mehnaz\_ara@fazal-20301295:~/Desktop/MehnazAraFazal3$ cd ..

mehnaz\_ara@fazal-20301295:~/Desktop$ ls -S

MehnazAraFazal1 MehnazAraFazal2 MehnazAraFazal3 20301295\_4.txt

mehnaz\_ara@fazal-20301295:~/Desktop$ sudo mv /home/mehnaz\_ara/Desktop/MehnazAraFazal3\* /root/

[sudo] password for mehnaz\_ara:

mehnaz\_ara@fazal-20301295:~/Desktop$ rm -r /home/mehnaz\_ara/Desktop/\*

mehnaz\_ara@fazal-20301295:~/Desktop$ touch course.txt

mehnaz\_ara@fazal-20301295:~/Desktop$ cat > course.txt

Course Names: CSE321|Operating Systems|Section 1

CSE370|Database Management System|Section 9

CSE484|Cloud Computing|Section 1

CHE101|Introduction to Chemistry|Section 1mehnaz\_ara@fazal-20301295:~/Desktop$

mehnaz\_ara@fazal-20301295:~/Desktop$ grep -o -i CSE course.txt | wc -l

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mehnaz\_ara@fazal-20301295:~/Desktop$ su -

Password:

su: Authentication failure

mehnaz\_ara@fazal-20301295:~/Desktop$ sudo su -

root@fazal-20301295:~# ls -dl .[^.]\*

-rw------- 1 root root 2798 অক্টোবর 30 01:21 .bash\_history

-rw-r--r-- 1 root root 3106 ডিসেম্বর 5 2019 .bashrc

drwx------ 8 root root 4096 অক্টোবর 24 16:48 .cache

drwx------ 4 root root 4096 অক্টোবর 23 21:58 .config

drwx------ 3 root root 4096 অক্টোবর 23 21:58 .dbus

drwx------ 3 root root 4096 অক্টোবর 23 21:58 .local

-rw-r--r-- 1 root root 161 ডিসেম্বর 5 2019 .profile

root@fazal-20301295:~# exit

logout

mehnaz\_ara@fazal-20301295:~/Desktop$ touch trees.txt

mehnaz\_ara@fazal-20301295:~/Desktop$ sed -n '5,17p' trees.txt

In another recent study, Polish participants spent 15 minutes gazing at either a wintertime urban forest or an unforested urban landscape. The trees in the forest had straight trunks and no leaves (because of winter), and there was no other shrubbery below the trees—in other words, no green; the urban landscape consisted of buildings and roads. Before and after, the participants filled out questionnaires related to their moods and emotions. Those who gazed at a winter forest reported significantly better moods, more positive emotions, more vigor, and a greater sense of personal restoration afterwards than those who gazed at the urban scene.

Studies have shown that spending short amounts of time in forests seems to benefit our immune systems. Specifically, one study found that elderly patients suffering from chronic obstructive pulmonary disease experienced decreases in perforin and granzyme B expressions, as well as decreased pro-inflammatory cytokines—all related to better immune function—after they visited forests rather than urban areas. Though it’s not clear exactly why this would be, a prior study suggests that trees may improve immunity thanks to certain aromatic compounds they release.

Trees also seem to help our heart health. In one study, participants walked in a forest one day and an urban environment another day, and researchers measured how the two walks impacted their bodies. In comparison to the urban environment, walking in trees lowered people’s blood pressure, cortisol levels, pulse rates, and sympathetic nervous system activity (related to stress), while increasing their parasympathetic nervous system activity (related to relaxation). All of these physiological markers are tied to better heart health, suggesting that walking in the woods improves cardiovascular function.

**C: Programming**

**a)** #include<stdio.h>

int main(){

float number\_one,number\_two;

float result;

printf("Give the first number: \n");

scanf("%f",&number\_one);

printf("Give the second number: \n");

scanf("%f",&number\_two);

if (number\_one > number\_two){

result = number\_one - number\_two;

}

else if (number\_one < number\_two){

result = number\_one + number\_two;

}

else{

result = number\_one \* number\_two;

}

printf("The result is: %f",result);

return 0;

}

**b)**#include<stdio.h>

#include<string.h>

int main(){

FILE \*fptr,\*fptr2;

char sentence [200]; //limiting no. of char

fptr = fopen("sample.txt","r"); //input text file

fptr2 = fopen("sampleOutput.txt","w"); //output text file

fgets(sentence,200,(FILE\*)fptr);

char \* word = strtok(sentence, " ");

while (word != NULL){

fputs(word,(FILE\*)fptr2);

fputc(' ',fptr2);

printf("%s\n",word);

word = strtok(NULL, " ");

}

fclose(fptr);

fclose(fptr2);

return 0;

}

**c)** #include<stdio.h>

#include<string.h>

#include<ctype.h>

int main(){

char password [20];

int category [4];

int j;

for(j=0;j<4;j++){ //setting all category value 0

category[j] = 0;

}

//Provide New Password

scanf("%s",&password);

int i;

for(i = 0; i < strlen(password);i++){ //uppercase

if (isupper(password[i])){

category[0] = 1;

}

}

for(i = 0; i < strlen(password);i++){ //lowercase

if (islower(password[i])){

category[1] = 1;

}

}

for(i = 0; i < strlen(password);i++){ //digit

if (isdigit(password[i])){

category[2] = 1;

}

}

for(i = 0; i < strlen(password);i++){ //special characters

if ((password[i] == '\_' )|| (password[i] == '$' )|| (password[i] == '#') || (password[i] == '@')){

category[3] = 1;

}

}

int sum = 0; //temp var

for(i=0;i<4;i++){

sum += category[i];

}

if (sum == 4){

printf("OK");

}

else {

for(i=0;i<4;i++){

if ((category[i] == 0) && (i == 0)){

printf("Uppercase character missing; ");

}

else if ((category[i] == 0) && (i == 1)){

printf("Lowercase character missing; ");

}

else if ((category[i] == 0) && (i == 2)){

printf("Digit missing; ");

}

else if ((category[i] == 0) && (i == 3)){

printf("Special character missing;");

}

}

}

return 0;

}

**d)**#include<stdio.h>

#include<string.h>

int main(){

char email[20];

//provide company email

scanf("%s",&email);

char \* ext = strtok(email, "@");

ext = strtok(NULL, ""); //domain

printf("%s\n",ext);

int comparison;

comparison = strcmp(ext,"sheba.xyz");

if (comparison == 0){

printf("Email address is okay");

}

else {

printf("Email address is outdated");

}

return 0;

}

**e)**#include<stdio.h>

#include<string.h>

int main(){

int sum = 0;

char tester[50]; //palindrome tester

scanf("%s",&tester);

int str\_length\_half,length\_type;

str\_length\_half = (strlen(tester))/2;

length\_type = (strlen(tester))%2;

char \*ptr1;

char \*ptr2;

if (length\_type == 0){

ptr1 = &tester[str\_length\_half];

ptr2 = &tester[str\_length\_half - 1];

}

else {

ptr1 = &tester[str\_length\_half + 1];

ptr2 = &tester[str\_length\_half - 1];

}

int i;

char temp1,temp2;

for(i=0;i<str\_length\_half;i++){

temp1 = \*ptr1;

temp2 = \*ptr2;

if (temp1 == temp2){

sum += 1;

}

ptr1 = ptr1 + 1;

ptr2 = ptr2 - 1;

}

if (sum == str\_length\_half){

printf("Palindrome");

}

else {

printf("Not Palindrome");

}

return 0;

}