**LAB REPORT NO 1**



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Registration No:- **19PWCSE1759**

Class Section: A

“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

Submitted to:

**Engr. Durr-e-Nayab**

Data:(25,04,2021)

Department of Computer Systems Engineering

University of Engineering and Technology, Peshawar

**Task 1 command: -**

**a).**

x=26;

>> x

x =

26

>> whos

Name Size Bytes Class Attributes

x 1x1 8 double

>> y=int8(x);

>> y

y =

26

>> whos

Name Size Bytes Class Attributes

x 1x1 8 double

y 1x1 1 int8

**b).**

>> x='Ali';

>> a=int8(x);

>> a

a =

65 108 105

>>

**Task 2 code: -**

clc

clear all

close all

alpha=input ('enter alpha value ');

beta=input ('enter beta value ');

disp(' \*\*\*fisrt formula prove\*\*\* ');

lhs=sin(alpha+beta);

disp('lhs value is ');

disp(lhs);

rhs=sin(alpha)\*cos(beta)+cos(alpha)\*sin(beta);

disp('rhs value is ');

disp(rhs);

disp(' \*\*\*2nd formula prove\*\*\* ');

lhs=sin(alpha-beta);

disp('lhs value is ');

disp(lhs);

rhs=sin(alpha)\*cos(beta)-cos(alpha)\*sin(beta);

disp('rhs value is ');

disp(rhs);

disp(' \*\*\*3rd formula prove\*\*\* ');

lhs=tan(alpha+beta);

disp('lhs value is ');

disp(lhs);

rhs=(tan(alpha)+tan(beta))/(1-tan(alpha)\*tan(beta));

disp('rhs value is ');

disp(rhs);

disp(' \*\*\*4th formula prove\*\*\* ');

lhs=sin(alpha)-sin(beta);

disp('lhs value is ');

disp(lhs);

rhs=2\*(cos((alpha+beta)/2)\*sin((alpha-beta)/2));

disp('rhs value is ');

disp(rhs);

disp(' \*\*\*5th formula prove\*\*\* ');

lhs=sin(alpha)\*cos(beta);

disp('lhs value is ');

disp(lhs);

rhs=1/2\*(sin(alpha+beta)+sin(alpha-beta));

disp('rhs value is ');

disp(rhs);

**output:-**

enter alpha value 45

enter beta value 45

\*\*\*fisrt formula prove\*\*\*

lhs value is

0.8940

rhs value is

0.8940

\*\*\*2nd formula prove\*\*\*

lhs value is

0

rhs value is

0

\*\*\*3rd formula prove\*\*\*

lhs value is

-1.9952

rhs value is

-1.9952

\*\*\*4th formula prove\*\*\*

lhs value is

0

rhs value is

0

\*\*\*5th formula prove\*\*\*

lhs value is

0.4470

rhs value is

0.4470

>>

**Task 3 code: -**

clc

clear all

disp('cgpa calculator');

disp('Enter grade and credit hours of 3rd semester ');

cs=input('Enter cs grade ');

csh=input('Enter cs credit hour ');

oop=input('Enter oop grade ');

ooph=input('Enter oop credit hour ');

dld=input('Enter dld grade ');

dldh=input('Enter dld credit hour ');

la=input('Enter la grade ');

lah=input('Enter la credit hour ');

cv=input('Enter cv grade ');

cvh=input('Enter cv credit hour ');

csl=input('Enter csl grade ');

cslh=input('Enter csl credit hour ');

oopl=input('Enter oppl grade ');

ooplh=input('Enter oopl credit hour ');

dldl=input('Enter dldl grade ');

dldlh=input('Enter dldl credit hour ');

totalgrad=(cs\*csh)+(csl\*cslh)+(oop\*ooph)+(oopl\*ooplh)+(dld\*dldh)+(dldl\*dldlh)+(cv\*cvh)+(la\*lah);

ftotalcredithours=csh+cslh+ooph+ooplh+dldh+dldlh+cvh+lah;

gpa=totalgrad/ftotalcredithours;

disp('3rdnd semeter gpa is :');

disp(gpa);

semesterweightag=gpa\*ftotalcredithours;

disp('Enter grade and credit hours of 3rd semester ');

ec=input('Enter es grade ');

ech=input('Enter es credit hour ');

ss=input('Enter ss grade ');

ssh=input('Enter ss credit hour ');

os=input('Enter os grade ');

osh=input('Enter os credit hour ');

pe=input('Enter pe grade ');

peh=input('Enter pe credit hour ');

dsa=input('Enter dsa grade ');

dsah=input('Enter dsa credit hour ');

ecl=input('Enter eslab grade ');

eclh=input('Enter eclab credit hour ');

ssl=input('Enter sslab grade ');

sslh=input('Enter osslab credit hour ');

osl=input('Enter oslab grade ');

oslh=input('Enter oslab credit hour ');

dsal=input('Enter dsalab grade ');

dsalh=input('Enter dsalab credit hour ');

ntotalgrad=(ec\*ech)+(ss\*ssh)+(pe\*peh)+(dsa\*dsah)+(ecl\*eclh)+(ssl\*sslh)+(osl\*oslh)+(ssl\*sslh)+(dsal\*dsalh);

ntotalcredithours=ech+eclh+ssh+sslh+dsah+dsalh+peh+osh+osl;

ngpa=ntotalgrad/ntotalcredithours;

disp('4th semeter gpa is :');

disp(ngpa);

nsemesterweightag=ngpa\*ntotalcredithours;

disp('cgpa is');

totalcredithours=ftotalcredithours+ntotalcredithours;

totalsemesterwtg=nsemesterweightag+semesterweightag;

cgpa=totalsemesterwtg/totalcredithours;

disp(cgpa);

**output:-**

cgpa calculator

Enter grade and credit hours of 3rd semester

Enter cs grade 3

Enter cs credit hour 3

Enter oop grade 3

Enter oop credit hour 3

Enter dld grade 3

Enter dld credit hour 3

Enter la grade 3

Enter la credit hour 3

Enter cv grade 3

Enter cv credit hour 3

Enter csl grade 3

Enter csl credit hour 1

Enter oppl grade 3

Enter oopl credit hour 1

Enter dldl grade 3

Enter dldl credit hour 1

3rdnd semeter gpa is :

3

Enter grade and credit hours of 3rd semester

Enter es grade 3

Enter es credit hour 2

Enter ss grade 3

Enter ss credit hour 2

Enter os grade 3

Enter os credit hour 3

Enter pe grade 3

Enter pe credit hour 3

Enter dsa grade 3

Enter dsa credit hour 3

Enter eslab grade 3

Enter eclab credit hour 1

Enter sslab grade 3

Enter osslab credit hour 1

Enter oslab grade 3

Enter oslab credit hour 1

Enter dsalab grade 3

Enter dsalab credit hour 1

4th semeter gpa is :

2.3684

cgpa is

2.6757

>>

**Task 4 code: -**

clc

clear all

a=4;

b=2;

disp('a = ');

disp(a);

disp('b = ');

disp(b);

a=a+b;

b=a-b;

a=a-b;

disp('after swaping');

disp('a = ');

disp(a);

disp('b = ');

disp(b);

**output:-**

a =

4

b =

2

after swaping

a =

2

b =

4

**Task 5 code: -**

clc

clear all

perp=input('enter perpendiculara ');

base=input('enter base ');

disp('hypotenuse is ');

hyp=(perp\*perp+base\*base);

x=sqrt(hyp);

disp(x);

**output:-**

enter perpendiculara 2

enter base 2

hypotenuse is

2.8284

**Task 7 code: -**

clc

clear all

frn=input('enter tempreture in farenheit ');

cel=(frn-32)/1.8;

disp('tempreture in celsius is');

disp(cel);

**output:-**

enter tempreture in farenheit 64.4

tempreture in celsius is

18.0000