**LAB 6**

choice = menu('Options','RMS Value','A\_MEAN','G\_MEAN','H\_MEAN');

switch choice

case 1

disp('RMS Value')

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

rms(r,n);

case 2

disp('A\_MEAN')

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

avg(r,n);

case 3

disp('G\_MEAN')

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

g\_mean(r,n)

case 4

disp('H\_MEAN')

as = []

prompt = {'Enter the number of numbers'}

title = 'Number'

answer = inputdlg(prompt,title)

n = str2num(answer{1});

prompt2 = {'Enter the number'}

title2 = 'Numbers'

r = [];

for i = 1:n

answer2 = inputdlg(prompt2,title2);

v = str2num(answer2{1});

r(1,i) = v;

%clear answer2

%clear v

end

h\_mean(r,n)

otherwise

error('thank you')

end

%RMS Value function

function [] = rms(r,n)

sum = 0;

for i = 1:n

sum = sum+(r(1,i))^2;

%disp(sum)

end

r\_m\_s = sqrt((sum)\*(1/n));

disp('rms is')

disp(r\_m\_s)

end

%A\_MEAN Function

function [] = avg(r,n)

sum = 0;

for i = 1:n

sum = sum+r(1,i);

%disp(sum)

end

amean = sum/n;

disp('arithmetic mean is')

disp(amean)

end

%G\_MEAN Function

function [] = g\_mean(r,n)

mul = 1;

for i = 1:n

mul = mul\*r(1,i);

%disp(sum)

end

gmean = (mul)^(1/n);

disp('geometric mean is')

disp(gmean)

end

%H\_MEAN Function

function [] = h\_mean(r,n)

sum = 0;

for i = 1:n

sum = sum+1/(r(1,i));

%disp(sum)

end

hmean = n/sum;

disp('Harmonic mean is')

disp(hmean)

end

**OUTPUT-**

final\_lab6

RMS Value

as =

[]

prompt =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'5'}

prompt2 =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number'}

title2 =

'Numbers'

rms is

3.3166

diary off

final\_lab6

A\_MEAN

as =

[]

prompt =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'5'}

prompt2 =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number'}

title2 =

'Numbers'

arithmetic mean is

3

diary off

final\_lab6

G\_MEAN

as =

[]

prompt =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'5'}

prompt2 =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number'}

title2 =

'Numbers'

geometric mean is

2.6052

diary off

final\_lab6

H\_MEAN

as =

[]

prompt =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'5'}

prompt2 =

1×1 <a href="matlab:helpPopup cell" style="font-weight:bold">cell</a> array

{'Enter the number'}

title2 =

'Numbers'

Harmonic mean is

2.1898

diary off