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 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

rms is

3.3166

diary off

final_lab6

A_MEAN

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

arithmetic mean is

3

diary off

final_lab6

G_MEAN

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

geometric mean is

2.6052

diary off

final_lab6

H_MEAN

as =

[]

prompt =

1×1 cell array

{'Enter the number of numbers'}

title =

'Number'

answer =

1×1 cell array

{'5'}

prompt2 =

1×1 cell array

{'Enter the number'}

title2 =

'Numbers'

Harmonic mean is

2.1898

diary off