

## Experiment No: 2c

### NORMALIZATION

Aim:

Write a c program to implement the decimal scaling normalization.

Decimal Scale Normalization:

In decimal scale normalization, transform the data by moving the decimal points of values of attribute A. The number of decimal points moved depends on the maximum absolute value of A. A value V of A is normalized to  $v_1$  by computing.

$$v_1 = V / 10^j$$

Where j is smallest integer such that  $\max(v) < 1$ .

Steps:

1) Consider age attribute as

A = 10 20 15 30 50 55

2) To find out Normalization by decimal scaling

$$V' = v / 10^j$$

V = actual value

V' = transformed value

J = positive integer & j should be selected such that  $\max |v| < 1$ .

$|v| < 1$ .

If max value 0-100 then  $j=2$

Here max = 55

$J=2$  100

V = 10

$$v_1 = 10 / 10^2 = 0.1$$

$$= 0.1$$

V = 20

V = 30

V = 15

V = 50

V = 55

$$v_1 = 20 / 10^2 = 0.2$$

$$v_1 = 30 / 10^2 = 0.3$$

$$v_1 = 15 / 10^2 = 0.15$$

$$v_1 = 50 / 10^2 = 0.5$$

$$v_1 = 55 / 10^2 = 0.55$$

A Decimal scaling(A)

10 0.1

20 0.2  
30 0.3  
15 0.15  
50 0.5  
55 0.55

Program:

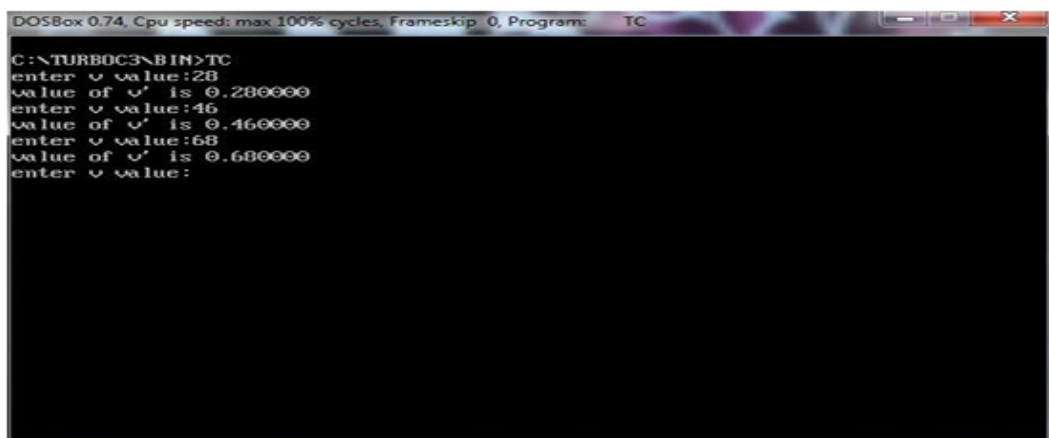
```
#include<stdio.h>

#include<math.h>

#include<stdlib.h>

int main()
{
float vd=2;
int j=1,v;
printf("enter v value:");
scanf("%d",&v);
v=abs(v);
while(vd>=1)
{
vd=v/pow(10,j);
j++;
}
printf("value of v' is %f\n",vd);
}
```

**OUTPUT:**



```
DOSBox 0.74, Cpu speed: max 100% cycles, Frameskip: 0, Program: TC
C:\TURB0C3\BIN>TC
enter v value:20
value of v' is 0.280000
enter v value:46
value of v' is 0.460000
enter v value:68
value of v' is 0.680000
enter v value:
```