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4C7

Aim

To find mean, standard deviation and moments about mean of a given frequency data.

Experiment - 9

APPLIED MATHEMATICS LAB

# **EXPERIMENT – 9**

## **Aim:**

To find mean, standard deviation and moments about mean of a given frequency data.

**Source Code:**

*//Program to find mean,S.D. and first r moments about mean of given n pairs (x)*

clc;clear;close;

clc

printf('\n\n Name - Syeda Reeha Quasar \n Enrolment No. - 14114802719 \n Group - C7 \n\n')

n = input('Enter the no.of pairs of values (x.f) to find the mean = ')

m = input('Enter the no. r = ')

disp('Enter the values of x : ')

for i = 1:n

x(i) = input(' ')

end

disp('Enter the corresponding frequencies f : ')

for i=1:n

f(i) = input(' ')

end

s = 0

s1 = 0

for i=1:n

s = s + f(i) *//Calculate the sum of all frequencies*

s1 = s1 + f(i)\*x(i) *// Calculate the sum of all f(i)x(i)*

end

A = s1/s *//Calculate the average*

printf('Average %g\n', A);

for j = 1:m

s2 = 0

for i=1:n

y(i) = f(i)\*(x(i)-A)^j

s2 = s2 + y(i)

end;

M(j) = (s2/s) *//Calculate the moments*

printf('Moment about mean M(%i) = %g\n', j, M(j))

end

sd = sqrt(M(2)) *//Calculate the standard deviation*

printf('Standard deviation = %g\n', sd);

# **Output:**





