**INPUT :**

data <- data.frame(s.no= c(01,02,03,04,05,06,07,08,09,10),

sample\_values = c("17 37 93 27 18","47 4 74 47 67",

"98 10 50 71 75","72 42 49 7 88","49 17 47 9 62",

"79 83 36 19 62" ,"83 11 46 23 24","7 45 32 14 8",

"0 56 76 31 38","42 37 7 96 88"),

mean = c(50.4,53.8,60.8,51.6,36.6,55.8,39.8,21.2,40.2,54.0),

variance = c(1104.8,906.7,1906.7,957.3,508.3,765.7,760.7,236.7,809.2,1390.5))

print(data)

k=10

n=5

N=50

mean = c(50.4,53.8,60.8,51.6,36.6,55.8,39.8,21.2,40.2,54.0)

#sum(mean)

mean\_sample\_mean = sum(mean)/k

print(mean\_sample\_mean)

#variane calculation

variance = c(1104.8,906.7,1906.7,957.3,508.3,765.7,760.7,236.7,809.2,1390.5)

#sum(variance)

mean\_sample\_variance = sum(variance)/k

print(mean\_sample\_variance)

#estimate polpulation total

estimate\_pop = n\*(mean\_sample\_mean)

print(estimate\_pop)

#population mean

pop\_mean = estimate\_pop/N

#standard error

SE = sqrt((N-1)/N)\*((mean\_sample\_variance)/n)

#standard error of estimate population total

SE\_pop = N\*(SE)

print(SE\_pop)

**OUTPUT :**

> print(data)

s.no sample\_values mean variance

1 1 17 37 93 27 18 50.4 1104.8

2 2 47 4 74 47 67 53.8 906.7

3 3 98 10 50 71 75 60.8 1906.7

4 4 72 42 49 7 88 51.6 957.3

5 5 49 17 47 9 62 36.6 508.3

6 6 79 83 36 19 62 55.8 765.7

7 7 83 11 46 23 24 39.8 760.7

8 8 7 45 32 14 8 21.2 236.7

9 9 0 56 76 31 38 40.2 809.2

10 10 42 37 7 96 88 54.0 1390.5

> print(mean\_sample\_mean)

[1] 46.42

> print(mean\_sample\_variance)

[1] 934.66

> print(estimate\_pop)

[1] 232.1

> print(SE\_pop)

[1] 9252.662