**Information about the code** –

The code is written in javascript ...

home.html is the index file

**SIP calculator** :

formula : -

mat = pri \* ({[1+pr]^n-1} / pr) \* (1+pr)

mat - Maturity amount

pri - investment in regular intervals

n = no.of payments done

pr - periodic rate of interest

In the code -

Investment of the person -

variable investment = sip amount \* n

(i.e., n (total no. of payments done ) = years \* 12 ...as I am taking the input as years)

Total amount of SIP on maturity -

variable Total\_amount = (SIP)\*[(i-1)/(convertmonthly)]\*(1+convertmonthly)

...... i = [1+convertmonthly]^n

convertmonthly - periodic rate of interest

Total Earnings of the person -

variable Earnings = Total\_amount - investment

(The person will earn a total amount of (maturity od sip amount - total amount he invested on sip)

**Retirement Planning** :

formula -

Required Monthly Savings -

RM = remaining \* yearly rate / (([1+pr]^n)-1) / (1 + yearly rate)

reamining - remaining amount of the retirement corpus which is subtracted from provision made

yearly rate - yearly rate of return on new investment

pr - periodic rate of return

n - no. of months left

In the code -

Future savings value i.e provision made -

FV = PV \* troi

PV = current savings

troi = total rate of interest in the years left (years left = expected retirement age - current age)

Retirement Corpus -

Retirement Corpus (RC) = R \* (1+ror)

FVExpense - yearly savings \* total inflation rate in the years left

R = (FVExpense / ror) \* (1 -(1/(1+ror)^yearsafter) ) (years after = life expectancy age - expected retirement age)

Rate of return (ror) = (post retirement interest rate / inflation rate ) - 1

Required Monthly Savings -

RM = remaining1 \* temp3 / (powerr-1) / (1 + yearly rate)

reamining1 - remaining amount of the retirement corpus which is subtracted from provision made

temp3 - yearly rate of return on new investment

powerr - temp4^n ...... this is same as {([1+pr]^n)}

n - no. of months left

**Goal Calculator** :

**1.Dream Home :**

formula :

required monthly savings = {(a\*r) / ([1+r]^n) -1} / (1+r)

a = downpayment subtracted current savings

r = periodic rate of return

n = no. of payments done

In the code -

Future cost of dream house -

CostFV = cost \* hike

hike = total inflation rate in no. of years he wants to buy house

cost = current cost of the house

Existing Savings -

FV\_existing = PV \* Power

PV = current savings

Power = total rate of return in no. of years he wants to buy house

Home Loan Total Amount -

down = CostFV\*(Percentage/100)

CostFV = future cost of dream house

Percentage = percentage to take home loan

Required monthly savings from present day -

SIP=[(FV\*rorp)/(Powerr-1)]))/(1+rorp)

rorp - periodic rate of return

FV = downpayment - existing savings

Powerr = [1+rorp]^n

**2.Dream Vacation** :

formula :

required monthly savings = {(a\*r) / ([1+r]^n) -1} / (1+r)

a = future cost of vacation subtracted current savings

r = periodic rate of return

n = no. of payments done

In the code -

Future cost of dream vacation -

CostFV = cost \* hike

hike = total inflation rate in no. of years he wants to go to vacation

cost = current cost of the house

Existing Savings -

FV\_existing = PV \* Power

PV = current savings

Power = total rate of return in no. of years he wants to go to vacation

Required monthly savings from present day -

SIP=[(FV\*rorp)/(Powerr-1)]))/(1+rorp)

rorp - periodic rate of return

FV = CostFV - existing savings

Powerr = [1+rorp]^n

**3.Dream Car** :

formula :

required monthly savings = {(a\*r) / ([1+r]^n) -1} / (1+r)

a = downpayment subtracted current savings

r = periodic rate of return

n = no. of payments done

In the code -

Future cost of dream vacation -

CostFV = cost \* hike

hike = total inflation rate in no. of years he wants to go to vacation

cost = current cost of the house

Existing Savings -

FV\_existing = PV \* Power

PV = current savings

Power = total rate of return in no. of years he wants to go to vacation

Home Loan Total Amount -

down = CostFV\*(Percentage/100)

CostFV = future cost of dream house

Percentage = percentage to take home loan

Required monthly savings from present day -

SIP=[(FV\*rorp)/(Powerr-1)]))/(1+rorp)

rorp - periodic rate of return

FV = downpayment - existing savings

Powerr = [1+rorp]^n

**4. Custom Goal** :

formula :

required monthly savings = {(a\*r) / ([1+r]^n) -1} / (1+r)

a = downpayment subtracted current savings

r = periodic rate of return

n = no. of payments done

In the code -

Future cost of goal -

CostFV = cost \* hike

hike = total inflation rate in no. of years he wants to go to vacation

cost = current cost of the house

Existing Savings -

FV\_existing = PV \* Power

PV = current savings

Power = total rate of return in no. of years he wants to go to vacation

Required monthly savings from present day -

SIP=[(FV\*rorp)/(Powerr-1)]))/(1+rorp)

rorp - periodic rate of return

FV = downpayment - existing savings

Powerr = [1+rorp]^n