Carreon, Ma. Addine Anne T.
CS128-5L – A1

12/09/2023

If r = 0.07 (Given r)

In [1]:
```
annual_salary = float(input("Enter your annual salary: "))
portion_saved = float(input("Enter the percent of your salary to save, as a decimal: "))
total_cost = float(input("Enter the cost of your dream home: "))

portion_down_payment = 0.25
current_savings = 0
r = 0.07  # 0.07 annual return on investment
monthly_salary = annual_salary / 12
months = 0

while current_savings < total_cost * portion_down_payment:
    current_savings += current_savings * r / 12
    current_savings += monthly_salary * portion_saved
    months += 1

print("Number of months:", months)
```

```
Enter your annual salary: 120000
Enter the percent of your salary to save, as a decimal: .10
Enter the cost of your dream home: 1000000
Number of months: 155
```

Test Case 1

In [2]:
```
annual_salary = float(input("Enter your annual salary: "))
portion_saved = float(input("Enter the percent of your salary to save, as a decimal: "))
total_cost = float(input("Enter the cost of your dream home: "))

portion_down_payment = 0.25
current_savings = 0
r = 0.07  # 0.07 annual return on investment
monthly_salary = annual_salary / 12
months = 0

while current_savings < total_cost * portion_down_payment:
    current_savings += current_savings * r / 12
    current_savings += monthly_salary * portion_saved
    months += 1

print("Number of months:", months)
```

```
Enter your annual salary: 80000
Enter the percent of your salary to save, as a decimal: .15
Enter the cost of your dream home: 500000
Number of months: 95
```

Test Case 2

If r = 0.04 (To achieve the ‘number of months’ given on the sample format)

In [3]:
```
annual_salary = float(input("Enter your annual salary: "))
portion_saved = float(input("Enter the percent of your salary to save, as a decimal: "))
total_cost = float(input("Enter the cost of your dream home: "))

portion_down_payment = 0.25
current_savings = 0
r = 0.04  # 0.04 annual return on investment
monthly_salary = annual_salary / 12
months = 0

while current_savings < total_cost * portion_down_payment:
    current_savings += current_savings * r / 12
    current_savings += monthly_salary * portion_saved
    months += 1

print("Number of months:", months)
```

```
Enter your annual salary: 120000
Enter the percent of your salary to save, as a decimal: .10
Enter the cost of your dream home: 1000000
Number of months: 183
```

Test Case 1

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In [4]:
```
annual_salary = float(input("Enter your annual salary: "))
portion_saved = float(input("Enter the percent of your salary to save, as a decimal: "))
total_cost = float(input("Enter the cost of your dream home: "))

portion_down_payment = 0.25
current_savings = 0
r = 0.04  # 0.04 annual return on investment
monthly_salary = annual_salary / 12
months = 0

while current_savings < total_cost * portion_down_payment:
    current_savings += current_savings * r / 12
    current_savings += monthly_salary * portion_saved
    months += 1

print("Number of months:", months)
```

```
Enter your annual salary: 80000
Enter the percent of your salary to save, as a decimal: .15
Enter the cost of your dream home: 500000
Number of months: 105
```

Test Case 2