Q1

Flowchart

```
        ( Start )
           |
           v
     / int testinteger /
     /  =3000000000   /
           |
           v
   [ Number is      ]
   [  = tetinteger  ]
           |
           v
    / Number is      /
    / -1294967296    /
           |
           v
        ( Stop )
```

Alogrithm

1   Start
2   Input   testinteger=-3000000000 .
3   Output   testinteger = -2447/294967296
    // This   is   because   variable   int   can   only   store
    values   between -2,147,483,647 and +2,147,483647
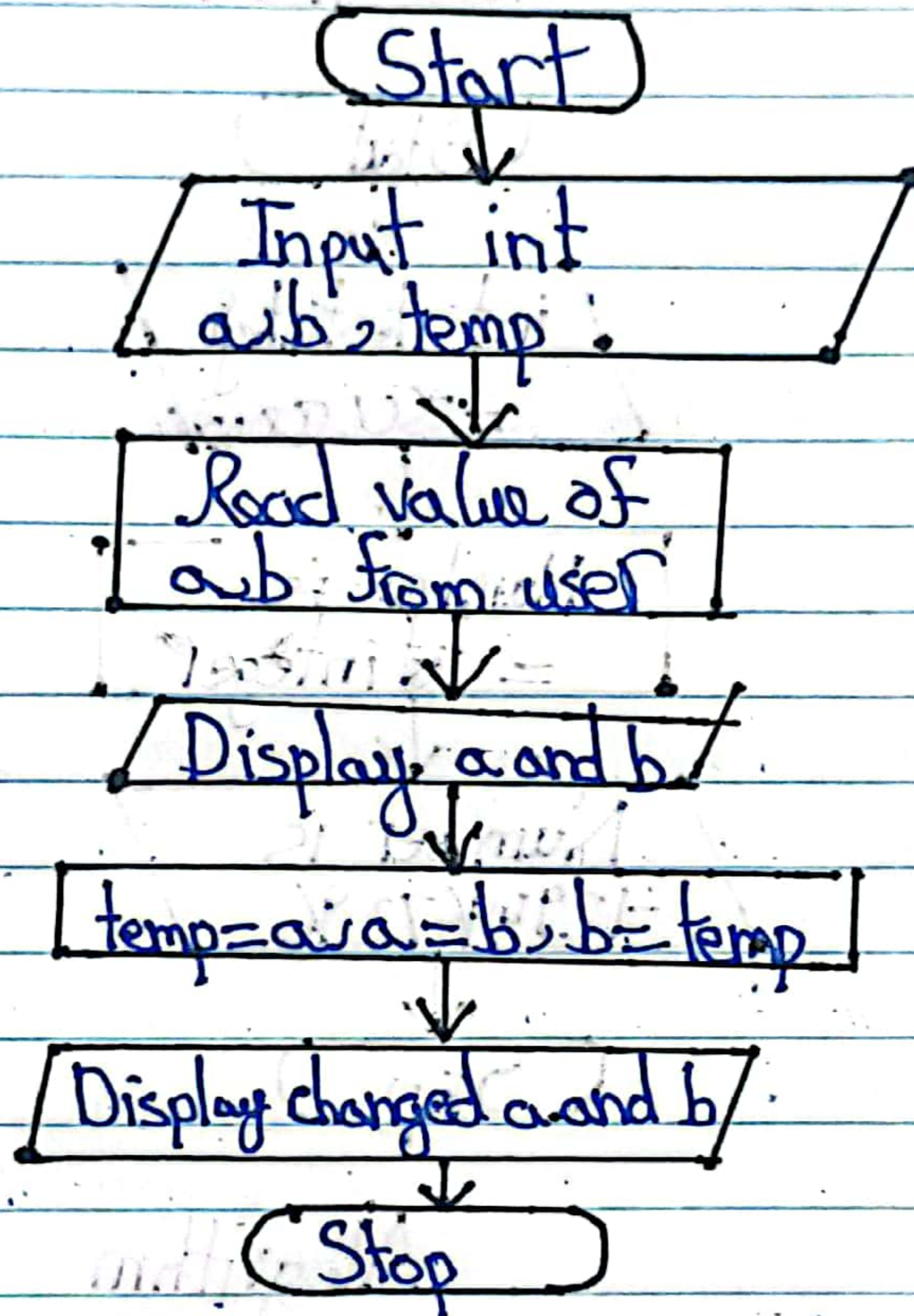4   Stop

24k-0001   FP Lab: 3

M.masoom khan

Q2   Flowchart

```
              ┌──────────┐
              │  Start   │
              └──────────┘
                   │
                   ▼
          ╱─────────────────╱
         ╱  Input int      ╱
        ╱   a,b , temp    ╱
       ╱─────────────────╱
                   │
                   ▼
          ┌─────────────────┐
          │  Read value of  │
          │  a,b from user  │
          └─────────────────┘
                   │
                   ▼
         ╱─────────────────╱
        ╱ Display a and b  ╱
       ╱─────────────────╱
                   │
                   ▼
          ┌────────────────────┐
          │ temp=a, a=b, b=temp│
          └────────────────────┘
                   │
                   ▼
        ╱──────────────────────╱
       ╱ Display changed a and b╱
      ╱──────────────────────╱
                   │
                   ▼
              ┌──────────┐
              │   Stop   │
              └──────────┘
```

Algorithm

1   Start
2   Input integer a,b.
3   Read value of a and b placed by the user.
4   Show the value a and b input by user.
5   Take another integer temp such that
    temp = a, a=b, b=temp this swaps the value of a and b
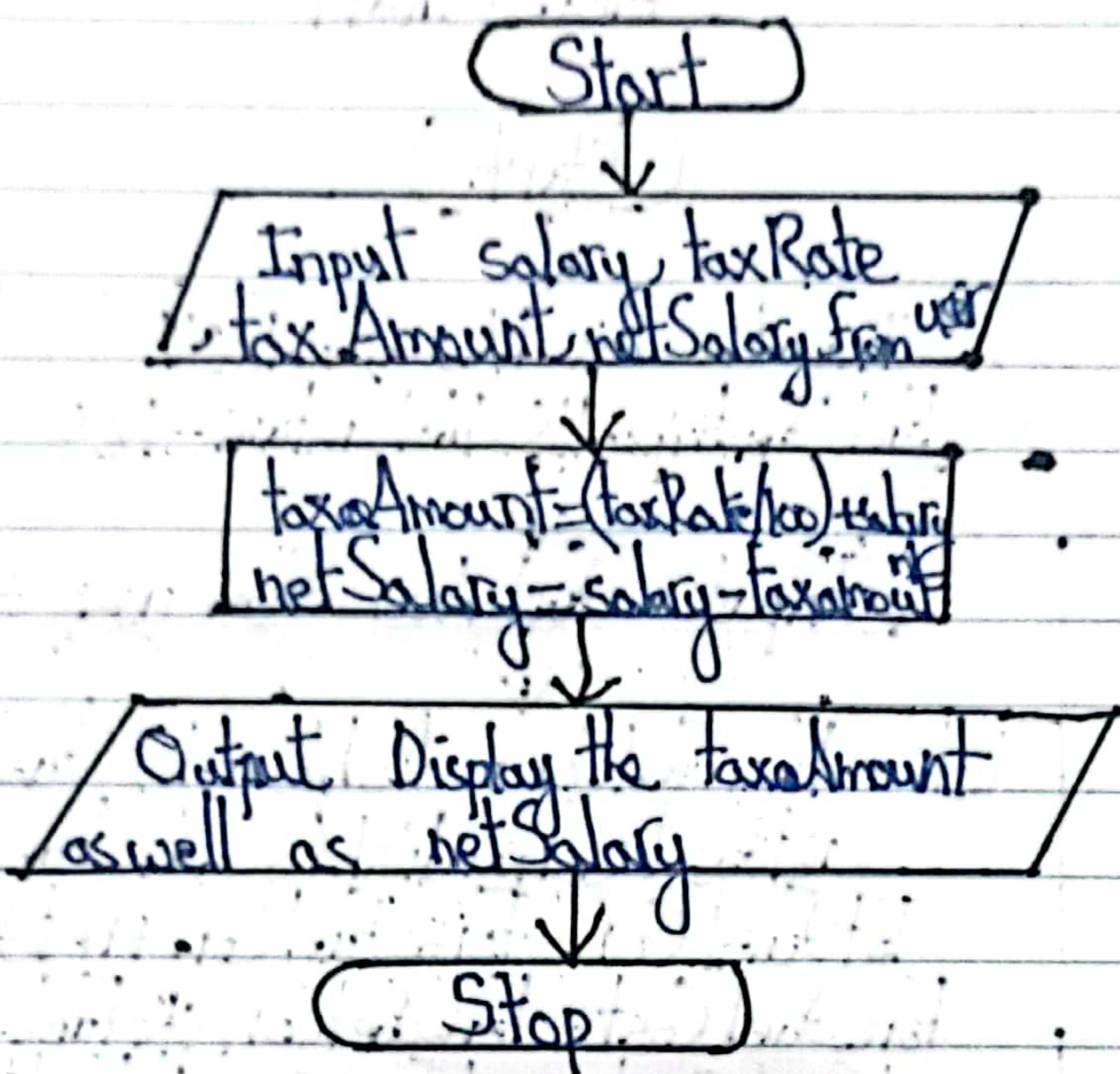6   Display new values of a and b
7   So Stop

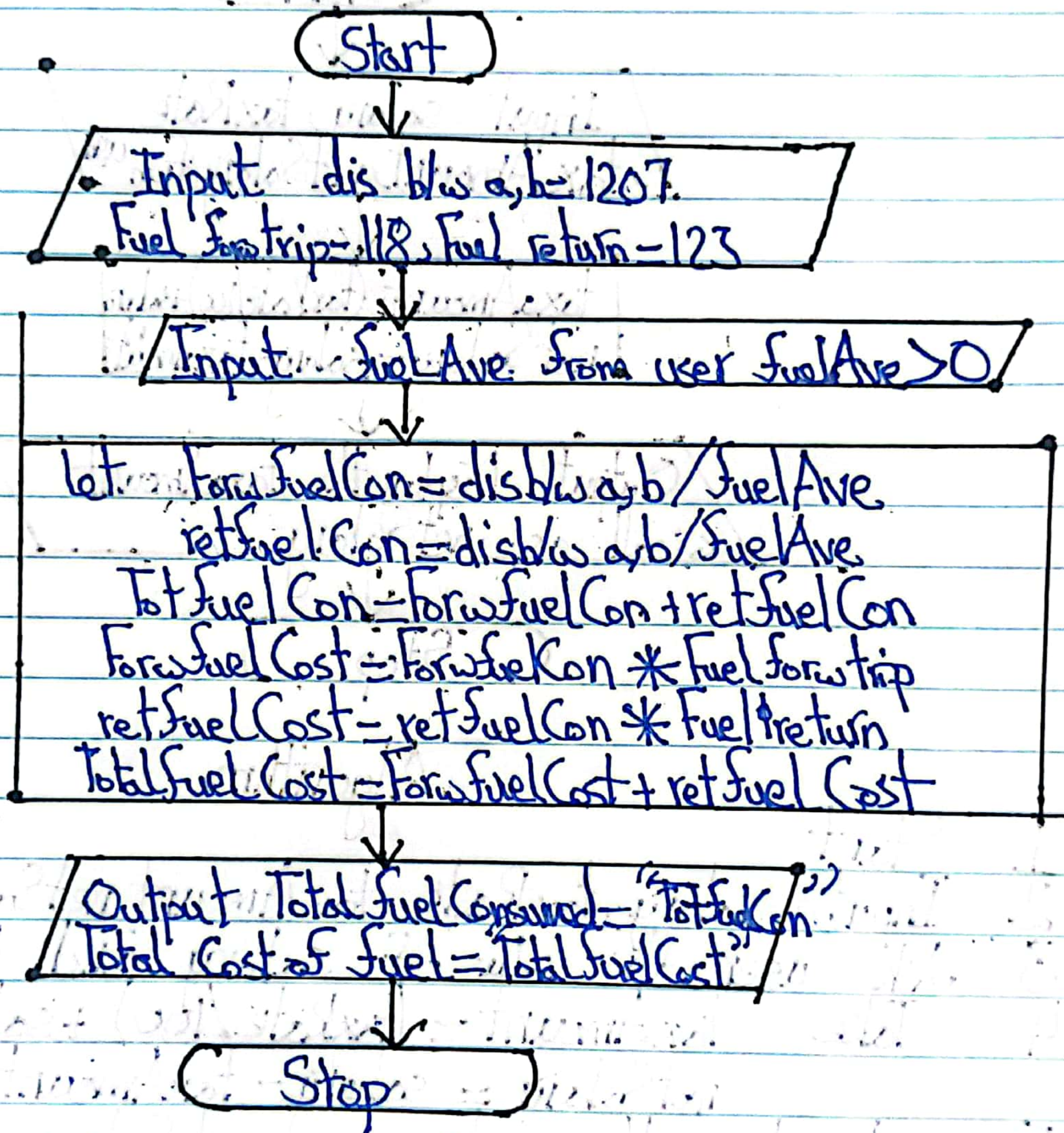24K-0001   FP Lab 32

M.masoom Khan

Q3

Flowchart

Start

Input salary, taxRate tax Amount, netSalary from user

taxAmount = (taxRate/100)+salary
netSalary = salary-taxamount

Output Display the taxAmount aswell as netSalary

Stop

Algorithm

1. Start
2. Input salary, taxRate, taxAmount, netSalary
3. Ask user for value of salary and taxRate
4. Take taxAmount = (taxRate/100) + salary
   netSalary = salary - taxAmount
5. Display the value of netSalary and taxAmount as output.
6. Stop

Q4   Flow Chart

```
                    ( Start )
                       |
                       v
  +-----------------------------------------------+
  /  Input  dis b/w a,b=1207.                      /
  / Fuel for trip=118, Fuel return=123            /
  +-----------------------------------------------+
                       |
                       v
      +-----------------------------------------+
      / Input  FuelAve from user fuelAve >0     /
      +-----------------------------------------+
                       |
                       v
  +-------------------------------------------------+
  | let   forwfuelCon = disb/w a,b / FuelAve        |
  |       retfuelCon = disb/w a,b / FuelAve         |
  |    Tot fuel Con = forwfuelCon + retfuelCon      |
  |   Forwfuel Cost = ForwfueKon * Fuel forw trip   |
  |   retfuelCost = retfuelCon * Fuel $return       |
  |  Total fuel Cost = Forw fuelCost + retfuel Cost |
  +-------------------------------------------------+
                       |
                       v
  +--------------------------------------------------+
  / Output Total fuel Consumed = "TotFuelCon"        /
  / Total Cost of fuel = TotalFuelCost"             /
  +--------------------------------------------------+
                       |
                       v
                   ( Stop )
```

24K-0001   FP Lab 3

M.masoom Khan

How =

Algorithm

Q4

1 Start

2 Input values of distance between point a and b, Fuel price forward trip and Fuel price return trip.

3 Input value of Average fuel from user and AverageFuel > 0.

4 Take variables Forward Fuel Consumed, Return Fuel Consumed, Total Fuel Consumed, Forward Fuel Cost, Return Fuel Cost and Total Fuel Cost.

5 Processing

Forward Fuel Consumed = distance between a and b / AverageFuel

Return Fuel Consumed = distance between a and b / AverageFuel

Total Fuel Consumed = Forward Fuel Consumed + Return Fuel Consumed

Forward Fuel Cost = Forward Fuel Consumed * Fuel price forward trip

Return Fuel Cost = Return Fuel Consumed * Fuel price return trip

Total Fuel Cost = Forward Fuel Cost + Return Fuel Cost

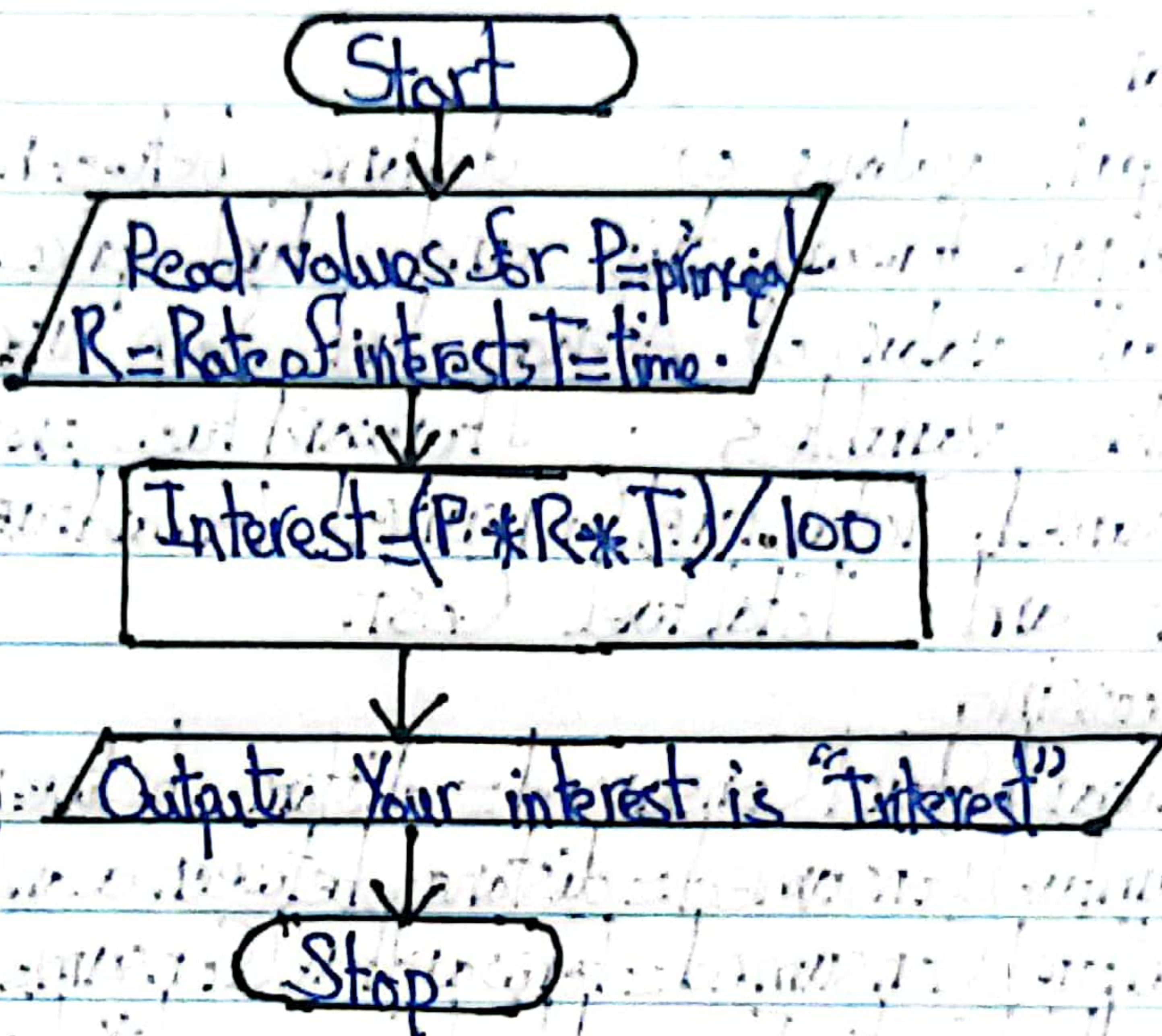6 Display Total Fuel Consumed and Total Fuel Cost as output.

7 Stop

Mmasoom Khan

Q5

Flowchart

Start

Read values for P=principal
R=Rate of interest; T=time

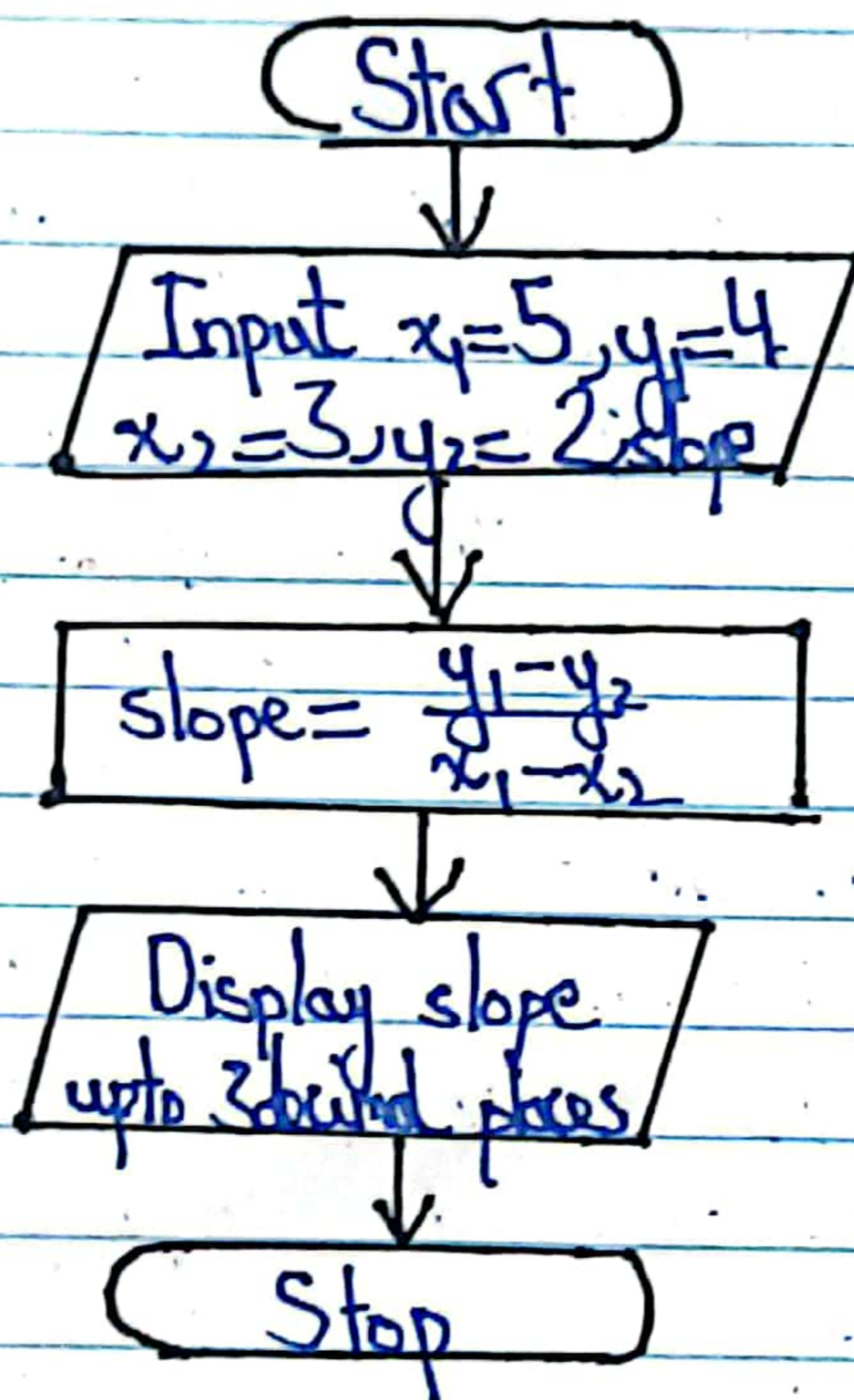Interest=(P*R*T)/100

Output: Your interest is "Interest"

Stop

Algorithm

1. Start
2. Input value of principal, int. rate of interest and time period from user.
3. let 100 < principal <1000,000,
        5% < rate of interest < 10%.
        1 < time period < 10
4. Calculate interest = principal * rate of interest * time period
5. Display value of interest as output
6. Stop

Q6

Flowchart

Start

Input $x_1=5, y_1=4$
$x_2=3, y_2=2$ slope

slope $= \dfrac{y_1-y_2}{x_1-x_2}$

Display slope
upto 3 decimal places

Stop

Algorithm

1 Start
2 Input values of x and y coordinates of points
   $x_1=5, y_1=4, x_2=3, y_2=2$
3 Calculate slope $= \dfrac{y_1-y_2}{x_1-x_2}$
4 Display value of slope to 3 decimals dplaces
   as output
5 Stop.