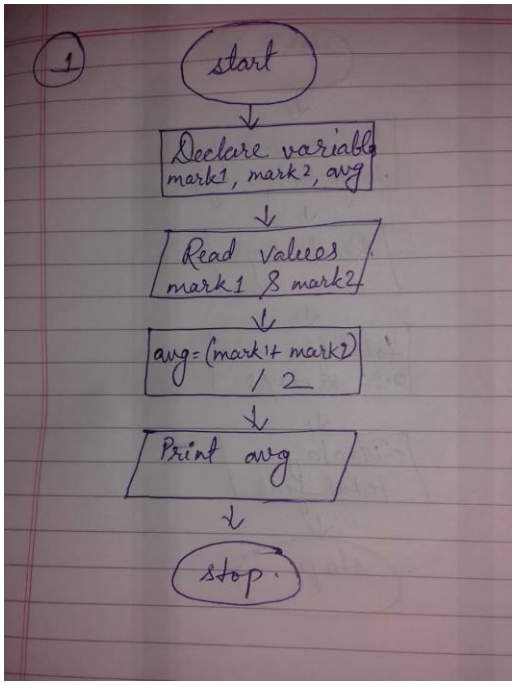
Write an algorithm and draw the flow chart:-

1. Find a student average mark given mark1 and mark2.

Algorithm:-

step1-start
step2-declare mark1,mark2 and avg
step3-Read values mark1 and mark2
step4-add mark1 and mark2 and divide by 2 and assign the result to average
    average <- (mark1 and mark2) / 2
step5-display avg
step6-stop

Flowchart:-

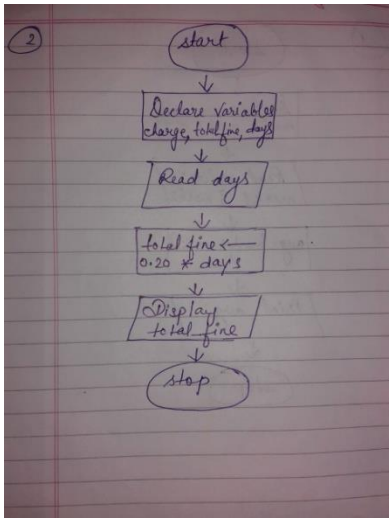


2. Calculate the total fine charged by library for late-return books. The charge is 0.20 INR for 1 day.

Algorithm:-

step1-start
step2-declare variable total_fine and days
step3-initialize the charge 0.20 INR for 1 day
step4-multiply 0.20 by days variable and assign to the total_fine
    total_fine <- 0.20 * days
step5-Display total_fine
step6-stop

Flowchart:-



3. You had bought a nice shirt which cost Rs. 29.90 with 15% discount. Count the nett price for the shirt.

Algorithm:-

step1-start

step2-declare variable actual_price,dis_cost and nett_price

step3-initialize the Rs 29.90 to actual_price

step4-multiply actual_price by 0.15 and assign to the discounted_cost

0.15 * actual_price=dis_cost

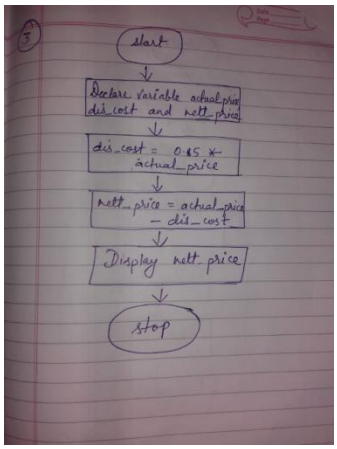
step5-assign the final value to the nett price

nett Price = actual_price - dis_cost

step6-Display nett_price

step7-stop

Flowchart:-

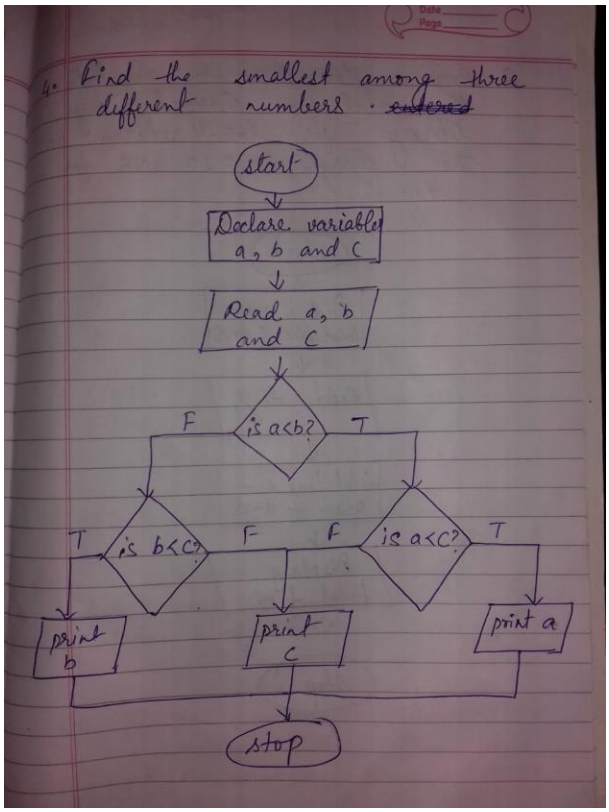


4. Find the smallest number among three different numbers.

Algorithm:-

step1-start
step2-declare variables a, b and c
step3-read variables a, b and c
step4-if a<b
    a<c
    display a is smallest
  else
    display c is smallest
  else
    if b<c
    display b is smallest
  else
    display c is smallest
step5-stop

Flowchart:-



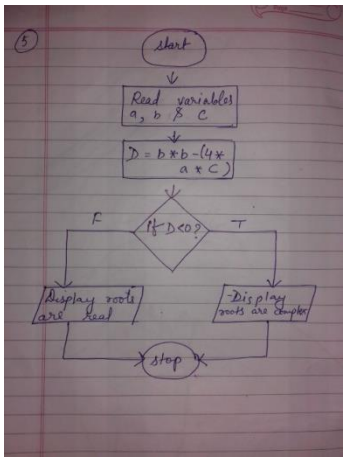
5. Find the roots of a quadratic equation $ax^2+bx+c=0$

Algorithm:-

Step1-start
Step2-Read the variable a, b, c and D
Step3-assign b^2-4ac to D
    D= $b^2-4*a*c$
Step4-if D<0

Display roots are complex
Else
Display roots are real
Step5-stop

Flowchart:-

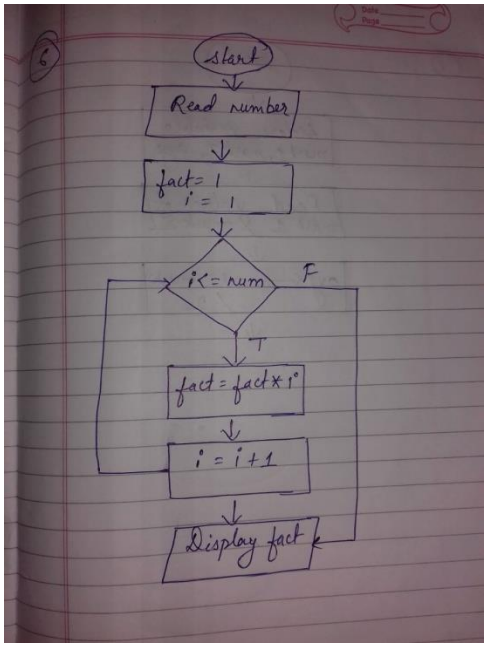


6. Find the factorial of a given number.

Algorithm:-

Step1-start
Step2-declare variable as num and fact
Step3-assign fact=1 and i=1
Step4-check condition i<num if false go to step 7
Step5-fact=fact*i
Step6-update i=i+1 go to step 4
Step7-display fact
Step8-stop

Flowchart:-



Practice questions(optional):-

D. get marks of 3 subject and declare the result . if the marks>=35 in all the subjects the students passes else fails.

Algorithm:-

Step1-Start

Step2-Declare variables m1,m2 and m3

Step3-Read the value of m1,m2 and m3

Step4-if m1>=35 go to step5 otherwise goto step 7

Step5-if m2>=35 go to step6 otherwise goto step 7

Step6-if m3>=35 print pass otherwise goto step 8

Step7-print fail

Step8-stop

Flowchart:-