

Assignment 1

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

step 1: start

step 2: Declare variables mar1, mar2, avg, sum

step 3: Read values mark1 and mark2

step 4: Add mar1 and mar2 and assign the result to sum

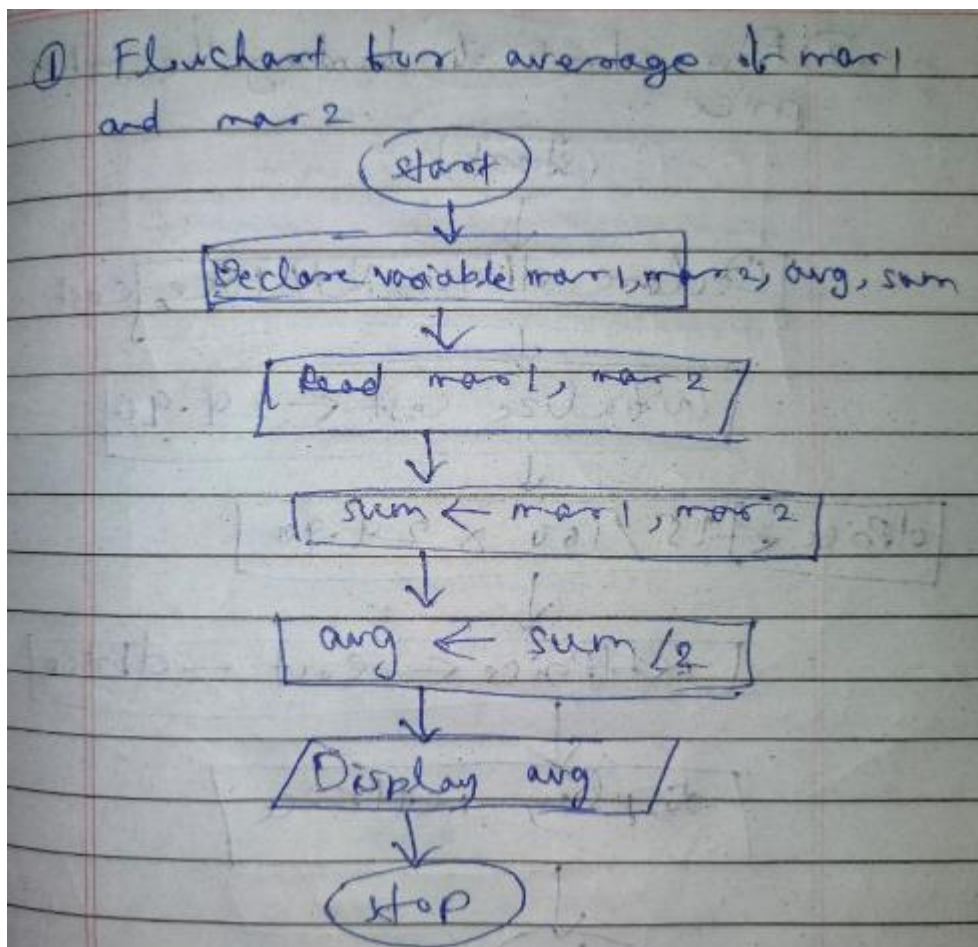
$\text{sum} \leftarrow \text{mar1} + \text{mar2}$

step 5: Divide sum by 2 and assign to avg

$\text{avg} \leftarrow \text{sum} / 2$

step 6: print avg

step 7: stop



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

step 1: start

step 2: Declare variable days, totalFine

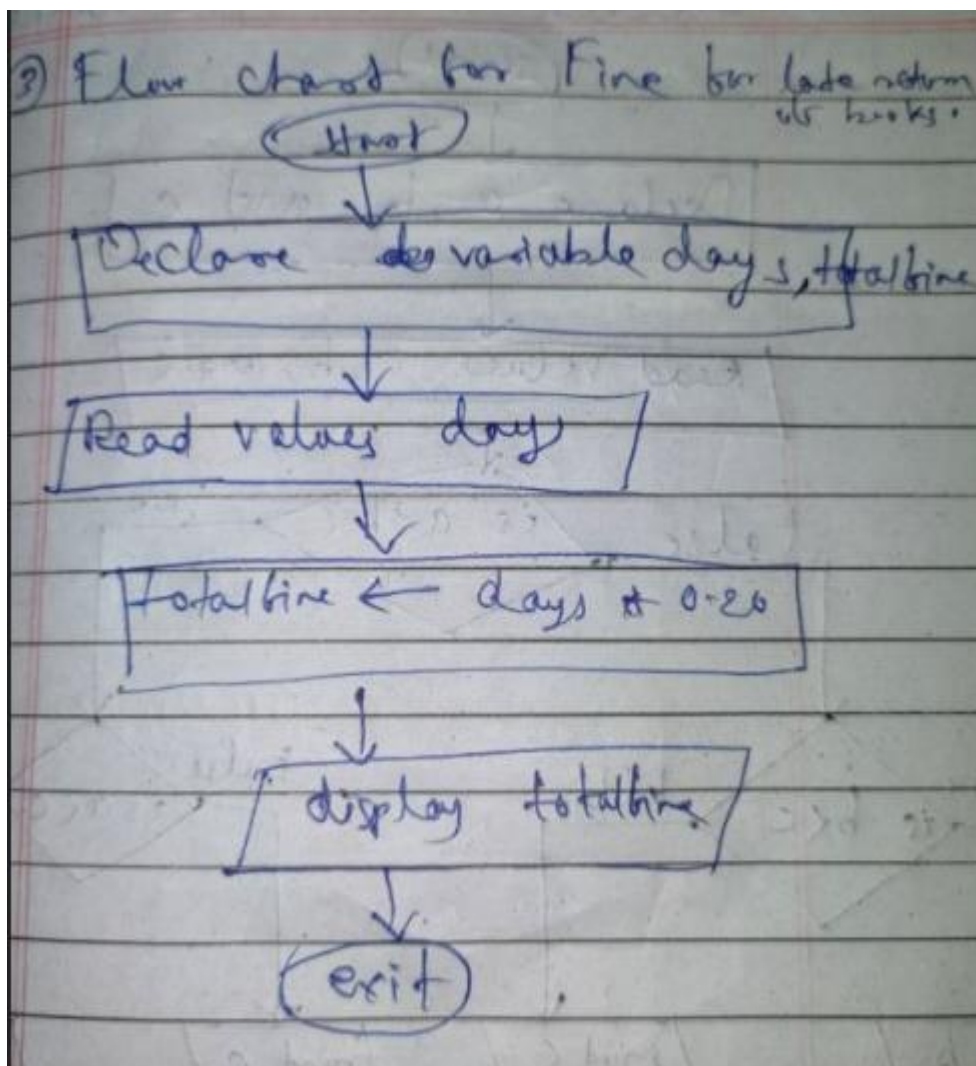
step 3: Read values no of days in days

step 4: Calculate days * 0.20 and assign in totalFine

$\text{totalFine} \leftarrow \text{days} * 0.20$

step 5: print totalFine

step 6: stop



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

step 1: start

step 2: Declare dPrice,nettPrice

step 3: calculate $15/100 * 29.90$ and assign to dPrice

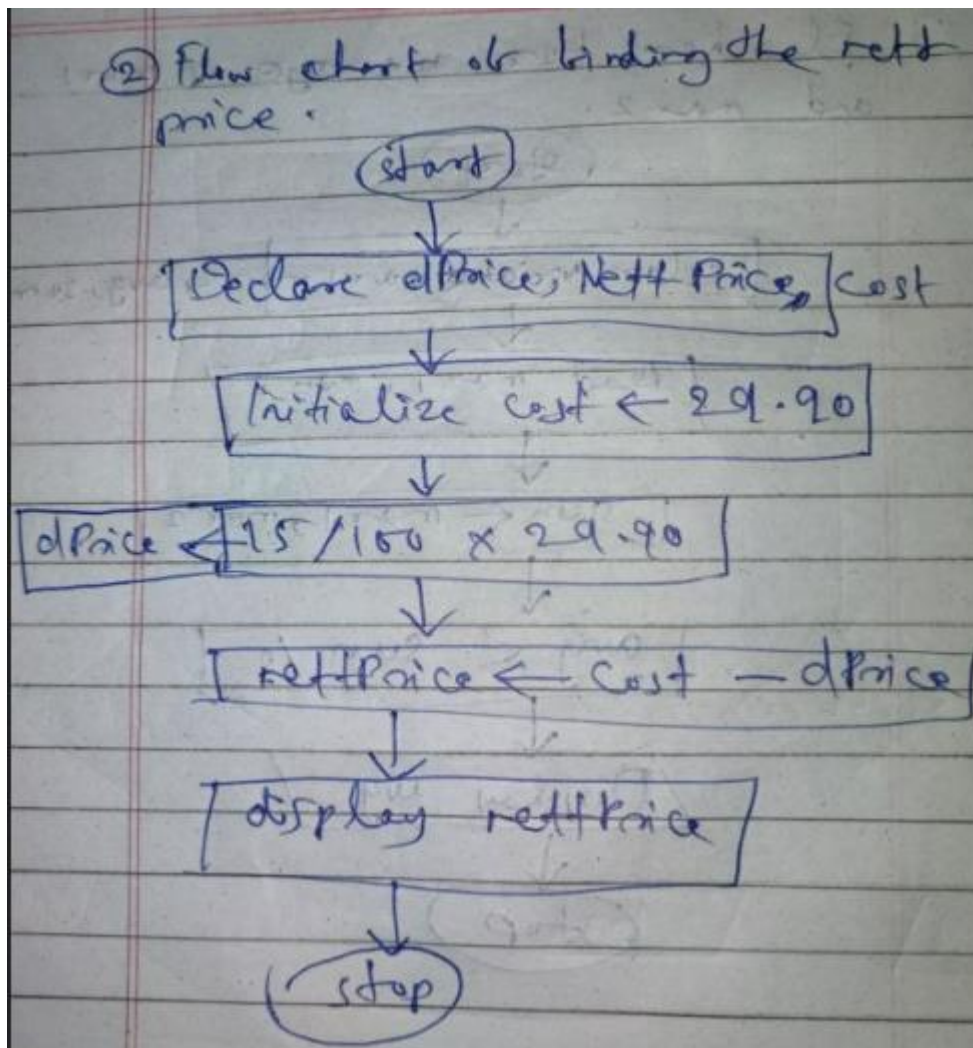
$dPrice \leftarrow 15/100 * 29.90$

step 4: Substract cost by dPrice and assign in nettPrice

$nettPrice \leftarrow cost - dPrice$

step 5: print nettPrice

step 6: stop



4. Find the smallest number among three different numbers.

step 1: start

step 2: Declare n1, n2 and n3

step 3: read the values for n1, n2 and n3

step 4: If $n1 < n2$ go to step 5 otherwise step 6

step 5: If $n1 < n3$ go to step 7 otherwise go to step 9

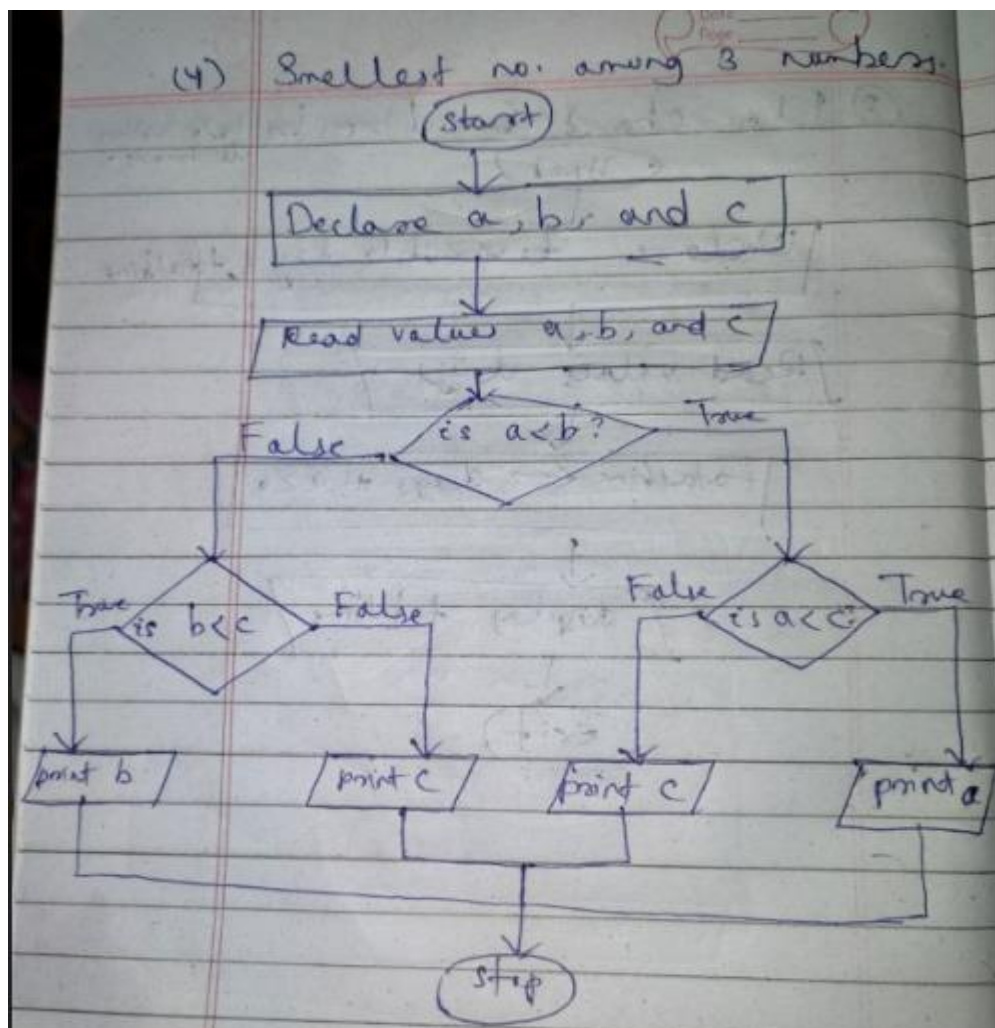
step 6: If $n2 < n3$ go to step 8 otherwise go to step 9

step 7: print n1 is the smallest and go to step 10

step 8: print n2 is the smallest and go to step 10

step 9: print n3 is the smallest

step 10: stop



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

step 1: start

step 2: declare a, b, c, d, r1 and r2

step 3: read a, b, and c

step 4: calculate $(b \times b) - (4 \times a \times c)$ and assign in the d

$$d \leftarrow (b*b) - (4*a*c)$$

step 5: calculate $(-b + \text{sqrt}(d)) / 2 \times a$, and assign to r1

$$r1 \leftarrow (-b + \text{sqrt}(d)) / 2 \times a$$

step 6: calculate $(-b - \text{sqrt}(d)) / 2 \times a$, and assign to r2

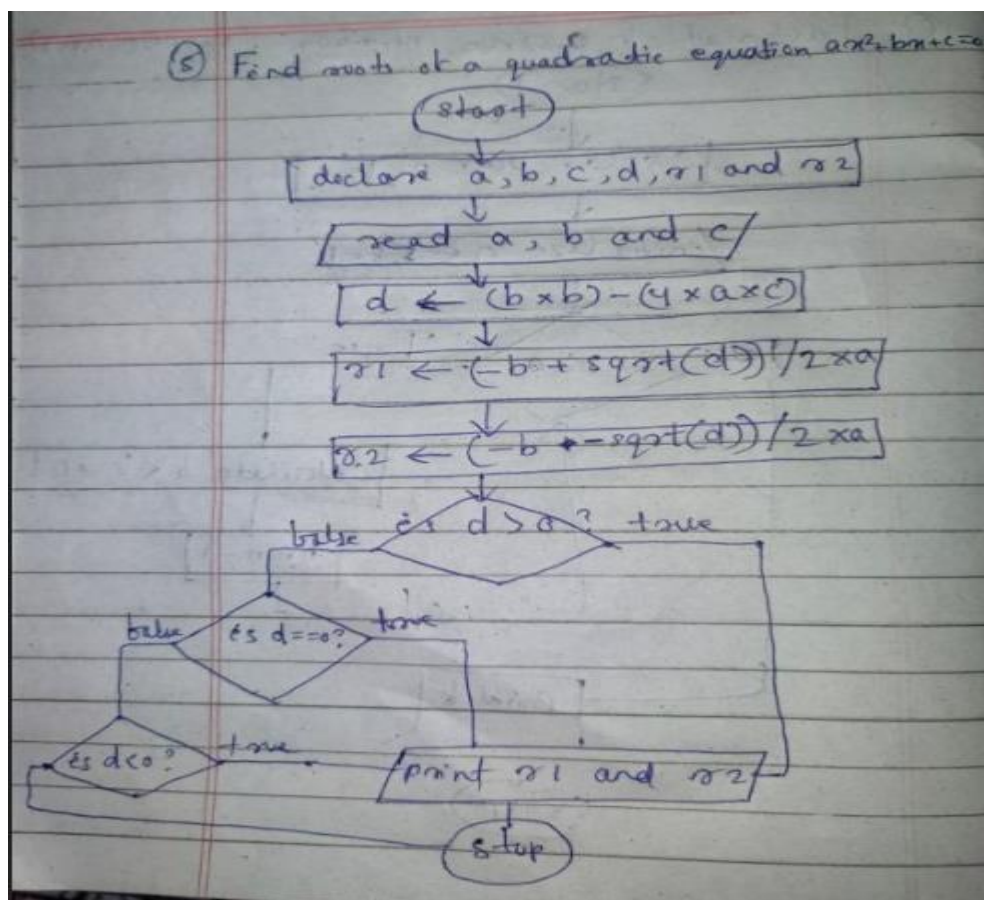
$$r2 \leftarrow (-b - \text{sqrt}(d)) / 2 \times a$$

step 7: If $d > 0$ print Roots are real and print r1 and r2

step 8: If $d == 0$ print Roots are real and same, and print r1

step 9: If $d < 0$ print Roots are Complex, and print r1 and r2

step 10: stop



6. Find the factorial of a given number, suppose the given number is 10.

Step 1: start

Step 2: Declare variables n, f

Step 3: Initialize $n \leftarrow 5$ and $f \leftarrow 1$

Step 4: [Loop] Calculate $f \times n$ and assign to f

$f \leftarrow f \times n$

step 5: $n \leftarrow n - 1$

step 6: repeat step 4 and step 5 until $n > 0$

step 7: print f

step 8: stop

