Q.1.FIND A STUDENT AVERAGE MARK GIVEN MARK1 AND MARK2.

ANS:

STEP 1: Start

STEP 2: Declare variables mark1, mark2 and average.

STEP 3: Read values for mark1 and mark2.

STEP 4: Add mark1 and mark2 and divide it by 2 and assign the result to average.

Average <- mark1+mark2/2.

STEP 5: Display average.

STEP 6: Stop

Q.2.CALCULATE THE TOTAL FINE CHARGED BY THE LIBRARY FOR LATE RETURN BOOKS. THE CHARGE IS 0.20INR FOR 1 DAY.

ANS:

STEP 1: Start

STEP 2: Declare the variables no_of_days, charge, fine.

STEP 3: Initialize charge=0.20inr

STEP 4: Read the value for no_of_days.

STEP 5: fine<- no_of_days*0.20INR

STEP 6: Display fine.

STEP 7: Stop

Q.3. YOU HAD BOUGHT A NICE SHIRT WHICH COSTS RS.29.90 WITH 15% DISCOUNT. COUNT THE NET PRICE FOR THE SHIRT.

ANS:

STEP 1: Start

STEP 2: Declare the variables cost, discount, discounted_cost and net_price.

STEP 3: Initialize the value of cost=29.90, discount=0.15.

STEP 4: Calculate the discounted_cost <- discount * cost.

STEP 5: Calculate the net_price <- cost – discounted_cost.

STEP 6: Display net_price.

STEP 7: Stop

Q.4.FIND THE SMALLEST NUMBER AMONG THREE DIFFERENT NUMBERS.

ANS:

STEP 1: Start

STEP 2: Declare the variables a, b and c.

STEP 3: read values for a, b and c.

STEP 4: Compare a with b and c. If a<b and a<c then a is smallest among the three.

STEP 5: Compare b with a and c. If b<a and b<c then b is smallest among the three.

STEP 6: Else c is the smallest among three.

STEP 7: Stop.

Q.5.FIND THE ROOTS OF A QUADRATIC EQUATION AX2+BX+C.

ANS:

STEP 1: Start

STEP 2: Declare the variables a, b, c, d, r1, r2, realpart, imagpart.

STEP 3: read values/coefficients for a, b, c.

STEP 4: d=b*b-4*a*c

STEP 5: if d>0, then

r1=(-b+sqrt(d)/(2*a))

r2=(-b-sqrt(d)/(2*a))

STEP 6: Display r1 and r2.

STEP 7: else if (d==0), then

r1=r2=-b/(2*a)

STEP 8: else display imaginary values,

r1=realpart+imagparti

r2=realpart-imagparti

STEP 9: Stop.

Q.6.FIND THE FACTORIAL OF A GIVEN NUMBER.

ANS:

STEP 1: Start

STEP 2: Read the number n.

STEP 3: Initialize i= 1 and fact =1.

STEP 4: Repeat step 4 through 6 until i=n.

STEP 5: fact=fact*i

STEP 6: i=i+1

STEP 7: Print fact.

STEP 8: Stop

PRACTICE QUESTIONS:

1.FIND THE FIBONACCI SERIES TILL TERM<=1000.

ANS:

STEP 1: Start

STEP 2: Declare and initialize i=0, a=0, b=1, show=0, n=1000.

STEP 3: Display the first two digits of the series i.e., a and b.

STEP 4: show<-a+b

STEP 5: while show<=n, display show

a=b

b=show

show=a+b

STEP 6: Stop.

2.CHECK WHETHER A NUMBER IS A PRIME NUMBER OR NOT.

STEP 1: Start

STEP 2: Declare the variables n, i, m=0, flag=0;

STEP 3: Read values for n.

STEP 4: m=n/2, check for loop condition i=2; i<m; i++

STEP 5: if n%i==0, display the number is not prime, come out of the loop.

STEP 6: flag=1

STEP 7: if flag==0, display number is prime.

STEP 8: Stop.

3.COUNT THE OCCURRENCE OF A DIGIT IN A NUMBER.

STEP 1: Start

STEP 2: Declare the variables num, digit, count=0,rem.

STEP 3: Read the values for num and digit.

STEP 4: check condition for num!=0, if true then

rem = num%10

if rem==digit, then count increament or num=num/10.

STEP 5: Display count.

STEP 6: Stop.

4.GET MARKS OF THREE SUBJECTS AND DECLARE THE RESULTS. IF THE MARKS>=35 IN ALL THE SUBJECTS THE STUDENT PASSES ELSE FAILS.

STEP 1: Start

STEP 2: Declare the variables sub1, sub2, sub3, result.

STEP 3: Read the values for sub1, sub2, sub3.

STEP 4: result<-sub1+sub2+sub3/3

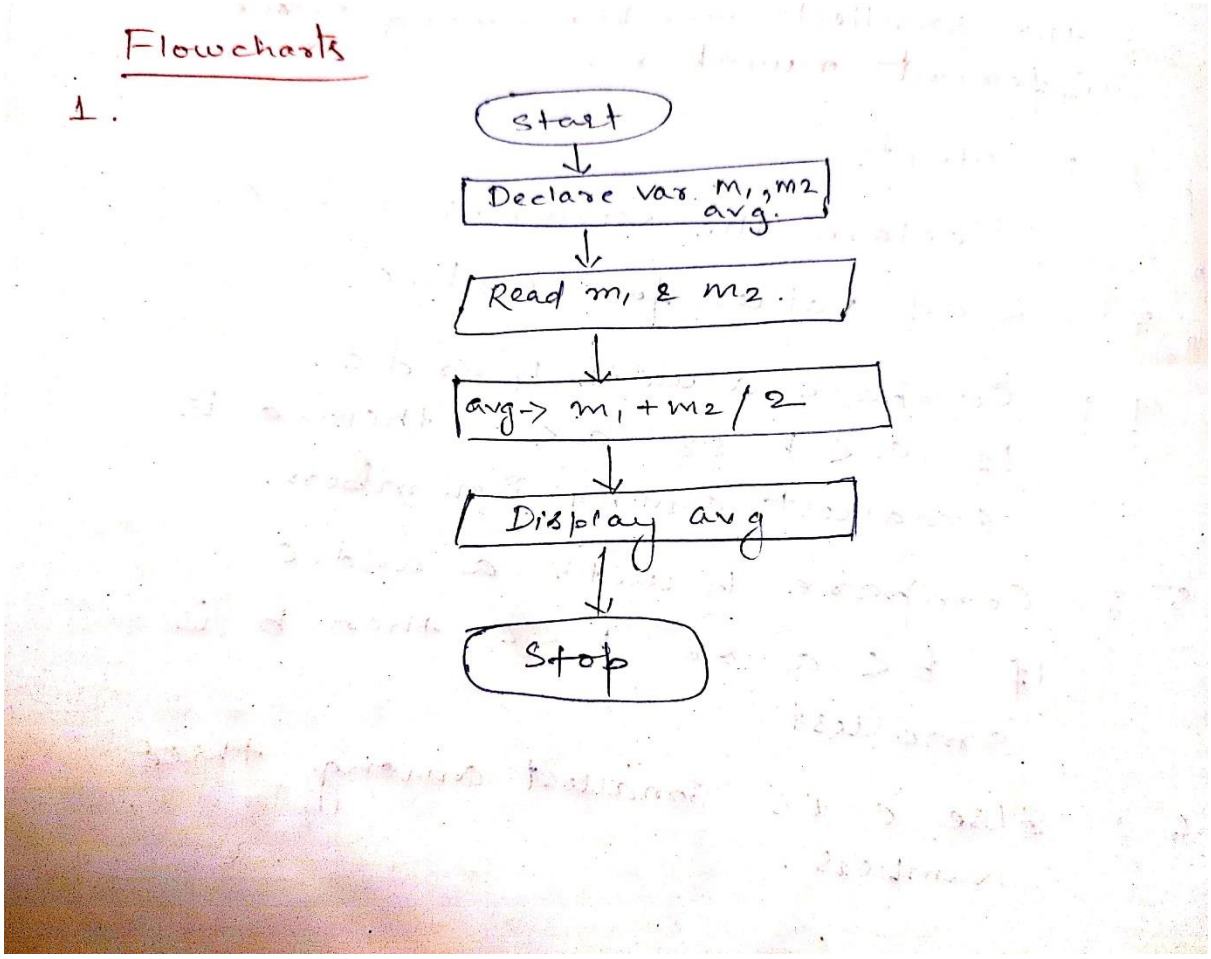
STEP 5: Check condition, if result>=35

STEP 6: Display passed.

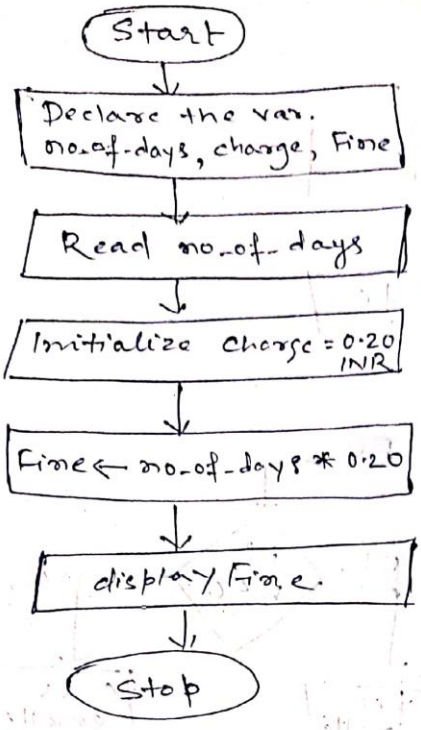
STEP 7: Else display failed.

STEP 8: Stop.

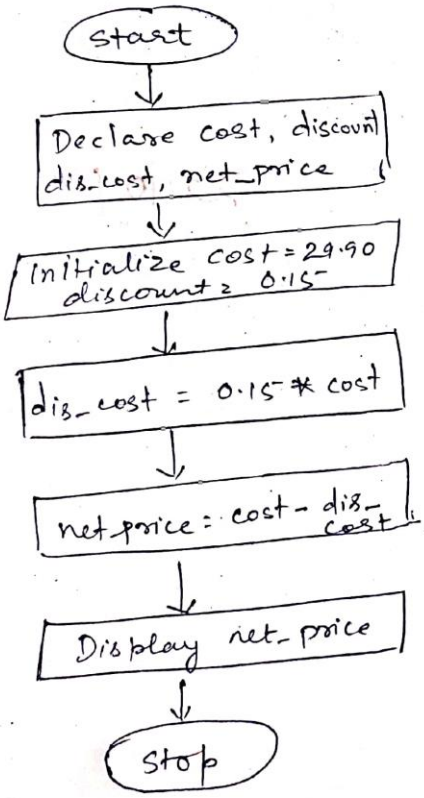
FLOWCHARTS :


Flowcharts
1.
Start
Declare var m1, m2 avg.
Read m1 & m2.
avg -> m1 + m2 / 2
Display avg
Stop

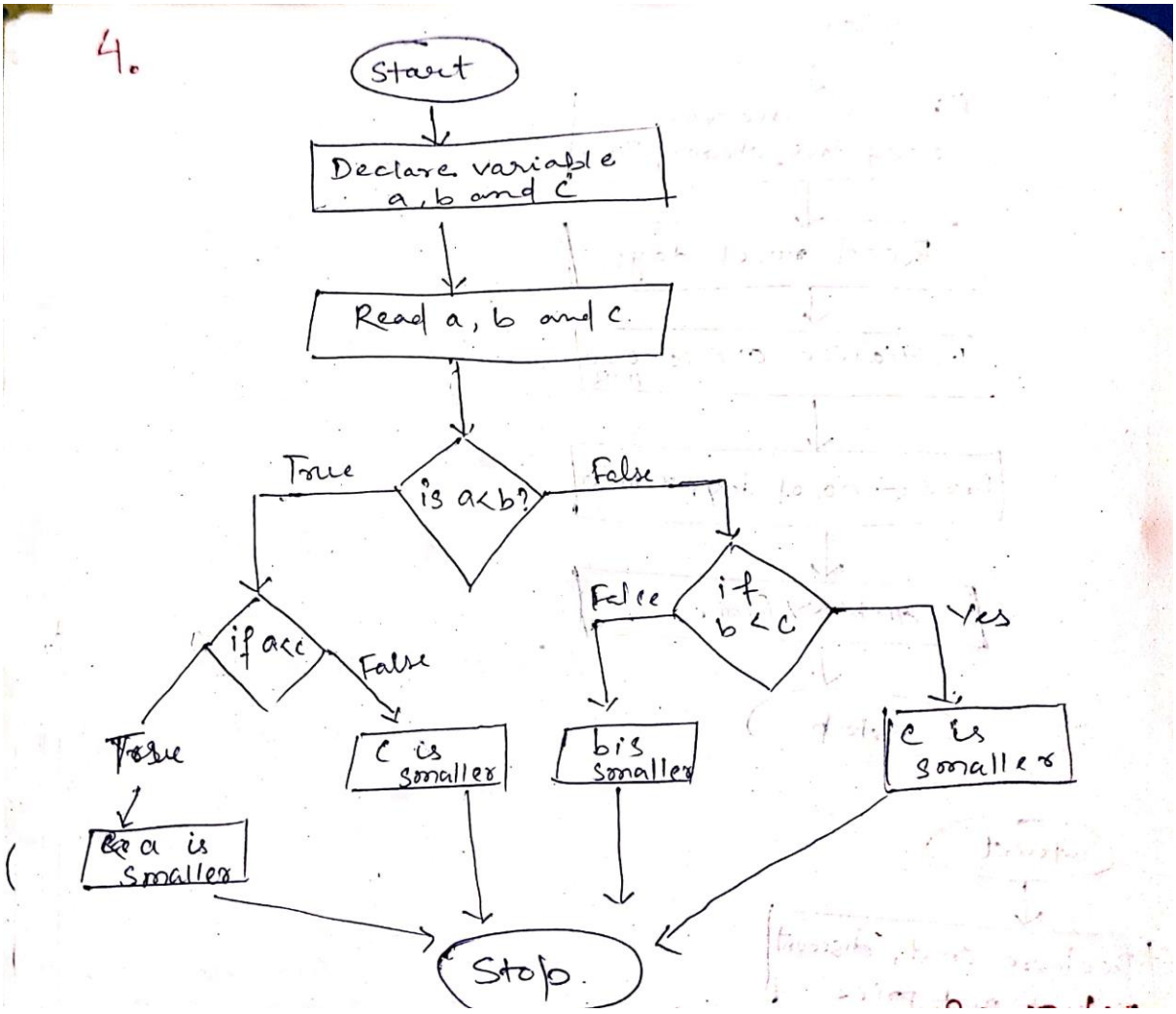
2.


Start
Declare the var. no_of_days, charge, Fine
Read no_of_days
Initialize charge = 0.20 INR
Fine ← no_of_days * 0.20
display Fine.
Stop

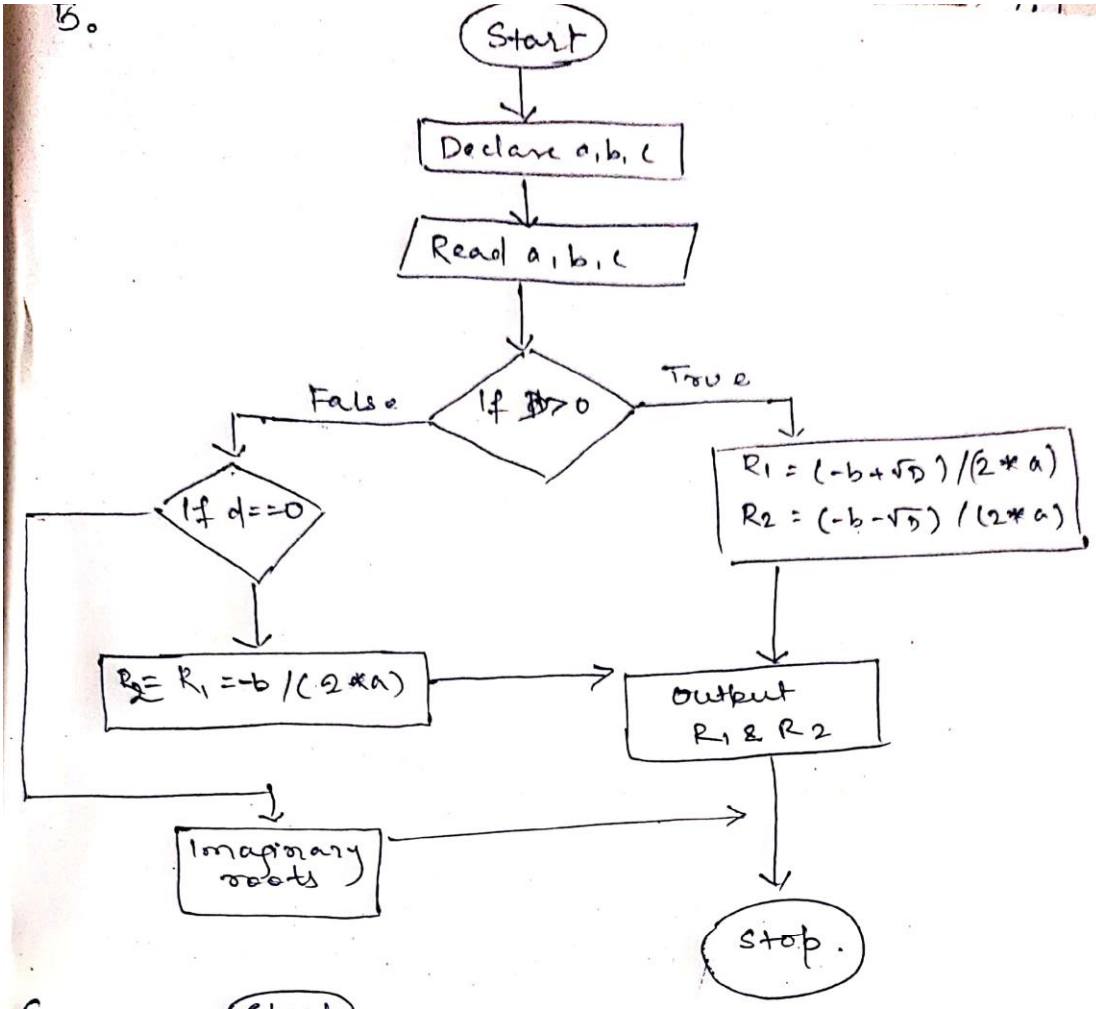
3.


start
Declare cost, discount dis_cost, net_price
Initialize cost = 29.90 discount = 0.15
dis_cost = 0.15 * cost
net_price = cost - dis_cost
Display net_price
Stop

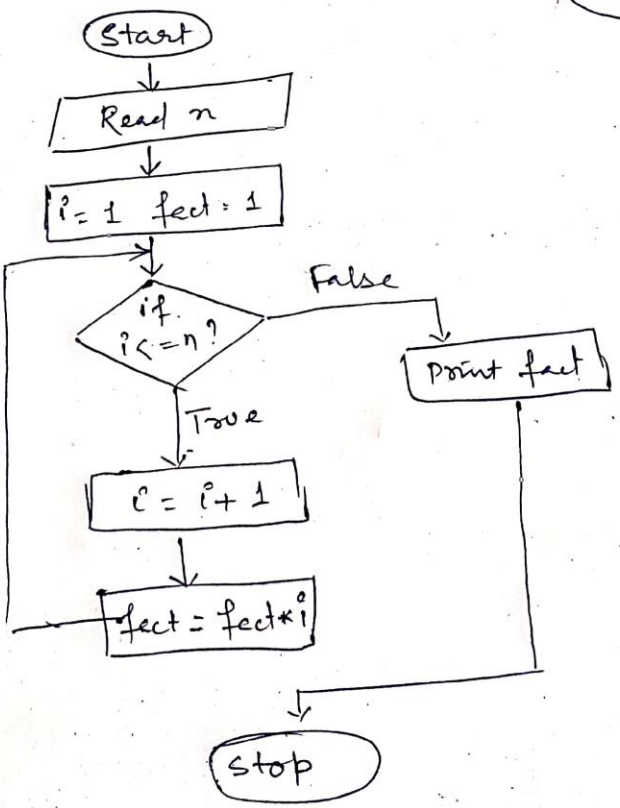
4.


Start
Declare variable a, b and c
Read a, b and c
is a<b?
True
False
if a<c
False
True
C is smaller
if b<c
False
Yes
b is smaller
c is smaller
a is smaller
Stop.

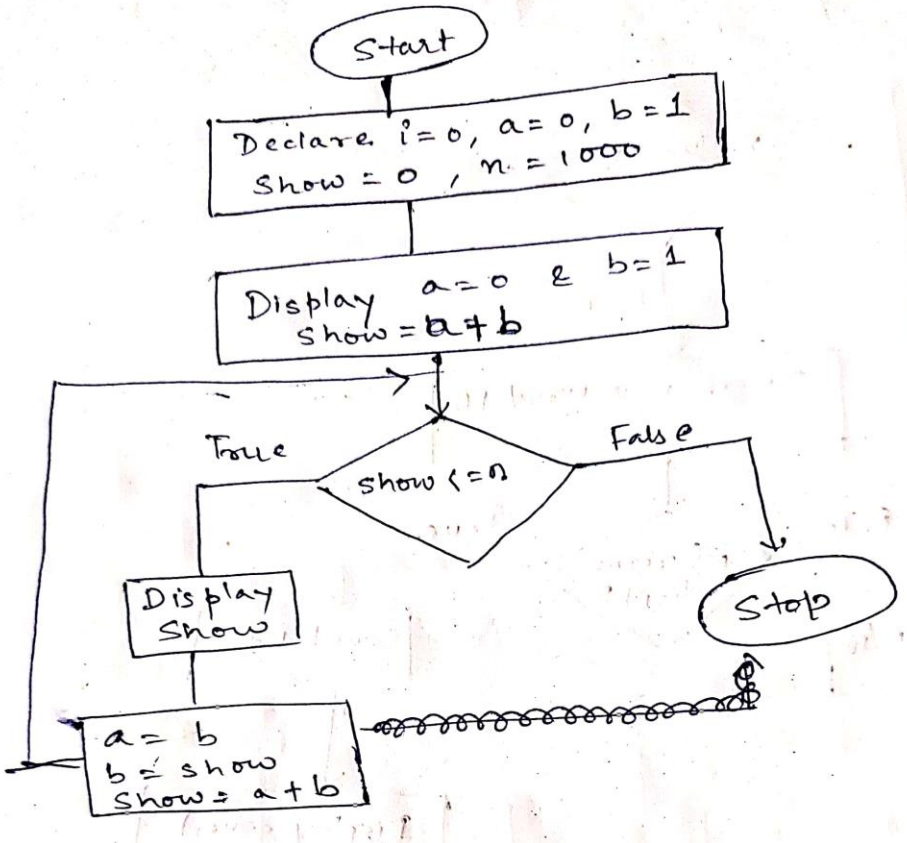
5.


Start
Declare a, b, c
Read a, b, c
If D > 0
False
True
If d == 0
R1 = (-b + √D) / (2 * a)
R2 = (-b - √D) / (2 * a)
R2 = R1 = -b / (2 * a)
Output R1 & R2
Imaginary roots
Stop.

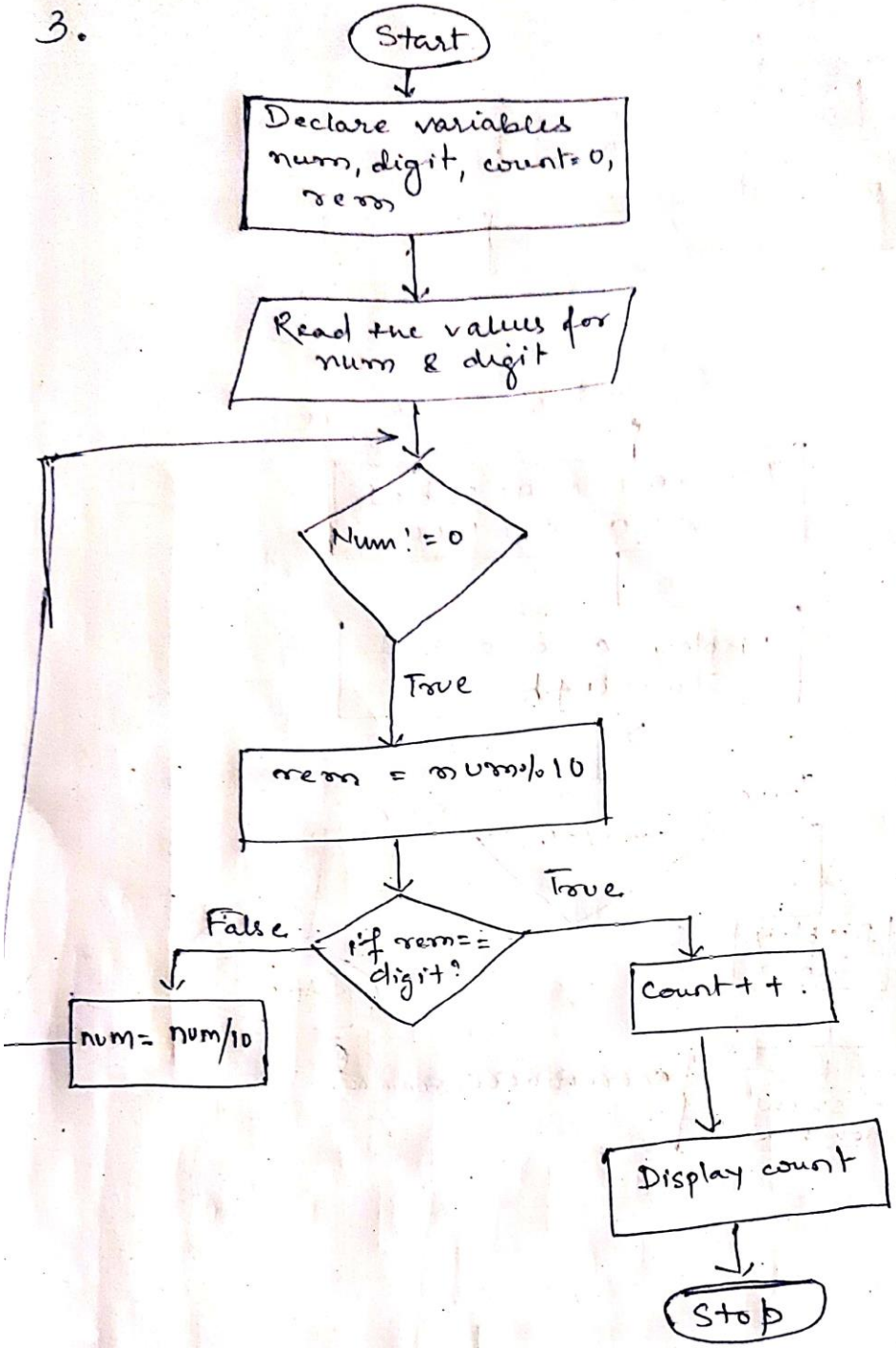
6.


Start
Read n
i = 1 fact = 1
if i <= n ?
False
True
print fact
i = i + 1
fact = fact * i
Stop

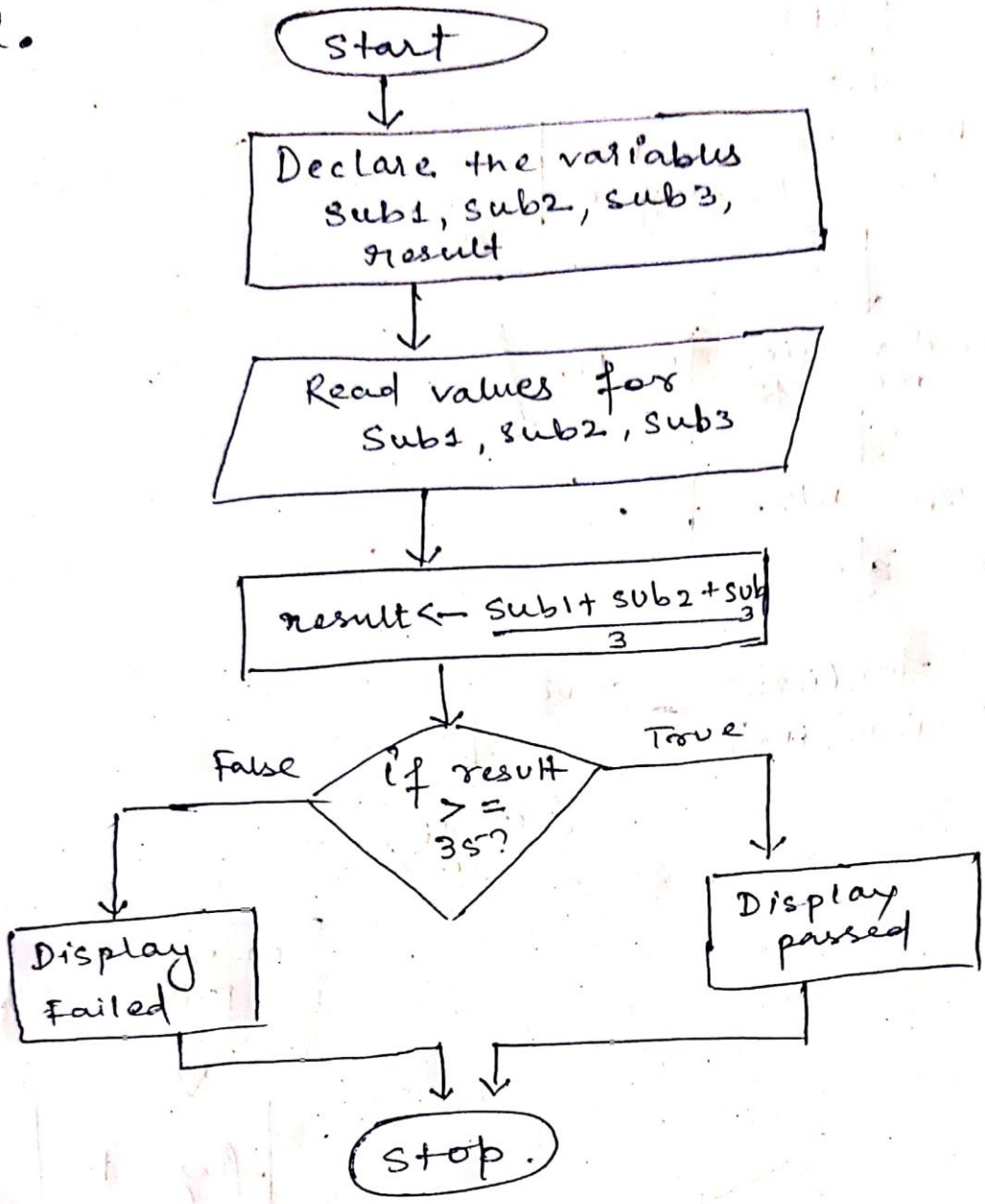
(1)


Start
Declare i=0, a=0, b=1
Show=0, n=1000
Display a=0 & b=1
Show=a+b
True
show <=n
False
Display Show
Stop
a=b
b=show
Show=a+b

3.


Start
Declare variables num, digit, count=0, rem
Read the values for num & digit
Num != 0
True
rem = num%10
True
False
if rem == digit?
Count++.
num= num/10
Display count
Stop

4.


Start
Declare the variables sub1, sub2, sub3, result
Read values for sub1, sub2, sub3
result ← sub1 + sub2 + sub3 / 3
if result >= 35?
False
True
Display failed
Display passed
Stop.