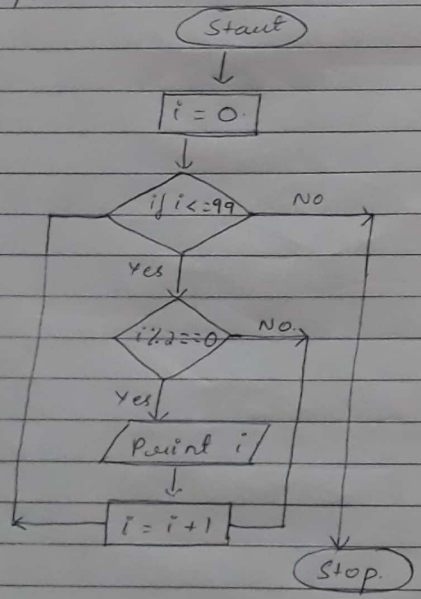
Assingment - 2.

1. Write algorithm and draw the flowcharts.

a. Print even numbers between 0 and 99.

→ Algorithm

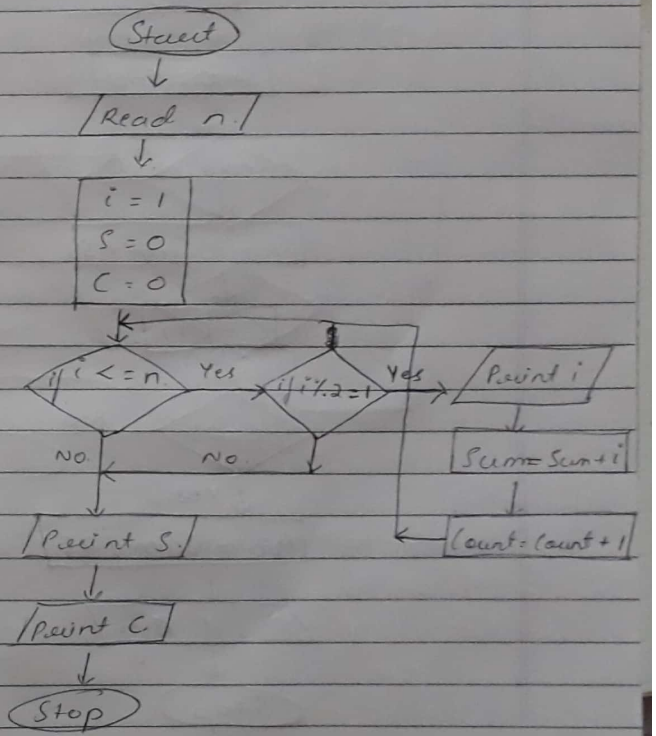
Step 1: Start
Step 2: Initialize i to 0.
Step 3: while i <= 99
Step 4: if i % 2 == 0 otherwise go to step 6.
Step 5: Print the number.
Step 6: increment value of i and go to step 3.
Step 7: Stop



b. Print odd numbers less than given number. It should also calculate their sum and count.

→ Algorithm.

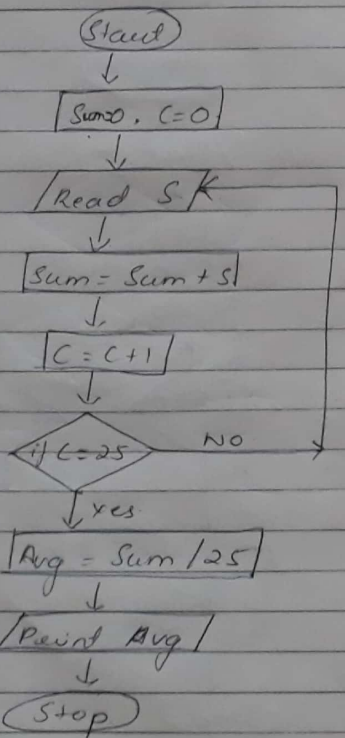
Step 1: Start
Step 2: Read number n.
Step 3: Initialize sum ← 0, count ← 0, i ← 1.
Step 4: if i <= n otherwise print sum and count
Step 5: check i % 2 = 1, then display i and perform S ← S+i, C ← C+1, go to step 4
Step 6: Stop.



c. Calculate average of 25 test scores.

→ Algorithm

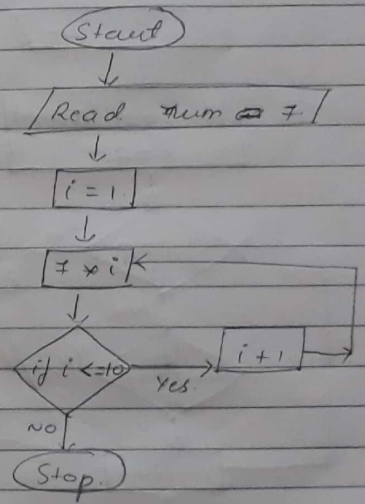
Step 1: Start
Step 2: Initialize $S \leftarrow 0$, $C \leftarrow 0$.
Step 3: Read exam scores as S.
Step 4: Sum = Sum + S
Step 5: C = C + 1
Step 6: If C = 25 calculate avg ← Sum / 25 otherwise goto step 3.
Step 7: Print Avg
Step 8: Stop



d. Print table of any number (say 7)

→ Algorithm

Step 1: Start
Step 2: Read the number 7
Step 3: Initialize variable i = 1
Step 4: 7 × i.
Step 5: Check i, if i is not equal to 10, then do i+1, goto step 4.
Step 6: if i = 10 then goto step 6.
Step 6: Stop.



e. Check if given number is prime or not

→ Algorithm.

Step 1 Start

Step 2 Read num

Step 3 R = SQRT (num)

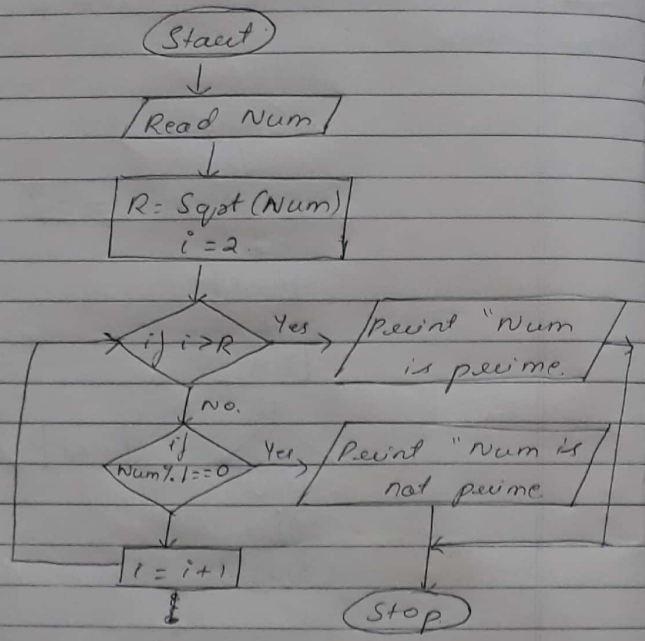
Step 4 i = 2.

Step 5 if (i > R) then write num is prime
otherwise

Step 6 if (num % i == 0) then print num is not prime

Step 7 i = i + 1 goto step 5

Step 8 Stop.



1. Print odd numbers backward from 99 to 1.

Step 1. Start

Step 2 initialize i ← 99

Step 3. Print i

Step 4 i = i - 2.

Step 5 check if i >= 1 then goto step 3. or goto step 6.

Step 6 Stop.