Ex. No.: I

Date: 22/10/24

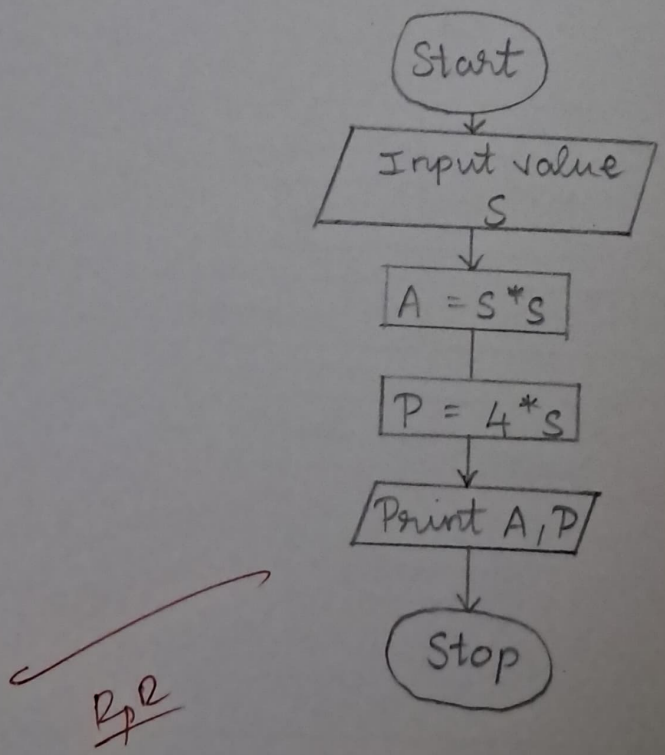
Calculate Area and Perimeter

Write an Algorithm and draw a Flowchart to Calculate the area and perimeter of a square.

Algorithm:

Step 1 : Start
Step 2 : Read S value
Step 3 : Calculate area of the square using the formula A = S*S
Step 4 : Print A.
Step 5 : Calculate perimeter of the square using the formula P = 4*S.
Step 6 : Print P
Step 7 : Stop.

Flowchart:



RpR

Ex. No.: 11 **Date:** 28/10/24

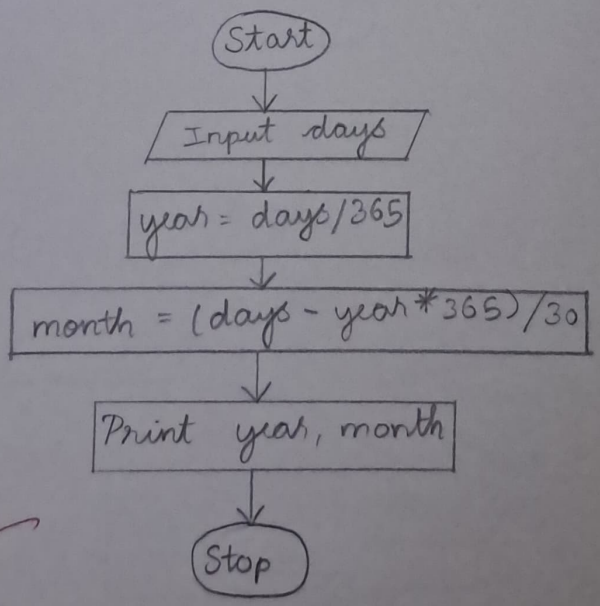
Days to Year Conversion

Write an Algorithm and draw a Flowchart to convert the given days into years & months.

Algorithm:

Step 1: Start
Step 2: Read a value for days
Step 3: Calculate year value using the formula year = days/365.
Step 4: Calculate month value using the formula month = (days - year * 365)/30
Step 5: Print year.
Step 6: Print month
Step 7: Stop.

Flowchart:



RJR

Ex. No.: 111 **Date:** 28/10/24

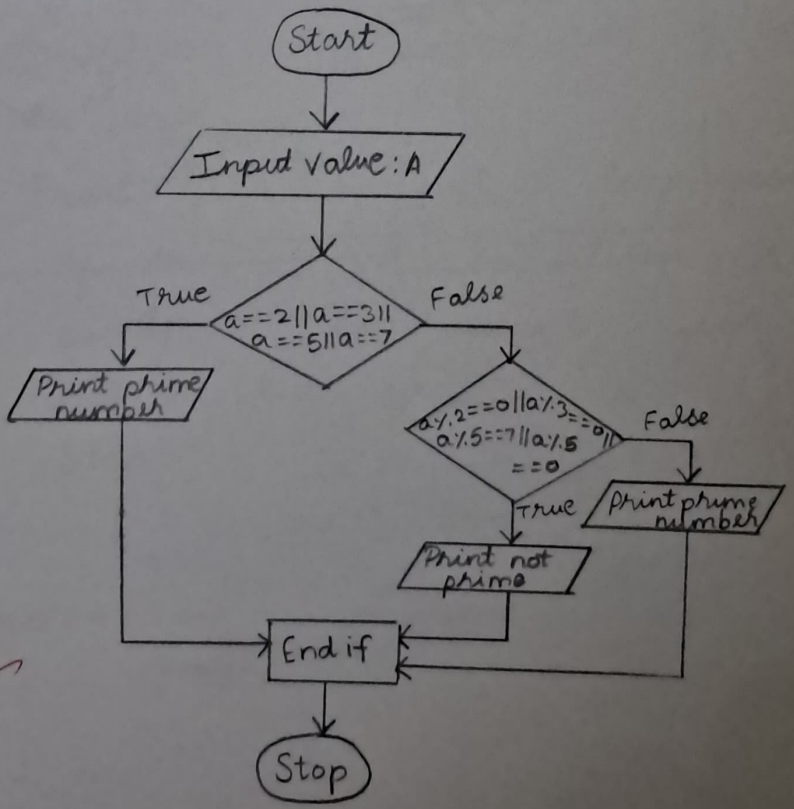
Prime Number

Write an Algorithm and draw a Flowchart to check whether the given number is Prime or not.

Algorithm:

Step 1 : Start
Step 2 : Read A value
Step 3 : Check if A is 2, 3, 5 or 7. Print A is a prime number.
Step 4 : Check if when A is divided by 2, 3, 5 or 7, the remainder is 0.
Step 5 : Print A is not a prime number
Step 6 : Otherwise print A is a prime number.
Step 7 : Stop.

Flowchart:



Ex. No.: IV **Date:** 22/10/24

Leap Year

Write an Algorithm and draw a Flowchart to check whether the given year is Leap year or not.

Algorithm:

Step1: Start

Step2: Read year value

Step3: Check if when year is divided by 400 the remainder is 0.

Step 4: Print year is a leap year.

Step 5: Otherwise check if year is divisible by four and not divisible by 100.

Step6: Print year is a leap year.

Flowchart:

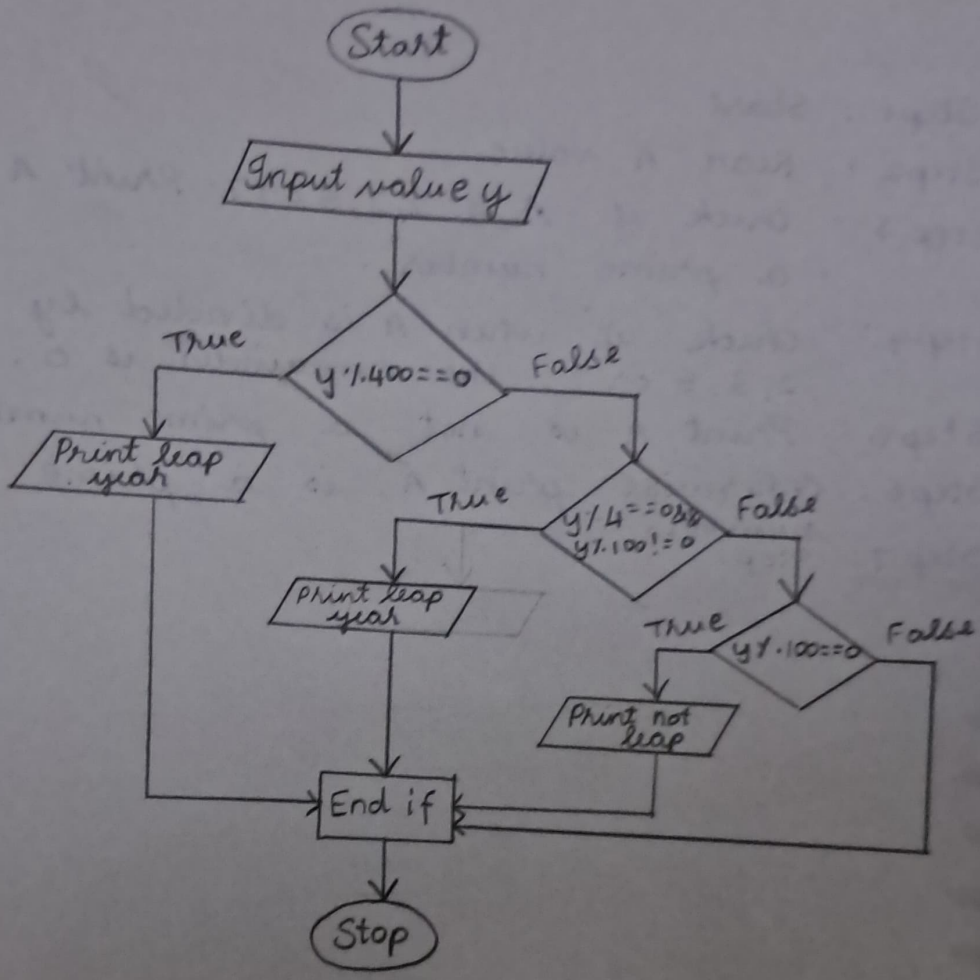
Step7: Otherwise check if year is divisible by 100.

Step 8: Print year is not a leap year.

Step 9: If the above conditions are not satisfied then print year is not a leap year.

Step 10: Stop.

FLOWCHART:


Start
Input value y
y%400==0
True
False
Print leap year
y/4==0 &&
y%100!=0
True
False
Print leap year
y%100==0
True
False
Print not leap
End if
Stop

Ex. No.: V

Date: 28/10/24

Palindrome Number

Write an Algorithm and draw a Flowchart to check whether the given number is palindrome number or not.

Algorithm:

Step 1: Start

Step 2: Initialise variables Reversed = 0, Q, n, r.

Step 3: Read an input value n.

Step 4: Save n to Q.

Step 5: If n is not 0, then calculate r using the formula r = n % 10.

Step 6: Calculate Reversed using the formula Reversed = Reversed * 10 + r.

~~Flowchart:~~

Step 7: Calculate n using n = n/10.

Step 8: Repeat step5, Step6 till n becomes 0.

Step 9: When n=0, check if Q is equal to Reversed.

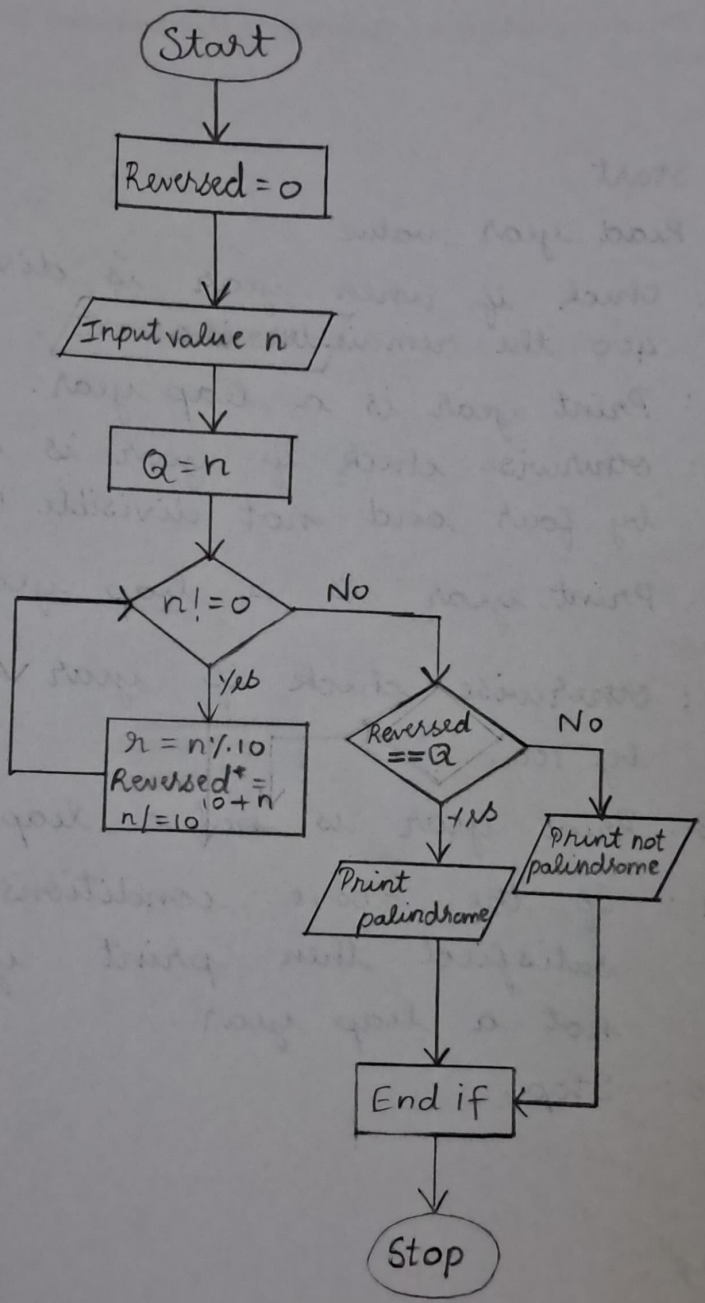
Step 10: Print the number is a palindrome.

Step 11: Otherwise print the number is not a palindrome.

Step 12: Stop.

RPR

FLOWCHART :


Start
Reversed = 0
Input value n
Q = n
n != 0
No
Yes
r = n % 10
Reversed* = 10 + n
n /= 10
Reversed == Q
No
Yes
Print palindrome
Print not palindrome
End if
Stop

Ex. No.: VI **Date:** 28/10/24

Sum of Digits

Write an Algorithm and draw a Flowchart to calculate the sum of digits in the given number.

Algorithm:

Step 1 : Start

Step 2 : Declare sum = 0 , rem = 0 .

Step 3: Read a value n .

Step 4: When n is greater than 0 , calculate rem using rem = n % 10 .

Step 5 : Calculate sum using sum = sum + rem.

Step 6 : Calculate n using the formula n = n/10 .

Flowchart:

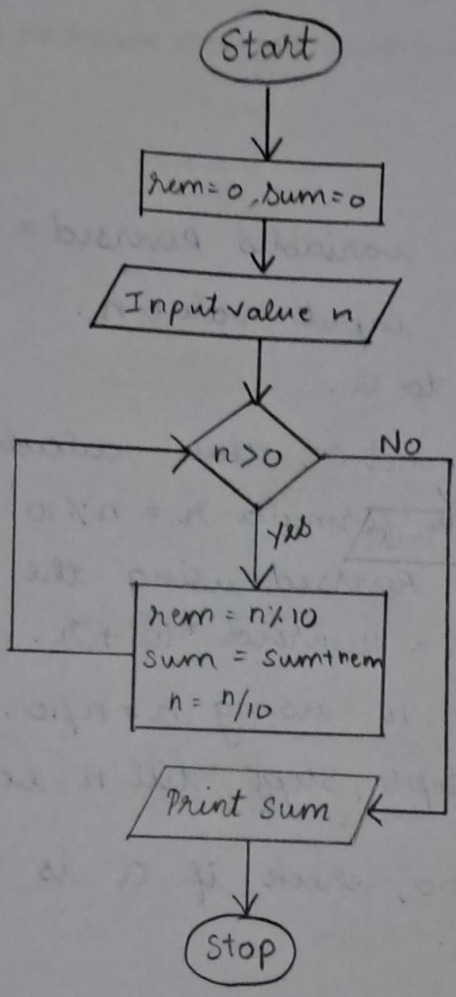
Step 7: Repeat steps 4 and 5 till n becomes less than 0 .

Step 8: Print sum.

Step 9: Stop.

DPR

FLOWCHART:


Start
rem=0, sum=0
Input value n
n>0
No
Yes
rem = n%10
sum = sum+rem
n = n/10
Print sum
Stop