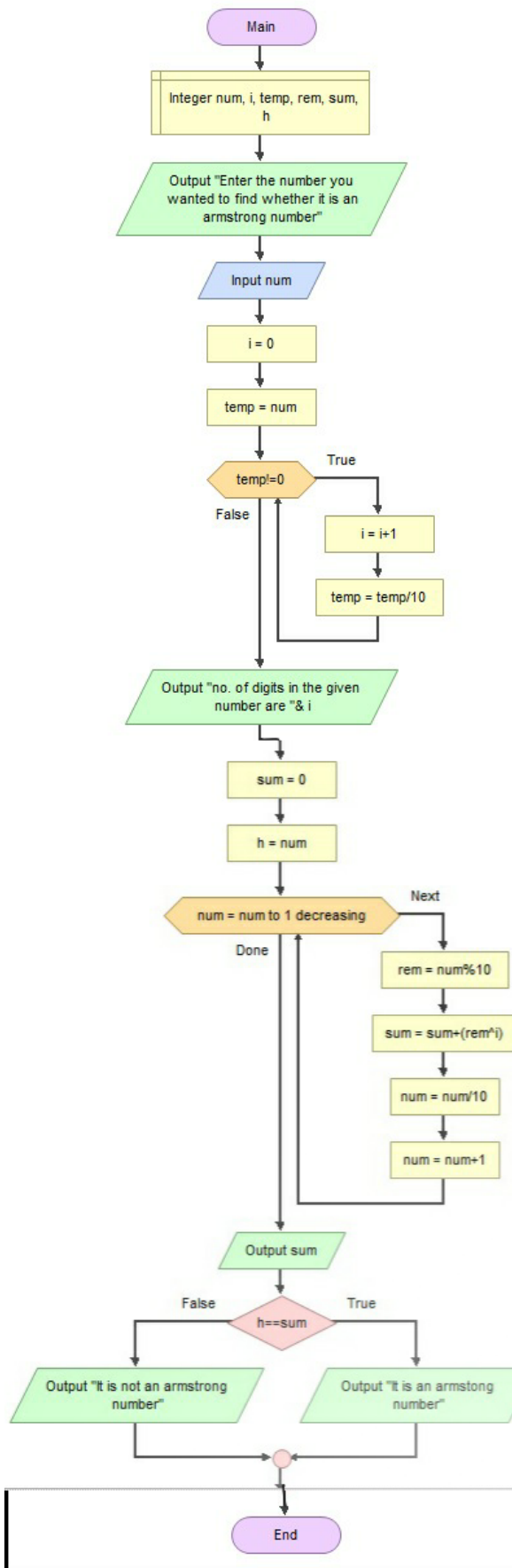


Task 6

Check whether the given number is an armstong number

- Here num=the number we wanted to check
 - i=number of digits in the given number
- rem= remainder of num when divided by 10
- sum=sum of digits raised to the power of number of digits
- temp and h are temporary variables we assigned for num



Algorithm:

Step 1: Start

Step 2: Declare num,i,temp,rem,sum,h

Step 4: Enter num

Step 5: Set $i=0$ and $temp=num$

Step 6: While temp is not 0 calculate $temp=temp/10$ and increment i (count) by 1 for each loop

Step 7: Display i

Step 8: Set $sum=0$ and $h=num$

Step 9: For num decreasing num count by 1 Compute $rem=num\%10$

$sum=sum+(rem^i)$

$num=num/10$

Then Assign $num=num+1$

Repeat loop until condition fails

Step 10 : If $sum == h$

It is an armstrong number

Step 6: Else it is not an armstrong number

Step 7: Terminate

Pseudocode :

BEGIN

DECLARE Integers num,i,temp,rem,sum,h

READ num

INITIALISE $i=0$

ASSIGN $temp=num$

WHILE $temp!=0$

 ASSIGN $i=i+1$

 COMPUTE $temp=temp/10$

ENDWHILE

PRINT i

INITIALISE $sum=0$

ASSIGN $h=num$

FOR num decreasing from num to 1

 COMPUTE $rem=num\%10$

 COMPUTE $sum=sum+(rem^i)$

 COMPUTE $num=num/10$

 ASSIGN $num=num+1$

END FOR

PRINT sum

IF $h==sum$ then

 PRINT "It is an armstrong number"

ELSE

 PRINT "It is not an armstrong number"

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ENDIF  
END
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