Week-05-Nested Loops - while and for, Jumps in Loops

Week-05-02-Practice Session-Coding

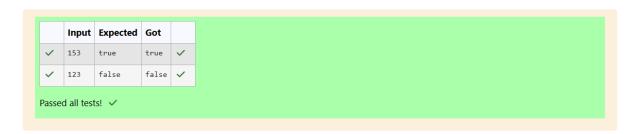
```
Question 1
                      The k-digit number N is an Armstrong number if and only if the k-th power of each digit sums to N.
Correct
Marked out of
3.00
                      Given a positive integer N, return true if and only if it is an Armstrong number.

▼ Flag question
```

Source code:

```
1 #include<stdio.h>
   #include<math.h>
3
    int main()
4 ▼ {
5
        int k,original,count=0,sum=0;
        scanf("%d",&k);
original = k;
8
        while(k>0)
9 🔻
10
            count++;
11
            k/=10;
12
13
        k=original;
14
        while(k>0)
15 ▼
16
            int t=k%10;
17
            sum+=pow(t,count);
18
            k/=10;
19
20
        if(original == sum)
21
22 🔻
            printf("true");
23
24
25
        else
26 🔻
            printf("false");
27
28
29
        return 0;
30 }
```

Result:

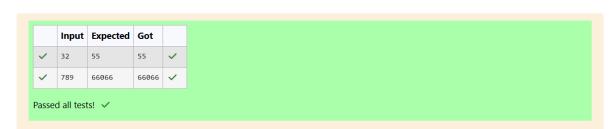


Question 2 Correct Marked out of 5.00 ▼ Flag question

```
Take a number, reverse it and add it to the original number until the obtained number is a palindrome. Constraints 1<=num<=99999999
Sample Input 1 32 Sample Output 1 55 Sample Input 2 789 Sample Output 2 66066
Answer: (penalty regime: 0 %)
#include<stdio.h>
int main()
{
             long long int n,s,rev,temp1,temp2;
scanf("%lld",%n);
while(1)
{
    4
5
   6
7
8
                  temp1=n,rev=0;
while(n)
{
   9
                        rev=rev*10+(n%10);
   11
12
13
14
15
16
17
                        n=n/10;
                   s=temp1+rev;
temp2=s;
                   rev=0;
while(s)
   18
19
                        rev= rev*10+(s%10);
   20
21
                        s=s/10;
                   if(temp2==rev)
   22
23 v
24
25
26
27
28
29
30 }
                        break;
```

Result:

n=temp2; printf("%11d",temp2);
return 0;



Question **3**Correct
Marked out of 7.00

Figure Flag question

A number is considered lucky if it contains either 3 or 4 or 3 and 4 both in it. Write a program to print the nth lucky number. Example, 1st lucky number is 3, and 2nd lucky number is 4 and 3rd lucky number is 33 and 4th lucky number is 34 and so on. Note that 13, 40 etc., are not lucky as they have other numbers in it.

The program should accept a number 'n' as input and display the nth lucky number as output.

Source code:

```
#include<stdio.h>
    int nluck(int n);
int iamlucky(int num);
 2
 3
    int main()
4
5
         int n;
scanf("%d",&n);
int luck=nluck(n);
printf("%d",luck);
6
7
8
9
10
         return 0;
11
    int nluck(int n)
12
13 1
         int c=0,num=3;
14
15
         while(c<n)</pre>
16
              if(iamlucky(num))
17
18
              {
19
                  C++;
20
21
              num++;
22
         return num-1;
23
24
25
    int iamlucky(int num)
26
         while(num>0)
27
28
              int digit = num%10;
29
30
              if(digit !=3 && digit != 4)
31
                  return 0;
32
33
              num/=10;
34
35
         return 1;
36
37 }
```

Result:

