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ECE-D

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ProblemStatement1:

Writeaprogramthatprintsasimplechessboard.

Inputformat:

ThefirstlinecontainsthenumberofinputsT.

Thelinesafterthatcontainadifferentvalueforsizeofthechessboard

Outputformat:

Printachessboardofdimensionssize\*size.

PrintWforwhitespacesandBforblackspaces.

SampleInput:

2

3

5

SampleOutput:

**WBW** 

BWB

**WBW** 

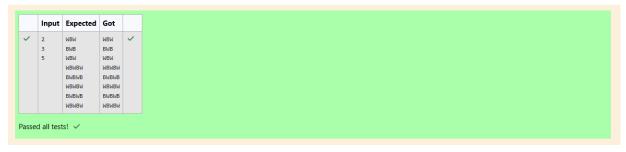
**WBWBW** 

**BWBWB** 

**WBWBW** 

**BWBWB** 

**WBWBW** 



### ProblemStatement2:

Let'sprintachessboard!

Writeaprogramthattakesinput:

 $The {\it first line contains T}, the number of test cases$ 

 $Each test case contains an integer N and also the starting character of the {\tt test} and {\tt te$ 

chessboard

**Output Format** 

Printthechessboardasperthegivenexamples

SampleInput:

2

2W

3B

SampleOutput:

**WB** 

BW

**BWB** 

**WBW** 

#### **BWB**



#### ProblemStatement3:

 $Decode the logic and print the {\tt Pattern that} corresponds to given input.$ 

IfN=3thenpatternwillbe:

10203010011012

\*\*4050809

\*\*\*\*607

IfN=4,thenpatternwillbe:

1020304017018019020

\*\*50607014015016

\*\*\*\*809012013

\*\*\*\*\*10011

Constraints:2<=N<=100

InputFormat

FirstlinecontainsT, the number of test cases, each test case contains a single integer N

## **Output Format**

First line print Case # iwhere iis the test case number, In the subsequent line, print the pattern

# SampleInput

3

3

4

5

# SampleOutput

Case#1

10203010011012

\*\*4050809

\*\*\*\*607

#### Case#2

1020304017018019020

\*\*50607014015016

\*\*\*\*809012013

\*\*\*\*\*10011

#### Case#3

102030405026027028029030

\*\*6070809022023024025

\*\*\*\*10011012019020021

\*\*\*\*\*13014017018

\*\*\*\*\*\*15016

```
1 |#include <stdio.h>
         int main(){
               main(){
int t;
scanf("%d",%t);
for(int x=1;xx=t;x++){
    printf("Case #%d\n",x);
    int n;
scanf("%d",%n);
    int f=1,b=n"(n+1);
    for(int i=0;ic;i++){
        printf("a");
    }
}
11 v
12 v
13 14 15 16 17 v
18 19 20 21 v
22 23 24 25 26 27 28 29 }
                                printf("%d",f);
                         print(
f++;
for(int k=2;k<=n-i;k++){
    printf("0%d",f);
    f++;</pre>
                               for(int l=b-(n-i)+1;1<=b;1++){
    printf("0%d",1);
}</pre>
                return 0;
        Input Expected
                                                                 10203010011012
**4050809
****607
                     10203010011012
                    **4050809
****607
                    Case #2
1020304017018019020
                     **50607014015016
                                                                 **50607014015016
                    ****809012013
******10011
                                                                 ****809012013
*****10011
                    Case #3 Case #3
102030405026027028029030 102030405026027028029030
                    **6070809022023024025

***10011012019020021

****13014017018

*****13014017018
                                                                ******15016
```

## ProblemStatement4:

Passed all tests! ✓

Thek-digitnumberNisanArmstrongnumberifandonlyifthek-thpowerof eachdigit sumstoN.

GivenapositiveintegerN, returntrueifandonlyifitisan Armstrong number.

Note:1<=N<=10^8

Hint:153isa3-digitnumber,and153=1^3+5^3+3^3.

SampleInput:

153

SampleOutput:

true

SampleInput:

123

SampleOutput:

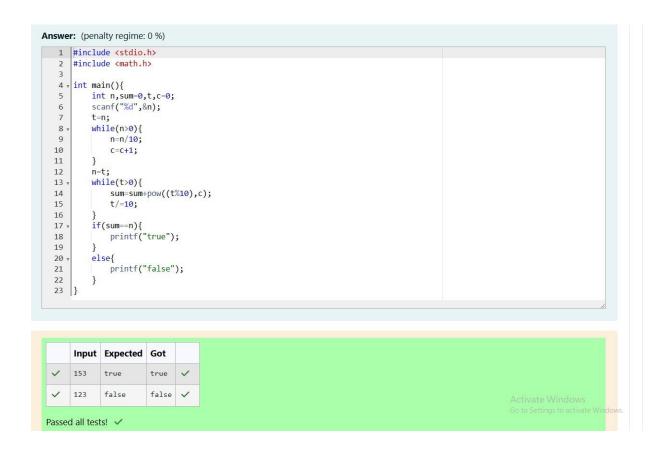
false

SampleInput:

1634

SampleOutput:

true



## ProblemStatement5:

 $\label{thm:continuous} Take a number, reverse it and addit to the original number until the obtained number is$ 

apalindrome.

Constraints

1<=num<=99999999

SampleInput1

32

SampleOutput1

55

SampleInput2 789 SampleOutput2 66066

```
Answer: (penalty regime: 0 %)
  1 #include <stdio.h>
  4 int rev(int n){
         int reverse=0;
         while(n>0){
        reverse=(reverse*10)+(n%10);
  8
         n=n/10;
  10
         return reverse;
  11 }
  12 v int Pal(int n){
         return rev(n)==n;
  13
  14 }
  15 ▼ int main(){
        int n;
scanf("%d",&n);
  16
17
  18 🔻
       while(!Pal(n)){
        int r=rev(n);
  19
  20
             n=n+r;
  21
  22
         printf("%d",n);
```

#### ProblemStatement6:

A number is considered lucky if it contains either 3 or 4 or 3 and 4 both in it.

#### Writea

programtoprintthenthluckynumber.Example,1stluckynumberis3,and 2ndlucky

numberis4and3rdluckynumberis33and4thluckynumberis34andsoon. Notethat 13,40etc.,arenotluckyastheyhaveothernumbersinit.

Theprogramshouldacceptanumber'n'asinputanddisplaythenthlucky numberas

output.

SampleInput1:

3

SampleOutput1:

33

```
Answer: (penalty regime: 0 %)
 1 #include <stdio.h>
   3 * int main(){
           int n=1;
int i=0,ns,c=0,e;
scanf("%d",&e);
while(i<e){</pre>
   4
5
    6
   7 🔻
                ns=n;
while(ns!=0){
   8
   9 🔻
                    c=0;
if(ns%10!=3&&ns%10!=4){
  10
  11 *
                     c=1;
break;
  12
  13
                    }
ns/=10;
  14
  15
  16
                 }
if(c==0){
  17
                i++;
  18
  19
  20
                n++;
  21
  22
            printf("%d",--n);
  23 }
```

