

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

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Attempts allowed: 3

This quiz has been configured so that students may only attempt it using the Safe Exam Browser.

Time limit: 2 hours

Grading method: Highest grade

Your attempts

Attempt 3

Status	Finished
Started	Sunday, 12 January 2025, 1:22 PM
Completed	Sunday, 12 January 2025, 2:43 PM
Duration	1 hour 20 mins

[Review](#)

Attempt 2

Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Tuesday, 17 December 2024, 12:49 PM
Duration	6 days 4 hours

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Attempt 1

Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Thursday, 12 December 2024, 10:24 AM
Duration	11 days 7 hours

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Finish review



Status	Finished
Started	Sunday, 12 January 2025, 1:22 PM
Completed	Sunday, 12 January 2025, 2:43 PM
Duration	1 hour 20 mins

Question 1

Correct

Marked out of
3.00

Flag question

Write a program that prints a simple chessboard.

Input format:

The first line contains the number of inputs T.

The lines after that contain different values for size of the chessboard

Output format:

Print a chessboard of dimensions size * size. Print W for white spaces and B for black spaces.

Input:

2

2

WBW

BWB

WBW

WBWBW

BWBWB

WBWBW

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int T, size;
5     scanf("%d",&T);
6     while(T--)
7     {
8         scanf("%d",&size);
9
10        for(int i=0;i<size;i++)
11        {
12            for(int j=0;j<size;j++)
13            {
14                if((i+j)%2==0)
15                {
16                    printf("W");
17                }
18                else
19                {
```

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```
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```

```
    {
        printf("W");
    }
    else
    {
        printf("B");
    }
    printf("\n");
}
return 0;
```

	Input	Expected	Got	
✓	2	WBW	WBW	✓
	3	BWB	BWB	
	5	WBW	WBW	
		WBWBW	WBWBW	
		BWBWB	BWBWB	
		WBWBW	WBWBW	
		BWBWB	BWBWB	
		WBWBW	WBWBW	

Passed all tests! ✓

Question 2

Let's print a chessboard!



Type here to search



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			WBWBW	WBWBW	WBWBW	
			BWBWB	BWBWB	BWBWB	
			WBWBW	WBWBW	WBWBW	

Passed all tests! ✓

Question 2

Correct

Marked out of
5.00

Flag question

Let's print a chessboard!

Write a program that takes input:

The first line contains T, the number of test cases

Each test case contains an integer N and also the starting character of the chessboard

Output Format

Print the chessboard as per the given examples

Sample Input / Output

Input:

2

2 W

2 B



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WB
BW
BWB
WBW
BWB

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int T, d,i,i1,i2,o,z;
5     char c,s;
6     scanf("%d",&T);
7     for(i=0;i<T;i++)
8     {
9         scanf("%d %c",&d,&s);
10        for(i1=0;i1<d;i1++)
11        {
12            z=(s=='W') ? 0:1;
13            o=(i1%2==z) ? 0:1;
14            for(i2=0;i2<d;i2++)
15            {
16                c=(i2%2==o)? 'W':'B';
17                printf("%c",c);
18            }
19            printf("\n");
20        }
21    }
22    return 0;
23 }
```

	Input	Expected	Got	
✓	2	WB	WB	✓
	2 W	BW	BW	
	3 B	BWB	BWB	
		WBW	WBW	
		BWB	BWB	

Passed all tests! ✓

Question 3

Correct

Marked out of
7.00

Flag question

Decode the logic and print the Pattern that corresponds to given input.

If N= 3

then pattern will be :

10203010011012

**4050809

****607

If N= 4, then pattern will be:

1020304017018019020

**50607014015016

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Constraints

$2 \leq N \leq 100$

Input Format

First line contains T , the number of test cases

Each test case contains a single integer N

Output

First line print Case # i where i is the test case number

In the subsequent line, print the pattern

Test Case 1

3

3

4

5

Output



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Case #2

1020304017018019020

**50607014015016

****809012013

*****10011

Case #3

102030405026027028029030

**6070809022023024025

****10011012019020021

*****13014017018

*****15016

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n,v,p3,c,in,i,i1,i2,t,ti;
5     scanf("%d",&t);
6     for(ti=0;ti<t;ti++){
7         v=0;
8         scanf("%d",&n);
9         printf("Case #%d\n", ti+1);
10        for(i=0;i<n;i++){
11            c=0;
12            if(i>0){
13                for(i1=0;i1<i;i1++) printf("**");
14            }
15            for(i1=i;i1<n;i1++)
```

```
28         printf("%d",p3++);
29         if (i2!=n-1) printf("0");
30     }printf("\n");
31 }
32 }
33 }
34 }
```

	Input	Expected	Got	
✓	3	Case #1 10203010011012	Case #1 10203010011012	✓
	4	**4050809	**4050809	
	5	****607	****607	
		Case #2 1020304017018019020 **50607014015016 ****809012013 *****10011	Case #2 1020304017018019020 **50607014015016 ****809012013 *****10011	
		Case #3 102030405026027028029030 **6070809022023024025 ****10011012019020021 *****13014017018 *****15016	Case #3 102030405026027028029030 **6070809022023024025 ****10011012019020021 *****13014017018 *****15016	

Passed all tests! ✓

Finish review



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Your attempts

Attempt 1

Status Finished

Started Monday, 23 December 2024, 5:33 PM

Completed Tuesday, 17 December 2024, 10:47 AM

Duration 6 days 6 hours

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Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
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Duration	6 days 6 hours

Question 1

Correct

Marked out of
3.00

Flag question

The k-digit number N is an Armstrong number if and only if the k-th power of each digit sums to N.

Given a positive integer N, return true if and only if it is an Armstrong number.

Example 1:

Input:

153

Output:

true

Explanation:



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Explanation:

153 is a 3-digit number, and $153 = 1^3 + 5^3 + 3^3$.

Example 2:**Input:**

123

Output:

false

Explanation:

123 is a 3-digit number, and $123 \neq 1^3 + 2^3 + 3^3 = 36$.

Example 3:**Input:**

1634



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Input:

1634

Output:

true

Note:

 $1 \leq N \leq 10^8$ **Answer:** (penalty regime: 0 %)

```
1 #include<stdio.h>
2 #include<math.h>
3 int main()
4 {
5     int n;
6     scanf("%d",&n);
7     int x=0,n2=n;
8     while(n2!=0)
9     {
10         x++;
11         n2=n2/10;
12     }
13     int sum=0;
14     int n3=n,n4;
15     while(n3!=0)
16     {
17         n4=n3%10;
```

```
12
13     int sum=0;
14     int n3=n, n4;
15     while(n3!=0)
16     {
17         n4=n3%10;
18         sum=sum+pow(n4,x);
19         n3=n3/10;
20     }
21     if(n==sum)
22     {
23         printf("true");
24     }
25     else
26     {
27         printf("false");
28     }
29     return 0;
30 }
```

	Input	Expected	Got	
✓	153	true	true	✓
✓	123	false	false	✓

Passed all tests! ✓

Question 2
Correct
Marked out of

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

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 $1 \leq \text{num} \leq 99999999$
Sample Input 1 32 Sample Output 1 55 Sample Input 2 789 Sample Output 2 66066

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int rev,n,nt=0,i=0;
5     scanf("%d",&n);
6     do{
7         nt=n;
8         rev=0;
9         while(n!=0)
10        {
11            rev=rev*10+n%10;
12            n=n/10;
13        }
14        n=nt+rev;
15        i++;
16    }while(rev!=nt || i==1);
17    printf("%d",rev);
18    return 0;
19 }
```

	Input	Expected	Got	
✓	32	55	55	✓
✓	789	66066	66066	✓



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Passed all tests! ✓

Question **3**

Correct

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7.00

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.

Sample Input 1:

3

Sample Output 1:

33

Explanation:

Here the lucky numbers are 3, 4, 33, 34, and the 3rd lucky number is 33.

Sample Input 2:



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Please enter lucky numbers and 0, 1, 33, 34, and the unlucky number is 333.

Sample Input 2:

34

Sample Output 2:

33344

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     int n=1,i=0,nt,co=0,e;
5     scanf("%d",&e);
6     while(i<e)
7     {
8         nt=n;
9         while(nt!=0)
10        {
11             co=0;
12             if(nt%10!=3&&nt%10!=4)
13             {
14                 co=1;
15                 break;
```

```
/ {  
8 nt=n;  
9 while(nt!=0)  
10 {  
11     co=0;  
12     if(nt%10!=3&&nt%10!=4)  
13     {  
14         co=1;  
15         break;  
16     }  
17     nt=nt/10;  
18 }  
19 if(co==0)  
20 {  
21     i++;  
22 }  
23 n++;  
24 }  
25 printf("%d",--n);  
26 return 0;  
27 }
```

	Input	Expected	Got	
✓	34	33344	33344	✓

Passed all tests! ✓

Finish review

Assessment-05-Decision Making and Looping - while and do...while

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 Done

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Jump to...

 Week-06-Decision Making and Looping - for