

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

GE23131-Programming Using C-2024

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Status

Finished

Started

Monday, 23 December 2024, 5:33 PM

Completed

Tuesday, 26 November 2024, 8:56 AM

Duration

27 days 8 hours

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 a different values for size of the chessboard

Output format:

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

Input:

2

3

5

Output:

WBW

BWB

WBW

WBWBW

BWBWB

WBWBW

Answer: (penalty regime: 0 %)

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Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 void printchessboard(int size){
3     for(int i=0;i<size;i++){
4         for(int j=0; j<size;j++){
5             if((i+j)%2==0){
6                 printf("W");
7             }
8             else{
9                 printf("B");
10            }
11        }printf("\n");
12    }
13 }
14 }
15 int main(){
16     int T;
17     scanf("%d",&T);
18     while (T--){
19         int size;
20         scanf("%d",&size);
21         printchessboard(size);
22         if (T>0){
23             printf("\n");
24         }
25     }
26 }
27 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**

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

Output:

WB

BW

BWB

WBW

BWB

**Answer:** (penalty regime: 0 %)

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     int T,n;
4     char m;
5     scanf("%d",&T);
6     for (int i=0;i<T;i++){
7         scanf("%d",&n);
8         scanf(" %c",&m);
9         for(int j=0;j<n;j++){
10            for(int k=0;k<n;k++){
11                if ((j+k)%2==0)
12                    printf("%c",m);
13                else
14                    if (m=='W'){
15                        printf("B");
16                    }else
17                        printf("W");
18            }
19            printf("\n");
20        }
21    }
22 }
23 }
24 }
25 return 0;
26 }
27 }
```

	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
***809012013
*****10011
```

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

Case #1

```
10203010011012
**4050809
****607
```

Case #2

```
1020304017018019020
```

```
***809012013
*****10011
```

Case #3

```
102030405026027028029030
**6070809022023024025
***10011012019020021
*****13014017018
*****15016
```

**Answer:** (penalty regime: 0 %)

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     int n,v,p,c,in,i,i1,i2,t,t1;
4     scanf("%d",&t);
5     for(t1=0;t1<t;t1++){
6         v=0;
7         scanf("%d",&n);
8         printf("Case #%d\n",t1+1);
9         for(i=0;i<n;i++){
10             c=0;
11             if(i>0){
12                 for(i1=0;i1<i;i1++) printf("***");
13             }
14             for (i1=i;i1<n;i1++){
15                 if(i>0)c++;
16                 printf("%d0",++v);
17             }
18             if(i==0){
19                 p=v+(v*(v-1))+1;
20                 in=p;
21             }
22             in=in-c;
23             p=in;
24             for (i2=i;i2<n;i2++){
25                 printf("%d",p++);
26                 if(i2!=n-1) printf("0");
27             }printf("\n");
28         }
29     }
```

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

Passed all tests! ✓





