Week-05-Nested Loops-while and for, Jumps in Loops
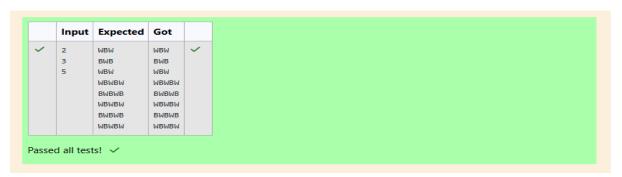
Week-05-01-Practice Session-Coding

Question **1**	Write a program that prints a simple chessboard.
Correct	
Marked out of 3.00	Input format:
🏳 Flag question	

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.

Source Code

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        int a;
        char c1='B',c2='W';
        scanf("%d",&a);
        for(int j=0;j<a;j++)
        {
            if(j%2!=0)
            {
                c1='W',c2='B';
            }
            else
            {
                c1='B',c2='W';
            }
            for(int k=0;k<a;k++)
            {
                if(k%2!=0)
                {
                    printf("%c",c1);
                }
                else
                {
                    printf("%c",c2);
                }
            }
            printf("\n");
        }
    }
    return 0;
}
```

Result

	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:
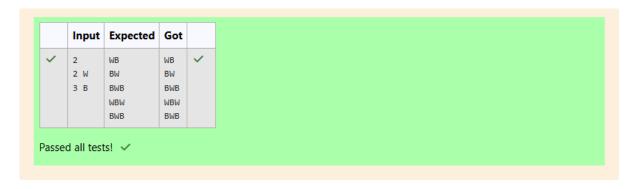
The first line contains T, the number of test cases

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

Source Code

```c
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    for(int i=0;i<n;i++)
    {
        int a;
        char b,c1='W',c2='B',temp;
        scanf("%d %c",&a,&b);
        for(int j=0;j<a;j++)
        {
            if(j%2==0)
            {
                if(b!=c1)
                {
                    c2=c1;
                    c1=b;
                }
            }
            else
            {
                temp=c1;
                c1=c2;
                c2=temp;
            }
            for(int k=0;k<a;k++)
            {
                if(k%2==0)
                {
                    printf("%c",c1);
                }
                else
                {
                    printf("%c",c2);
                }
            }
            printf("\n");
        }
    }
    return 0;
}
```

Result

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

Source Code

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main()
{
    int n;
    scanf("%d",&n);
    for(int i=1;i<=n;i++)
    {
        int a;
        scanf("%d",&a);
        int l=1,s=a,t=(a*(a+1))-a+1;
        printf("Case #%d\n",i);
        for(int j=0;j<a;j++)
        {
            int k=2*j,t1=t;
            while(k>0)
            {
                printf("%c",'*');
                k-=1;
            }
            for(int p=0;p<s;p++)
            {
                printf("%d",l);
                l+=1;
                printf("%d",0);
            }
            for(int q=0;q<s;q++)
            {
                printf("%d",t1);
                t1+=1;
                if(q==(s-1))
                {
                    break;
                }
                printf("%d",0);
            }
            s-=1;
            t-=s;
            printf("\n");
        }
    }
}
```

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Result

	Input	Expected	Got	
✓	3 3 4 5	Case #1 10203010011012 **4050809 ****607 Case #2 1020304017018019020 **50607014015016 ****809012013 ******10011 Case #3 10203040502602702802 9030 **6070809022023024025 ****100110112019020021 ******13014017018 ********15016	Case #1 10203010011012 **4050809 ****607 Case #2 1020304017018019020 **50607014015016 ****809012013 ******10011 Case #3 10203040502602702802 9030 **6070809022023024025 ****100110112019020021 ******13014017018 ********15016	✓

Passed all tests! ✓