ROLL NO.:24100125	51
Name: sivaram.p	
Q1) Write a progran	n that prints a simple chessboard.
Input format:	
The first line contain	ns the number of inputs T.
The lines after that	contain a different value for size of the chessboard
Output format:	
Print a chessboard	of dimensions size * size.
Print W for white sp	aces and B for black spaces.
Sample Input:	
2	
3	
5	
Sample Output:	
WBW	
BWB	
WBW	
WBWBW	
BWBWB	
WBWBW	
BWBWB	
WBWBW	
CODE:	
Status	Finished
Started	Sunday, 12 January 2025, 9:17 PM
Completed	Sunday, 12 January 2025, 10:27 PM

Duration 1 hour 10 mins

Week 5 - 01:

```
#include <stdio.h>
   int main(){
 2 v
         int t, size;
 3
         scanf("%d",&t);
 4
        while(t--)
 5
 6 *
             scanf("%d",&size);
 7
             for(int i=0;i<size;i++)</pre>
 8
 9 *
                 for(int j=0;j<size;j++)</pre>
10
11 *
                      if((i+j)\%2==0)
12
                      printf("W");
13
                      else
14
                      printf("B");
15
16
                 printf("\n");
17
18
19
        return 0;
20
   }
21
```

OUTPUT:

Passed all tests! <

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

Q2) 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:

2

2 W

3 B

Sample Output:

WB

BW

BWB

WBW

BWB

CODE:

```
#include<stdio.h>
1
 2 v int main(){
        int t, size;
 3
        char ch;
 4
        scanf("%d",&t);
 5
        while(t--)
 6
 7 1
             scanf("%d %c",&size,&ch);
 8
 9
             for(int i=0;i<size;i++)</pre>
10 +
                 for(int j=0;j<size;j++)</pre>
11
12 1
13
                      if((i+j)\%2==0)
                      printf("%c",ch);
14
15
                      printf("%c",(ch=='W')?'B':'W');
16
17
                 printf("\n");
18
19
20
21
        return 0;
   }
22
```

OUTPUT:

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

Q3) 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 <= N <= 100
Input Format
First line contains T, the number of test cases, each test case contains a single integer N
Output Format
First line print Case #i where i is the test case number, In the subsequent line, print the
pattern
pattern Sample Input
Sample Input
Sample Input 3
Sample Input 3 3
Sample Input 3 4
Sample Input 3 4 5
Sample Input 3 4 5 Sample Output
Sample Input 3 3 4 5 Sample Output Case #1
Sample Input 3 3 4 5 Sample Output Case #1 10203010011012
Sample Input 3 3 4 5 Sample Output Case #1 10203010011012 **4050809
Sample Input 3 3 4 5 Sample Output Case #1 10203010011012 **4050809 ****607
Sample Input 3 3 4 5 Sample Output Case #1 10203010011012 **4050809 ****607 Case #2

```
******10011

Case #3

102030405026027028029030

**6070809022023024025

****10011012019020021

******13014017018

*******15016
```

CODE:

```
#include<stdio.h>
 2 v int main(){
   int num, t;
 3
   scanf("%d",&t);
 4
 5
    int st1=1;
 6
    int st2;
 7 * for(int k=1;k<=t;k++){</pre>
    printf("Case #%d\n",k);
 8
   scanf("%d",&num);
 9
10
    st1=1;
    st2=num*(num+1);
11
    for(int i=0;i<num;i++)</pre>
12
13 + {
14 v for(int j=0; j<i; j++){
    printf("**");
15
16
    for(int j=0;j<num-i;j++){</pre>
17 *
    printf("%d",(st1++)*10);
18
19
20
    st2=st2-(num-i-1);
21 v for(int j=0;j<(num-i-1);j++){
    printf("%d",(st2++)*10);
22
23
    printf("%d",st2);
24
25
    st2=st2-(num-i);
    printf("\n");
26
27
28
29
    return 0;
30
   }
```

OUTPUT:

	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	