Week 5 – 1:

ROLL NO.:240801166

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Status	Finished
Started	Monday, 23 December 2024, 5:33 PM
Completed	Saturday, 23 November 2024, 2:26 PM
Duration	30 days 3 hours
Question 1	verite a program that prints a simple chessboard.

Correct

Marked out of 3.00

Q1)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 value for size of the chessboard

Output format:

Print a chessboard of dimensions size * size.

Print W for white spaces and B for black spaces.

Sample Input:

2

3

5

Sample Output:

WBW

BWB

WBW

WBWBW

BWBWB

WBWBW

BWBWB

WBWBW

Code:

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

OUTPUT:

	Input	Expected	Got	
~	2	WBW	WBW	~
	3	BWB	BWB	
	5	WBW	WBW	
		WBWBW	WBWBW	
		BWBWB	BWBWB	
		WBWBW	WBWBW	
		BWBWB	BWBWB	
		WBWBW	WBWBW	
Passe	d all test	ts! 🗸		

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() {
 3
        int t,size;
 4
        char ch;
        scanf("%d",&t);
while(t--)
 5
 6
 7
        scanf("%d %c",&size,&ch);
 8
        for(int i=0;i<size;i++)</pre>
 9
10 ,
11
             for (int j=0;j<size;j++)</pre>
12 v
13
                 if((i+j)%2==0)
                 printf("%c",ch);
14
15
16
                 else
                 printf("%c",(ch=='W')?'B':'W');
17
18
19
             printf("\n");
20
21
22
23
24
        return 0;
25 }
```

OUTPUT:

		Input	Expected	Got		
	~	2	WB	WB	~	
		2 W	BW	BW		
		3 B	BWB	BWB		
			WBW	WBW		
			BWB	BWB		
			BMB	BMB		
F	Passed all tests! ✓					

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
Sample Input
3
3
4
5
Sample Output
Case #1
10203010011012
**4050809
****607
Case #2
1020304017018019020
**50607014015016
****809012013
*****10011
Case #3
```

102030405026027028029030

```
**6070809022023024025

****10011012019020021

*****13014017018

*******15016
```

Code:

```
#include <stdio.h>
    int main()
 2
 З ,
 4
        int num,t;
        scanf("%d",&t);
 5
        int st1=1;
 6
        int st2;
 8
         for(int k=1;k<=t;k++)</pre>
9
10
             printf("Case #%d\n",k);
             scanf("%d",&num);
11
             st1=1;
12
13
             st2=num*(num+1);
14
             for(int i=0;i<num;i++)</pre>
15 1
16
                 for(int j=0;j<i;j++){</pre>
                     printf("**");
17
                 }
18
                for(int j=0;j<num-i;j++) {</pre>
19
                     printf("%d",(st1++)*10);
20
21
                 st2=st2-(num-i-1);
22
                 for(int j=0;j<(num-i-1);j++)</pre>
23
24 1
                     printf("%d",(st2++)*10);
25
26
27
                 printf("%d",st2);
28
                 st2=st2-(num-i);
29
                 printf("\n");
30
31
32
    return 0;
33
34
35
```

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	

Passed all tests! <