GE23131-Programming Using C-2024

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Quiz navigation

1 2 3

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Finish review

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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

Output:

WBW

BWB

WBW

WBWBW

BWBWB

WBWBW

BWBWB

WBWBW

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
void printchessboard(int size)
{
    for(int i=0;i<size;i++)
    {
        for(int j=0;j<size;j++)
        {
            if((i+j)%2==0)
            {
                printf("W");

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

```
    scanf("%d",&T);
    int sizes[T];
    for(int i=0;i<T;i++)
    {
        scanf("%d",&sizes[i]);
    }
    for(int i=0;i<T;i++)
    {
        printchessboard(sizes[i]);

    }
    return 0;
}
```

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

Passed all tests! ✓

Question **2**

Correct

Marked out of 5.00

Let's print a chessboard!

Write a program that takes input:

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

3 B

Output:

WB

BW

BWB

WBW

BWB

Answer: (penalty regime: 0 %)

```
#include<stdio.h>
void printchessboard(int size,char startchar)
```

```
        for(int j=0;j<size;j++)
        {
           if((i+j)%2==0)
            {
               printf("%c",startchar);
            }

            else
            {
             printf("%c",(startchar=='W')?'B':'W');
            }
        }
      printf("\n");
    }
}
int main()
{
    int T;
    scanf("%d",&T);
    while(T--)
    {
        int N;
        char startchar;
        scanf("%d %c",&N,&startchar);
        printchessboard(N,startchar);
    }
    return 0;
}
```

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

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:

10203040170180190 20

**50607014015016

****809012013

******10011

Constraints

2 <= N <= 100

Input Format

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

**50607014015016

****809012013

******10011

**6070809022023024025

****10011012019020021

******13014017018

********15016

Answer: (penalty regime: 0 %)

```c
#include<stdio.h>
int main()
{
    int n,v,p3,c,in,i,i1,i2,t,ti;
    scanf("%d",&t);
    for(ti=0;ti<t;ti++)
    {
        v=0;
        scanf("%d",&n);
        printf("Case #%d\n",ti+1);
        for(i=0;i<n;i++)
        {
            c=0;
            if(i>0)
            {
                for(i1=0;i1<i;i1++)
                printf("**");

            }
            for(i1=i;i1<n;i1++)
            {
                if(i>0)
                c++;
                printf("%d0",++v);
            }
            if(i==0)
            {
                p3=v+(v*(v-1))+1;
                in=p3;
            }
```

```
34                  {
35                      printf("%d",p3++);
36                      if(i2!=n-1)
37                      printf("0");
38                  }
39                  printf("\n");
40              }
41          }
42
43  }
```

	Input	Expected	Got	
✓	3 3 4 5	Case #1 10203010011012 **4050809 ****607 Case #2 1020304017018019020 **50607014015016 ****809012013 ******10011 Case #3 10203040502602702802903 0 **6070809022023024025 ****10011012019020021 ******13014017018 ********15016	Case #1 10203010011012 **4050809 ****607 Case #2 1020304017018019020 **50607014015016 ****809012013 ******10011 Case #3 10203040502602702802903 0 **6070809022023024025 ****10011012019020021 ******13014017018 ********15016	✓

Passed all tests! ✓