SAMDEVARAJA J 2024-CSE S2

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

Week-05-01-Practice Session-Coding

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.

Source code:

```c
#include<stdio.h>
int main()
{
    int T,size,i,j;
    scanf("%d",&T);
    while(T--)
    {
        scanf("%d",&size);
        for(i=0;i<size;i++)
        {
            for(j=0;j<size;j++)
            {
                if((i+j)%2==0)
                {
                    printf("W");
                }
                else
                {
                    printf("B");
                }
            }
            printf("\n");
        }
    }
    return 0;
}
```

Result:

	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

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 T,N,i,j;
    char ch;
    scanf("%d",&T);
    while(T--)
    {
        scanf("%d %c",&N,&ch);
        for(i=0;i<N;i++)
        {
            for(j=0;j<N;j++)
            {
                printf("%c",ch);
                ch=(ch=='W')?'B':'W';
            }
            printf("\n");
            if(N%2==0)
            {
                ch=(ch=='W')?'B':'W';
            }
        }
    }
    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

If N= 4, then pattern will be:

1020304017018019020

**506070014015016

****809012013

******10011

Constraints

2 <= N <= 100

Source code:

```c
#include<stdio.h>
int main()
{
    int t;
    scanf("%d",&t);
    for(int x=1;x<=t;x++)
    {
        printf("Case #%d\n",x);
        int n;
        scanf("%d",&n);
        int f=1,b=n*(n+1);
        for(int i=0;i<n;i++)
        {
            for(int k=0;k<2*i;k++)
            {
                printf("*");
            }
            printf("%d",f);
            f++;
            for(int j=2;j<=n-i;j++)
            {
                printf("0%d",f);
                f++;
            }
            for(int l=b-(n-i)+1;l<=b;l++)
            {
                printf("0%d",l);
            }
            b-=n-i;
            printf("\n");
        }
    }
    return 0;
}
```

Result: