PLACEMENTS KEY'S

Coding Challenge #15 (Question)

Day - 8

Vyas wants an application which prints a triangle with his input character and number of lines(height) as borders.

Help him to develop the required program.

INPUT FORMAT:

1. User needs to enter the height of triangle(n)

2. User needs to enter the character to be drawn along the borders(x)

OUTPUT FORMAT:

Output the required triangle with given height and border.

CONSTRAIANTS:

n and x should be non-negative integers.

SAMPLE INPUT 0:

6

*****

SAMPLE OUTPUT 0:

```
     *
    * *
   *   *
  *     *
 *       *
* * * * * *
```

PLACEMENTS KEY'S

Coding Challenge #15 (C Solution)

Day - 8

```c
#include <stdio.h>

int main()
{
	printf("Enter the height\n");
	int n;
	scanf("%d",&n);
	printf("Enter the character\n");
	char ch;
	scanf(" %c",&ch);
	for(int i=1;i<=n;i++){
		for(int j=1;j<=n-i;j++){
			printf(" ");
		}
		for(int j=1;j<=((2*i)-1);j++){
			if(i==n)
				printf("%c",ch);
			else{
				if(j==1 || j==((2*i)-1))
					printf("%c",ch);
				else
					printf(" ");
				}
		}
		printf("\n");
	}
}
```

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Coding Challenge #15 (JAVA Solution)

Day - 8

```
import java.util.*;
public class TrianglePattern
{
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		System.out.println("Enter the height");
		int n= input.nextInt();
		System.out.println("Enter the character");
		char c= input.next().charAt(0);
		for(int i=1;i<=n;i++){
			for(int j=1;j<=n-i;j++){
				System.out.print(" ");
			}
			for(int j=1;j<=((2*i)-1);j++){
				if(i==n)
					System.out.print(c);
				else{
					if(j==1 || j==((2*i)-1))
						System.out.print(c);
					else
						System.out.print(" ");
					}
			}
			System.out.println();
		}
	}
}
```

PLACEMENTS KEY'S

Coding Challenge #16 (Question)

Day - 8

User wants to check whether his number is a lucky number or not provided the number is four-digited. Develop an application program which checks the user's four-digited number is either lucky number or not.

A four-digit number PQRS is called LUCKY NUMBER if P+Q =R+S

INPUT FORMAT:

A four digited number input given from the user.

OUTPUT FORMAT:

Print as The given number is a lucky number if it satisfies the conditions of a lucky number otherwise not

CONSTRAINTS:

The given input must be a non-negative integer and consisting of 4 digits.

SAMPLE INPUT 0:

2341

SAMPLE OUTPUT 0:

The given number is a lucky number.

EXPLANATION:

2+3 = 4+1

SAMPLE INPUT 1:

1234

SAMPLE OUTPUT 1:

The given number is not a lucky number.

EXPLANATION:

1+2 is not equal to 3+4

PLACEMENTS KEY'S

Coding Challenge #16 (C Solution)

Day - 8

```c
#include <stdio.h>

int main()
{
        printf("Enter a four-digit number\n");
        int num;
        scanf("%d",&num);
        int fourth_digit = num%10;
        int third_digit = (num/10)%10;
        int second_digit =(num/100)%10;
        int first_digit = (num/1000);
        int sum1 = third_digit+fourth_digit;
        int sum2 = first_digit+second_digit;
        if(sum1==sum2)
                printf("Entered element is a LUCKY NUMBER");
        else
                printf("Entered element is NOT a lucky number");
}
```

PLACEMENTS KEY'S

Coding Challenge #16 (JAVA Solution)

Day - 8

```
import java.util.*;
public class LuckyNumber
{
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		System.out.println("Enter a four-digit number");
		int num = input.nextInt();
		int fourth_digit = num%10;
		int third_digit = (num/10)%10;
		int second_digit =(num/100)%10;
		int first_digit = (num/1000);
		int sum1 = third_digit+fourth_digit;
		int sum2 = first_digit+second_digit;
		if(sum1==sum2)
			System.out.println("Entered element is a LUCKY NUMBER");
		else
			System.out.println("Entered element is NOT a lucky
number");
	}
}
```