PLACEMENTS KEY'S

Coding Challenge #85 (Question)

Day - 43

Gopal wants to design his mat in a triangular format. He is trying to do this in digital way using the computer logics. Give his the way to complete the design pattern.

Input format:
First line should be in integer format
Where 1<integer<1000

Output format:
Desired pattern as shown in sample outputs

Sample input 0:
3

Sample Output 0:

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

Sample Input 1:
5

Sample Output 1:

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

PLACEMENTS KEY'S

Coding Challenge #85 (C Solution)

Day - 43

```
#include<stdio.h>
int triangle(int height);
int main()
{
        int height;
        scanf("%d",&height);
        triangle(height);
}
int triangle(int height)
{
        int space=height-1;
        int i,j,k;
        int n;
        int x=1;
        for(i=1;i<=height;i++){
                for(n=1;n<=height;n++){
                        printf(" ");
                }
                for(k=space;k>=i;k--)
                        printf(" ");
                for(j=1;j<=i;j++)
                        printf("* ");
                printf("\n");
        }
```

PLACEMENTS KEY'S

Coding Challenge #85 (C Solution contd.)

Day - 43

```
for(i=0;i<height;i++)
        {
                for(j=space;j>i;j--)
                {
                        printf(" ");
                }
                for(k=0;k<=i;k++)
                {
                        printf("* ");
                }
                for(n=(height+height-2);n>=x;n--)
                {
                        printf(" ");
                }
                for(k=0;k<=i;k++)
                {
                        printf("* ");
                }
                x+=2;
                printf("\n");
        }
    }
```

PLACEMENTS KEY'S

Coding Challenge #85 (JAVA Solution)

Day - 43

```
import java.util.Scanner;
public class Main{
public static void main(String  args[])
{
        Scanner reader=new Scanner(System.in);
        int height = reader.nextInt();
        triangle(height);
}
public static void triangle(int height) {
        int space=height-1;
        int i,j,k;
        int n;
        int x=1;
        for(i=1;i<=height;i++)  {
                for(n=1;n<=height;n++){
                        System.out.printf(" ");
                }
                for(k=space;k>=i;k--)
                        System.out.printf(" ");
                for(j=1;j<=i;j++)
                        System.out.printf("* ");
                System.out.printf("\n");
        }
```

PLACEMENTS KEY'S

Coding Challenge #85 (JAVA Solution contd.)

Day - 43

```
for(i=0;i<height;i++)
        {
            for(j=space;j>i;j--)
            {
                System.out.printf(" ");
            }
            for(k=0;k<=i;k++)
            {
                System.out.printf("* ");
            }
            for(n=(height+height-2);n>=x;n--)
            {
                System.out.printf(" ");
            }
            for(k=0;k<=i;k++)
            {
                System.out.printf("* ");
            }
            x+=2;
            System.out.printf("\n");
        }
    }

}
```

PLACEMENTS KEY'S

Coding Challenge #86 (Question)

Day - 43

Milk Man and His Bottles

A Milkman serves milk in packaged bottles of varied sizes. The possible size of the bottles are {1, 5, 7 and 10} litres. He wants to supply the desired quantity using as fewer bottles as possible irrespective of the size. Your objective is to help him find the minimum number of bottles required to supply the given demand for milk.

Input Format:

The first line contains the number of test cases N
Next N lines, each contains a positive integer Li which corresponds to the demand of milk.

Output Format:

For each input Li, print the minimum number of bottles required to fulfill the demand

Constraints:
1 <= N <= 1000 Li > 0 1 <= i <= N

Sample Input and Output:

2
17
65

Sample Output :

2
7

Explanation:
Number of test cases is 2
For 17 = 10*1 + 7*1 = 2
For 65 = 10*6 + 5*1 = 7
Few more examples:
For 99 = 10*9 + 7*1 + 1*2 = 12
For 63 = 10*6 + 1*3 =9

PLACEMENTS KEY'S

Coding Challenge #86 (C Solution)

Day - 43

```c
#include <stdio.h>
 int main()
 {
   int n,b=0,i,m,s=0;
  scanf("%d",&m);
 for( i=0;i<m;i++)
  {
    scanf("%d",&n);
    b=n/10;
    n=n%10;
    s=s+b;
    b=0;
    b=n/7;
    n=n%7;
    s=s+b;
    b=0;
    b=n/5;
    n=n%5;
    s=s+b;
    b=0;
    b=n/1;
    s=s+b;
   printf("%d\n",s);
   s=0;
   b=0;
   }
  return 0;
}
```

PLACEMENTS KEY'S

Coding Challenge #86 (JAVA Solution)

Day - 43

```
import java.io.*;
import java.util.*;
public class Main
{
	public static int minBottles(int[] Bottles,int m,int V){
		int result[] = new int[V+1];
		result[0]=0;
		for(int i = 1;i<=V;i++){
			result[i]=Integer.MAX_VALUE;
		}
		for(int i=1;i<=V;i++){
			for(int j=0;j<m;j++){
				if(Bottles[j]<=i){
					int sub_res = result[i-Bottles[j]];
					if(sub_res!=Integer.MAX_VALUE && sub_res + 1
<result[i])
						result[i]=sub_res+1;
				}
			}
		}
		return result[V];
	}
	public static void main(String[] args)
	{
		Scanner input = new Scanner(System.in);
		int Bottles[] = {10,7,5,1};
		System.out.println("Enter no of test cases");
		int test = input.nextInt();
		for(int i =0;i<test;i++){
			int demand = input.nextInt();
			System.out.println(minBottles(Bottles,4,demand));
		}
	}
}
```