Machine learning Assignment 2

Question 1:

Use a python code to display the following star pattern using the for loop

In [48]:
```
def pattern(n):

   for i in range(n):      ## using the for loop  for top 5 rows
      for j in range(i+1):

         print("* ",end="")
      print("\r")


   for i in range(n):      ## using the for loop for the bottom 5 rows
      for j in range(n-i-1):

         print("* ",end="")
      print("\r")

n = int(input('Enter the number of rows: '))


pattern(n)
```

```
Enter the number of rows: 5
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

For loop is used in order to print the required number of stars in each line

Question 2:

Use looping to output the elements from a provided list present at odd indexes. my_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

In [26]:
```
## we are using the looping to output the elements from a provided list present at odd indexes
list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
for i in list[1::2]:
    print(i, end=" ")
```

```
20 40 60 80 100
```

In order to print the values at odd indexes, the iterator is started from 1 and incremented to the second next value until the end of the list

Question 3:

Write a code that appends the type of elements from a given list.

Input x = [23, ‘Python’, 23.98]

```
x = [23,'Python', 23.98]
n = []
for i in range(len(x)):
    n.append(type(x[i]))     ### here we are using type function to get types of elements and printing them
print(n)
print(x)
```

```
[<class 'int'>, <class 'str'>, <class 'float'>]
[23, 'Python', 23.98]
```

The data type of each element is found using type method.

Question 4:

Write a function that takes a list and returns a new list with unique items of the first list. Sample List: [1,2,3,3,3,3,4,5]

Unique List: [1, 2, 3, 4, 5]

```
def unique_list(l):
  x = []
#using for loop
  for a in l:
    if a not in x:
      x.append(a)
  return x
print(unique_list([1,2,3,3,3,3,4,5]))
```

```
[1, 2, 3, 4, 5]
```

Question 5:

Write a function that accepts a string and calculate the number of upper-case letters and lower-case letters.

Input String: 'The quick Brow Fox'

```
Input_String= 'The quick Brow Fox'
lower = [i for i in Input_String if i.islower()]
upper = [j for j in Input_String if j.isupper()]

print('Lowercase characters:', len(lower))
print('Uppercase characters:', len(upper))
```

```
Lowercase characters: 12
Uppercase characters: 3
```

Here we are using the input string and then printing the number of upper case and lower case letters

Git hub link : https://github.com/TriveniBala/TriveniBala