Revision Class 1 (Dated: 02-Sep-2022)

1. Given empty list, populate array with values 1 to 50:

```
x=[]
for i in range (1, 51):
    x.append(i)
```

2. Input index from user and store -1 at input index

```
index = int (input ("Enter Index 0-49:");
x[i] = -1
```

However, I am taking 5 random indexes and placing -1

```
for i in range (5):
    x[random.randint(0,49)] = -1
```

3. Assume there are two lists x & y of same size, compare them and print the indexes, where value is different

```
for i in range(len(a)):
    if x[i] != y[i]:
        print (i, end=' ')
```

4. Print value in list x, such that move to next line for every -1 in the list (without printing -1), the output may be like:

```
1 2 3
5 6 7 8 9 10
12 13
...
```

```
for i in range (len(a)):
    if a[i] == -1:
        print()     #move to next line
    else:
        print (a[i], end=' ')
```

5. Extend previous task, do count values in each line, and print at the end of each line, see example:

```
1 2 3 (3)
5 6 7 8 9 10 (6)
12 13 (2)
...
```

```
count = 0
for i in range (len(a)):
    if a[i] == -1:
        print()     #move to next line
    else:
        print (a[i], end=' ')
```

Related Practice Problems

Task 1: Given list x has values with -1 at some indexes. Consider list x as roll numbers of students, where -1 indicates that the student has left the course/ degree etc. Take an empty list of marks. Read list of roll numbers, if roll number is non-negative assign random marks in range 0-100 (both inclusive) in marks list, otherwise store -1 in marks. See example:

Roll #:	1	2	3	4	5	6	-1	8	9	10	11	12	13	-1	15	16	...
Marks	67	83	90	55	40	75	-1	35	77	82	75	70	65	-1	80	85	…

Task 2: Print marks of the students (skip students who left ...) in two columns:

Roll No	Marks
1	67
2	83
3	90
4	…

Task 3: Consider task 1, print summary of the result in following format:

```
Students with marks greater than 80: 2 3 10 …
Students with marks greater than 70: 6 9 11 15 …
Students with marks greater than 60: 13 …
Students with marks greater than 50: 4 …
Students with marks below 50: 5 8 …
```

Task 4: Consider task 1, read marks of the students (skip students who left …) and round them to nearest multiple of 5, if marks are greater than equal 50 (don't round marks below 50). For example:

- 53, 54, 56, 57 will be rounded to 55
- 58, 59, 61, 62 will be round to 60
- 63, 64, 66, 67 will be round to 70

Task 5: Consider task 1, the teacher is thinking students has random marks, so to improve result, there are some 2-5 marks are increased for every student at random. Teacher want to keep track of original marks as well as increased marks. Take an empty list "increased_marks". Append marks in new list after random increment (2 to 5). At the end print following report:

Roll No	Marks	New Marks	Difference
1	67	69	2
2	83	88	5
3	90	94	4
4	…		