NAME _____ **ICA-1**

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Work with your neighbor.

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1. Write a for loop that
   a. prints the numbers from 100 to 0 in descending order by 2

   Ans:
```
for i in range(100, -2, -2):
    print(i)
```

   b. prints every other element of `nums` , which is a list of integers

   Ans:
```
for i in range(0,len(nums),2):
    print(nums[i])
```

2. Write a function `get_words(s)` that takes a string `s` as an argument that consists of words separated by dashes. The function `get_words` returns a list of strings where each string in the list is one of the words in `s`. For example,

```
get_words('CS-120-Summer-2018-U-of-A')
```

   returns

```
['CS', '120', 'Summer', 2018', 'U', 'of', 'A']
```

Ans:
```
def dash_list(s):
    return s.split("-")
```

3. Write a function `sum_column(grid, offset)` that takes as arguments a grid of numbers and an offset and returns the result of summing the numbers on a specified column of grid. A grid is represented as a list of lists, as shown on the right, and offset 0 refers to the leftmost column (in the example shown: 11, 66, 22, 77, 33). You can assume that the argument grid is in fact a grid (i.e., a list of equal-length lists of numbers).

```
[[11, 22, 33, 44, 55],
 [66, 77, 88, 99, 11],
 [22, 33, 44, 55, 66],
 [77, 88, 99, 11, 22],
 [33, 44, 55, 66, 77]]
```

Ans:
```
def sum_column(grid, offset):
    sum = 0
    for i in range(len(grid)):
        sum += grid[i][offset]
    return sum
```

4. Write a function `print_some_words(filename,n)` that takes a filename as a string argument and for each line in the file, finds and prints the individual words of *length great than or equal to* `n` on a separate line.

   A word is defined as a string of characters separated by white space. When considering words, the punctuation characters `".,;?"` should be omitted. For example, if the file `poem.txt` consists of the following lines,

   ```
   Two roads diverged in a yellow wood,
   And sorry I could not travel both
   And be one traveler, long I stood
   And looked down one as far as I could
   To where it bent in the undergrowth;
   ```

   the function `print_some_words("poem.txt", 6)` would print the words below:

   ```
   diverged
   yellow
   travel
   traveler
   looked
   undergrowth
   ```

Ans:

```
def print_some_words(filename,n):
    textfile = open(filename)
    for line in textfile:
        line = line.split()
        for word in line:
            clean_word = word.strip(".,?;")
            if len(clean_word) >= n:
                print(clean_word)
```