

Practice Python Programming Language here:

<https://www.w3resource.com/python-exercises/>

Practice Programming here:

The following problems can be easily solved by using the concepts that we learned in python session. These questions are hosted on hackerrank. Hackerrank is an online platform for competitive coding. You need to sign up to access these questions.

[LVL 1]

- 1.) <https://www.hackerrank.com/challenges/divisible-sum-pairs/problem>
- 2.) <https://www.hackerrank.com/challenges/circular-array-rotation/problem>
- 3.) <https://www.hackerrank.com/challenges/kangaroo/problem>
- 4.) <https://www.hackerrank.com/challenges/sock-merchant/problem>
- 5.) <https://www.hackerrank.com/challenges/designer-pdf-viewer/problem>
- 6.) <https://www.hackerrank.com/challenges/find-digits/problem>
- 7.) <https://www.hackerrank.com/challenges/camelcase/problem>
- 8.) <https://www.hackerrank.com/challenges/caesar-cipher-1/problem>
- 9.) <https://www.hackerrank.com/challenges/reduced-string/problem>
- 10.) <https://www.hackerrank.com/challenges/pangrams/problem>
- 11.) <https://www.hackerrank.com/challenges/alternating-characters/problem>
- 12.) <https://www.hackerrank.com/challenges/the-love-letter-mystery/problem>

[LVL 2]

- 13.) <https://www.hackerrank.com/challenges/encryption/problem>
- 14.) <https://www.hackerrank.com/challenges/bigger-is-greater/problem>

15.) <https://www.hackerrank.com/challenges/the-grid-search/problem>

--> This problem can be solved easily in python. And extremely easy while using python numpy.

Instructions:

Once you sign up on hackerrank you can use one of those links to get to the exercise.

The screenshot shows the HackerRank problem page for 'The Grid Search'. The 'Problem' tab is selected, displaying the problem description, function description, input format, and constraints. The right sidebar shows the author 'wanbo', difficulty 'Easy', max score '10', and submitted by '126851'. There are links for 'View discussions', 'View editorial', 'View top submissions', 'Rate this challenge', and 'Download problem statement'.

Problem | Submissions | Leaderboard | Discussions | Editorial

You are given an array of n integers, $ar = [ar[0], ar[1], \dots, ar[n-1]]$, and a positive integer, k . Find and print the number of (i, j) pairs where $i < j$ and $ar[i] + ar[j]$ is divisible by k .

For example, $ar = [1, 2, 3, 4, 5, 6]$ and $k = 5$. Our three pairs meeting the criteria are $[1, 4]$, $[2, 3]$ and $[4, 6]$.

Function Description

Complete the `divisibleSumPairs` function in the editor below. It should return the integer count of pairs meeting the criteria.

`divisibleSumPairs` has the following parameter(s):

- n : the integer length of array ar
- ar : an array of integers
- k : the integer to divide the pair sum by

Input Format

The first line contains 2 space-separated integers, n and k .

The second line contains n space-separated integers describing the values of $ar[ar[0], ar[1], \dots, ar[n-1]]$.

Constraints

Author: wanbo
Difficulty: Easy
Max Score: 10
Submitted By: 126851

NEED HELP?

- View discussions
- View editorial
- View top submissions

RATE THIS CHALLENGE

☆☆☆☆

MORE DETAILS

- Download problem statement
- Download sample test cases

Scroll down to write you code and change the programming language to Python3.

The screenshot shows the HackerRank code editor. The language selection dropdown menu is open, showing options: C++, Pypy 2, Pypy 3, Python 2, Python 3, and R. 'Python 3' is highlighted with a red circle. The code editor shows the following code:

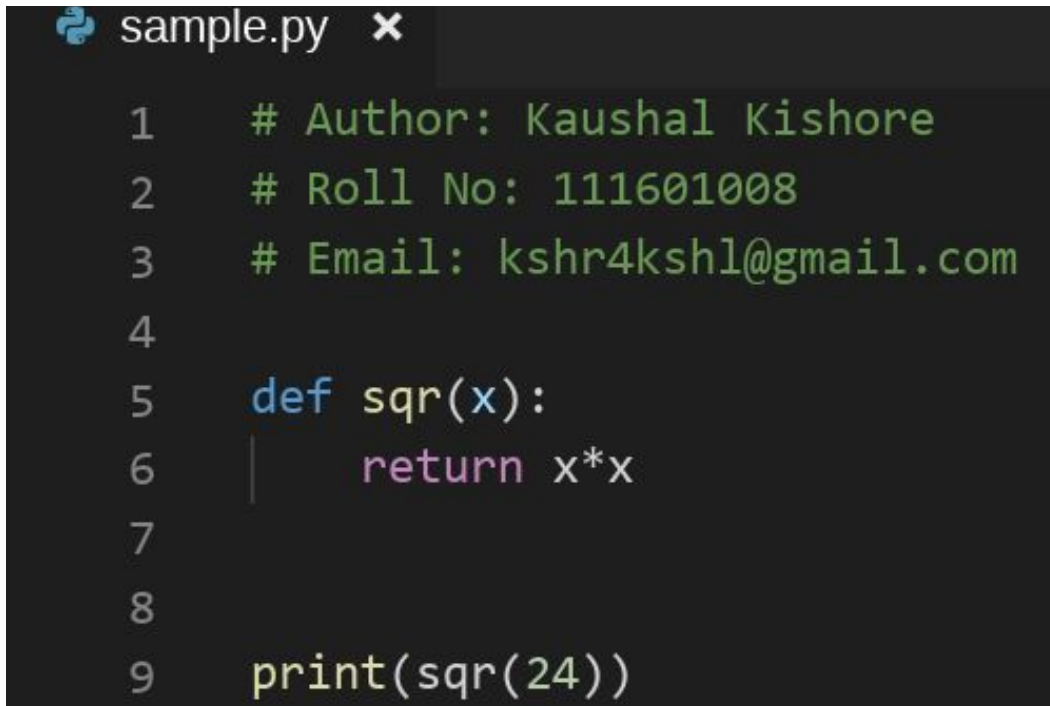
```
ng(string);

SumPairs function below.
n, int k, vector<int> ar) {

"OUTPUT_PATH"));
```

Click on Submit Code to check the results.

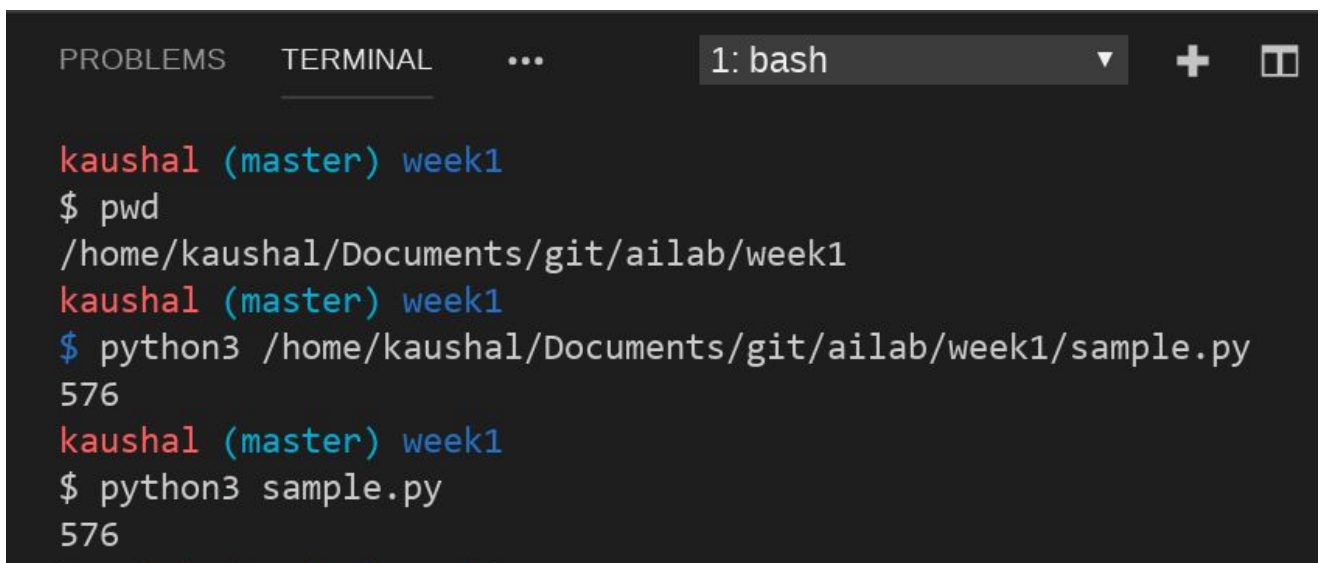
Basic Coding Format for python:

A screenshot of a code editor window titled 'sample.py'. The code is written in Python and includes comments for author, roll number, and email, followed by a function definition and a print statement.

```
1  # Author: Kaushal Kishore
2  # Roll No: 111601008
3  # Email: kshr4ksh1@gmail.com
4
5  def sqr(x):
6      |   return x*x
7
8
9  print(sqr(24))
```

During the python session we used jupyter notebook to code. But like any other language we can also type python scripts into a text file. The above image shows a python script “sample.py” where ‘.py’ is the python extension. To execute any python script on your local system type the following command on terminal:

python3 <location-of-the-file>

A screenshot of a terminal window with tabs for 'PROBLEMS', 'TERMINAL', and '...'. The active tab is 'TERMINAL', showing a bash shell session. The user 'kaushal' is in the 'master' branch of a directory named 'week1'. They run 'pwd' to show the current directory, then 'python3 /home/kaushal/Documents/git/ailab/week1/sample.py' which outputs '576'. Finally, they run 'python3 sample.py' which also outputs '576'.

```
PROBLEMS  TERMINAL  ...  1: bash
kaushal (master) week1
$ pwd
/home/kaushal/Documents/git/ailab/week1
kaushal (master) week1
$ python3 /home/kaushal/Documents/git/ailab/week1/sample.py
576
kaushal (master) week1
$ python3 sample.py
576
```

pwd : this command prints the current working directory

And the absolute path of the file 'sample.py' is :
/home/kaushal/Documents/git/ailab/week1/sample.py

Hence to execute the program, type the following command:

python3 /home/kaushal/Documents/git/ailab/week1/sample.py

But you don't need to type the absolute path of the file to execute the python script. Instead you can change your current working directory to the directory containing the python script and execute the script as follows:

python3 sample.py

In the above example my current working directory was already set to **/home/kaushal/Documents/git/ailab/week1/** and hence I didn't need to change it explicitly. But if this is not the case you can use the 'cd' command to change the current working directory.

Submission:

If you have completed more than 7 questions on the hackerrank, make a zip file and send it to me. Don't forget to comment your code and put your name in the code.

First person to complete more than 12 questions before 12 september will receive a nice reward from Data Analysis Club.

Kaushal Kishore
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