Hands On Assignment- Python Advanced

[Marks:30*2 = 60]

1 Write a Python program that does the following:

- ***takes*** a **list** as input - **list_input**
- ***takes*** another **list** as input - **list_pos**
- ***creates*** a **Pandas Series** from **list_input**
- ***prints*** all values of **list_input** which are present at the positions listed out by **list_pos**

Input Format

- The first line contains space-separated ***values*** (this value can be of any data type), which represent the elements of the list **list_input**
- The second line contains space-separated ***integers***, which represent the elements of the list **list_pos**.
- These positions are on **0-based indexing**, i.e. indexing starts from 0.

Output Format

- For the positions listed out by **list_pos**, print all values from **list_input** which are present at those locations, along with its **dtype**

SAMPLE TEST CASE

Sample Input

```
a b c d e f g h i j k l m n o p q r s t u v w x y z
0 4 8 14 20
```

Sample Output

```
0     a
4     e
8     i
14    o
20    u
```

```
dtype: object
```

Explanation
Based on 0-based indexing, the values of **list_input** present at the positions: **0, 4, 8, 14** and **20** ARE **a, e, i, o** and **u** respectively.

2 Given a data frame from the following dictionary input format

d = {'a': [3,8,5,2,9], 'b': [11, 1, 4, 7, 2]}

Next, create a new column '**c**' that is the product of columns '**a**' and '**b**'. Finally, filter the data frame to contain only those rows where the value of '**c**' is greater than or equal to 15 in same sequence and index number.

Input Format

- First line will contains a string in dictionary format.

Constraints

- 1<=dictionary_row<=10^2.

Output Format

- Print the DataFrame in given format.

Sample Input

```
{'a': [3,8,5,2,9], 'b': [11, 1, 4, 7, 2]}
```

Sample Output

```
   a   b   c
0  3  11  33
1  5   4  20
2  9   2  18
```