GTS123 Lab Midterm Quiz 1/2023
Q2

Write a Python code to take input from a user. A user enters any of the three characters that are vowels ("A", "E", "I", "O", "U"). The program should handle both upper-case and lower-case characters and display the output as the various combinations of input characters shown in the examples. The program validates the input by the following conditions:

- An input with only three characters should be considered valid input.
- A valid character can be "A", "E", "I", "O", or "U".

Example 1 (user inputs are in *italics*)

```
Input: AOU
AOU
AUO
OAU
OUA
UAO
UOA
```

Example 2 (user inputs are in *italics*)

```
Input: aou
AOU
AUO
OAU
OUA
UAO
UOA
```

Example 3 (user inputs are in *italics*)

```
Input: O.E
Invalid input, valid characters: ["A", "E", "I", "O", "U"]
```

Example 4 (user inputs are in *italics*)

```
Input: AEIU
Only three characters are allowed.
```

Example 5 (user inputs are in *italics*)

```
Input: AE
Only three characters are allowed.
```