

## day40B pangram checker

Due: 6th period, Tuesday 11/15

7th period, Wednesday 11/16

A pangram is a phrase that contains every letter of the alphabet. These sentences are examples of pangrams:

The five boxing wizards jump quickly.

The quick brown fox jumps over the lazy dog.

This week we're going to write a pangram checking program.

Steps:

1. Print a message telling the user what is going to happen.
2. Do a while True: loop
3. Ask the user to enter a phrase, store it in a variable **phrase**.
4. Store a copy of phrase in a variable **tester**.
5. Make tester lowercase.
6. Create a variable **letters** like this (copy these two lines to save time):

```
letters = 'abcdefghijklmnopqrstuvwxyz'  
letters = list(letters)
```

7. This makes the letters variable into a list that has each lowercase letter of the alphabet in it. In other words, it looks like this: ['a', 'b', 'c', ... , 'z']. We're going to use this list to keep track of which letters we find in the phrase the user entered.
8. Do a for loop to go through all of the letters in tester: for x in tester:
9. Check if x is in letters. If it is, remove that letter from letters. You would do these steps like this:

```
if x in letters:  
    letters.remove(x)
```

10. What this does is delete characters from the variable **letters** as they are found in **tester**. When we're done going through all of the characters from **tester**, if the letters list still has anything in it, you do NOT have a pangram. If letters is empty at that point then you DO have a pangram. You can check the length of a list using the len(letters) command: if len(letters) == 0:
11. If the phrase is a pangram, say so. If the phrase is not a pangram, tell the user which letters were not found in the phrase. (You know which letters were not found as they are the ones still in the variable letters.)
12. Go back up to where the user entered the phrase. Add a check to see if phrase is empty and if it is, say goodbye and break. (You can look at our last program for details on that.)
13. Test your program. Try entering the boxing wizards phrase from the top of this page and you should be told it is a pangram. Enter "I sure miss regular school", and you should be told it is not a pangram and that it is missing these letters: b d f j k n p q t v w x y z. Try another phrase or two, find a funny pangram on the Internet, make sure it works.

Sample output for this program is on the next page.

## Sample output:

Enter a phrase and I'll tell you if it's a pangram.

Phrase: The five boxing wizards jump quickly.

'The five boxing wizards jump quickly.' is a pangram

Enter a phrase and I'll tell you if it's a pangram.

Phrase: I sure miss regular school

'I sure miss regular school' is NOT a pangram. It does not contain the following letters:

b d f j k n p q t v w x y z

Enter a phrase and I'll tell you if it's a pangram.

Phrase: I don't want to jynx things, but I'm going to try to just make a long sentence that gets every stinking letter of English, one way or another!

'I don't want to jynx things, but I'm going to try to just make a long ssentence that gets every stinking letter of English, one way or another!' is NOT a pangram. It does not contain the following letters:

p q z

Enter a phrase and I'll tell you if it's a pangram.

Phrase: Oops, I missed p q and z.

'Oops, I missed p q and z.' is NOT a pangram. It does not contain the following letters:

b c f g h j k l r t u v w x y

Enter a phrase and I'll tell you if it's a pangram.

Phrase:

Goodbye