Lyrics

Intro

This exercise is simple. You are going to create a code that writes the lyrics of a famous song. **The shorter your code is, the better**. Although it may seem a bit silly, it is important that you learn to automate repetitive tasks or that there are few changes between them.

Song

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark!
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark!
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt!
Run away,…
```

Goals

0. Use of string methods: **format()**, **str()**
1. Use of **for loop**
2. Use of the function **range()**
3. print()
4. Use of functions
5. Open files
6. Refactoring

Hints

- '\n' is the character for new line. It must end every string in the third step.

Solution

```
In [1]:
```

```python
# Variable

babyshark = '''Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark!
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark!
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt!
Run away,…'''
```

Step 1: First Paragraph

Create a code to print the first paragraph and asign it to a variable.

```python
# your code here
def firstparagraph(song):
    first_paragraph = ""
    for x in song:
        first_paragraph += x
        if x == "!":
            break
    return first_paragraph

first_paragraph_babyshark = firstparagraph(babyshark)

print(first_paragraph_babyshark)
```

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
```

Expected output:

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
```

Step 2: Full song

Create a code that prints the complete lyrics.

```python
# your code here


my_characters = ["Baby shark", "Mommy shark", "Daddy shark", "Grandma shark", "Gr
first_3_lines = ", doo doo doo doo doo doo\n"
the_end = "Run away,…"
whole_song = ""
for character in my_characters:
    whole_song += (character + first_3_lines)*3
    whole_song += (character + "!\n")
whole_song += the_end

print(whole_song)
```

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark!
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
```

Expected output:

```
    Baby shark, doo doo doo doo doo doo
    Baby shark, doo doo doo doo doo doo
    Baby shark, doo doo doo doo doo doo
    Baby shark!
    Mommy shark, doo doo doo doo doo doo
    Mommy shark, doo doo doo doo doo doo
    Mommy shark, doo doo doo doo doo doo
    Mommy shark!
    Daddy shark, doo doo doo doo doo doo
    Daddy shark, doo doo doo doo doo doo
    Daddy shark, doo doo doo doo doo doo
    Daddy shark!
    Grandma shark, doo doo doo doo doo doo
    Grandma shark, doo doo doo doo doo doo
    Grandma shark, doo doo doo doo doo doo
    Grandma shark!
    Grandpa shark, doo doo doo doo doo doo
    Grandpa shark, doo doo doo doo doo doo
    Grandpa shark, doo doo doo doo doo doo
    Grandpa shark!
    Let's go hunt, doo doo doo doo doo doo
    Let's go hunt, doo doo doo doo doo doo
    Let's go hunt, doo doo doo doo doo doo
    Let's go hunt!
    Run away,…
```

Step 3: Check output

Now i want you must create a string variable called **result** to store all the characters and check if it is equal to the lyrics. Remenber de hint section.

In [4]:

```python
# your code here

result = whole_song
```

In [5]:

```python
# Check

print(result == babyshark)
```

```
True
```

Expected output:

```
    True
```

Step 4: Function

Create a functions called babyshark() that generates the wanted output.

In [6]:

```python
def baby_shark_lyrics():
    my_characters = ["Baby shark", "Mommy shark", "Daddy shark", "Grandma shark",
    first_3_lines = ", doo doo doo doo doo doo\n"
    the_end = "Run away,…"
    output = ""
    for character in my_characters:
        output += (character + first_3_lines)*3
        output += (character + "!\n")
    output += the_end
    return output

babyshark_lyrics = baby_shark_lyrics()
```

In [7]:

```python
# Check

print(baby_shark_lyrics() == babyshark)
```

```
True
```

Expected output:

```
    True
```

Step 5: Files

Baby shark lyrics can be read in the songs folder. Try to store the content of that file in a variable called **text** and check if it is equal to the babyshark variable and the output of your baby_shark_lyrics function.

https://www.pythonforbeginners.com/files/reading-and-writing-files-in-python
(https://www.pythonforbeginners.com/files/reading-and-writing-files-in-python)

In [8]:

```python
# your code here
with open('/Users/bego/Documents/CAREER/Ironhack/Exercices/Ironhack/2019 07 28 -
    text = baby_shark_file.read()
```

```python
# check

print(text == babyshark)
```

```
True
```

Expected output:

```
True
```

```python
# Check

print(baby_shark_lyrics() == text)
```

```
True
```

Expected output:

```
True
```

Step 6: Refactor

Now I want you to refactor your **baby_shark_lyrics** function in order to be less than 400 characters. If your code is larger than 400 characters, you should change baby_shark_lyrics function in order to shorten it.

```python
import inspect

code = inspect.getsource(baby_shark_lyrics)

# check

print('Your baby_shark_lyrics functions has {} characters'.format(len(code)))
print(len(code) < 400)
```

```
Your baby_shark_lyrics functions has 396 characters
True
```

Expected output:

```
Your baby_shark_lyrics functions has 367 characters
True
```

Bonus

Now let`s try with another lyric, you can find it in songs folder.

Step 1. Create bottles_lyrics function

In [42]:

```python
def bottles_lyrics():
    number_bottles = 99
    song = ""
    bottles = "bottles"
    while number_bottles >= 2:
        song += "{number_bottles} bottles of beer on the wall, {number_bottles} b
        number_bottles = number_bottles - 1
        if number_bottles == 1:
            bottles = "bottle"
        song += "Take one down and pass it around, {number_bottles} {bottles} of
    song += "1 bottle of beer on the wall, 1 bottle of beer.\nTake one down and p
    return song

print(bottles_lyrics())
```

```
99 bottles of beer on the wall, 99 bottles of beer.
Take one down and pass it around, 98 bottles of beer on the wall.

98 bottles of beer on the wall, 98 bottles of beer.
Take one down and pass it around, 97 bottles of beer on the wall.

97 bottles of beer on the wall, 97 bottles of beer.
Take one down and pass it around, 96 bottles of beer on the wall.

96 bottles of beer on the wall, 96 bottles of beer.
Take one down and pass it around, 95 bottles of beer on the wall.

95 bottles of beer on the wall, 95 bottles of beer.
Take one down and pass it around, 94 bottles of beer on the wall.

94 bottles of beer on the wall, 94 bottles of beer.
Take one down and pass it around, 93 bottles of beer on the wall.

93 bottles of beer on the wall, 93 bottles of beer.
```

Step 2. Open file

```
In [43]:
```

```python
# your code here.
with open('/Users/bego/Documents/CAREER/Ironhack/Exercices/Ironhack/2019 07 28 -
    new_text = bottes_of_beer_file.read()
print (new_text)
```

```
99 bottles of beer on the wall, 99 bottles of beer.
Take one down and pass it around, 98 bottles of beer on the wall.

98 bottles of beer on the wall, 98 bottles of beer.
Take one down and pass it around, 97 bottles of beer on the wall.

97 bottles of beer on the wall, 97 bottles of beer.
Take one down and pass it around, 96 bottles of beer on the wall.

96 bottles of beer on the wall, 96 bottles of beer.
Take one down and pass it around, 95 bottles of beer on the wall.

95 bottles of beer on the wall, 95 bottles of beer.
Take one down and pass it around, 94 bottles of beer on the wall.

94 bottles of beer on the wall, 94 bottles of beer.
Take one down and pass it around, 93 bottles of beer on the wall.

93 bottles of beer on the wall, 93 bottles of beer.
```

```
In [44]:
```

```python
# Check

print(bottles_lyrics() == new_text)
```

```
True
```

Expected output:

```
    True
```

Step 3: Check code

Now I want you to refactor your **bottles_lyrics** function in order to be less than 1000 characters.

```
In [45]:
```

```python
import inspect

code = inspect.getsource(bottles_lyrics)
```

```python
# check

print('Your bottles_lyrics functions has {} characters'.format(len(code)))
print(len(code) < 1000)
```

```
Your bottles_lyrics functions has 810 characters
True
```

Expected output:

```
Your bottles_lyrics functions has 837 characters
True
```

If you want a real challenge, follow the link below. Sign in and start coding!

[https://www.codewars.com/kata/baby-shark-lyrics-generator/train/python (https://www.codewars.com/kata/baby-shark-lyrics-generator/train/python)](https://www.codewars.com/kata/baby-shark-lyrics-generator/train/python)

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This exercise is simple. You are going to create a code that writes the lyrics of a famous song. **The shorter your code is, the better**. Although it may seem a bit silly, it is important that you learn to automate repetitive tasks or that there are few changes between them.

Song

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
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Grandpa shark, doo doo doo doo doo doo
Grandpa shark!
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt!
Run away,…
```

Goals

0. Use of string methods: **format()**, **str()**
1. Use of **for loop**
2. Use of the function **range()**
3. print()
4. Use of functions
5. Open files
6. Refactoring

Hints

- '\n' is the character for new line. It must end every string in the third step.

Solution

In [1]:

Step 1: First Paragraph

Create a code to print the first paragraph and asign it to a variable.

```

```

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
```

Expected output:

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
```

Step 2: Full song

Create a code that prints the complete lyrics.

```
```

Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark, doo doo doo doo doo doo
Grandma shark!
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo
Grandpa shark, doo doo doo doo doo doo

Expected output:

```
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark, doo doo doo doo doo doo
Baby shark!
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark, doo doo doo doo doo doo
Mommy shark!
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark, doo doo doo doo doo doo
Daddy shark!
Grandma shark, doo doo doo doo doo doo
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Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt, doo doo doo doo doo doo
Let's go hunt!
Run away,…
```

Step 3: Check output

Now i want you must create a string variable called **result** to store all the characters and check if it is equal to the lyrics. Remenber de hint section.

In [4]:

In [5]:

```
True
```

Expected output:

```
True
```

Step 4: Function

Create a functions called babyshark() that generates the wanted output.

In [6]:

In [7]:

True

Expected output:

    True

Step 5: Files

Baby shark lyrics can be read in the songs folder. Try to store the content of that file in a variable called **text** and check if it is equal to the babyshark variable and the output of your baby_shark_lyrics function.

In [8]:

In [9]:

True

Expected output:

    True

In [10]:

True

Expected output:

    True

Step 6: Refactor

Now I want you to refactor your **baby_shark_lyrics** function in order to be less than 400 characters. If your code is larger than 400 characters, you should change baby_shark_lyrics function in order to shorten it.

```
Your baby_shark_lyrics functions has 396 characters
True
```

Expected output:

```
    Your baby_shark_lyrics functions has 367 characters
    True
```

Bonus

http://www.99-bottles-of-beer.net/ (http://www.99-bottles-of-beer.net/)

Now let`s try with another lyric, you can find it in songs folder.

Step 1. Create bottles_lyrics function

In [42]:

```
99 bottles of beer on the wall, 99 bottles of beer.
Take one down and pass it around, 98 bottles of beer on the wall.

98 bottles of beer on the wall, 98 bottles of beer.
Take one down and pass it around, 97 bottles of beer on the wall.

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94 bottles of beer on the wall, 94 bottles of beer.
Take one down and pass it around, 93 bottles of beer on the wall.

93 bottles of beer on the wall, 93 bottles of beer.
```

Step 2. Open file

```
99 bottles of beer on the wall, 99 bottles of beer.
Take one down and pass it around, 98 bottles of beer on the wall.

98 bottles of beer on the wall, 98 bottles of beer.
Take one down and pass it around, 97 bottles of beer on the wall.

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94 bottles of beer on the wall, 94 bottles of beer.
Take one down and pass it around, 93 bottles of beer on the wall.

93 bottles of beer on the wall, 93 bottles of beer.
```

```
True
```

Expected output:

```
True
```

Step 3: Check code

Now I want you to refactor your **bottles_lyrics** function in order to be less than 1000 characters.

```
Your bottles_lyrics functions has 810 characters
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Expected output:

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