

proj02: Iteration

Part I:

Open proj02_01.py.

You will see my solution for proj01 (A simple program). Currently, the program calculates the year that someone will be 100 using arithmetic. Instead, use a loop to count from the current year up to the year that they will be 100.

```
birthday = raw_input("Has your birthday happened this year? Enter  
Y or N: ")

if birthday == "Y":
    # Calculates the year that the user will be 100
    year_100 = str((100 - age) + 2017)
    valid = True
elif birthday == "N":
    # Calculates the year that the user will be 100
    year_100 = str((100 - age) + 2016)
    valid = True
else:
    valid = False
```

Part II:

Open proj02_02.py.

Write a program that asks the user how many Fibonacci numbers to generate and then generates them.

The Fibonacci sequence is a sequence of numbers where the next number in the sequence is the sum of the previous two numbers in the sequence. The sequence looks like this: 1, 1, 2, 3, 5, 8, 13 ...

Extensions:

- Use the other type of loop
- Instead of Fibonacci numbers, generate powers of 2
- Instead of Fibonacci numbers, generate all divisors of a number (*Hint: % gives the remainder of two numbers, so $8\%4 = 0$, and $8\%5 = 1$*).