Guess My Age

Task Goal

The goal of this assignment is to get students to:
- Take in inputs
- Perform mathematical calculations
- Produce an intended output
- Format and print strings
- Type cast values

Task

Have you ever done one of those math tricks that allow you to guess someone's age without actually asking what their age is?

For this assignment, you will create a program that does just that. One way to guess someone's age is:

1. Ask them to five you a number from 1 to 10 (ex. 5). You can assume that the user will only give you a valid number.
2. Multiply that number by 2 (ex. 5*2 = 10)
3. Add 5 to that above number (ex. 10 + 5 = 15)
4. Multiply the resulting number by 50 (ex. 15*50 = 750)
5. If they have already had a birthday this year, add 1774 to that sum. If they haven't had a birthday yet this year, add 1773. (ex. They haven't had their birthday yet: 750 + 1773 = 2523)
6. Then, subtract their birth year from that number (ex. 2523 - 2002 = 521)

After this process, you will have a 3-digit number (in the examples provided throughout the steps, that number is 521). The first digit in that number is the initial number they gave you in Step 1 (5). The second 2 digits in that number is their age (21)!

For this PA, you will write a program that runs through these calculations and guesses the user's age! See the Example Runs section for more information on the program formatting.

Example Runs

Example 1

Pick a number between 1 and 10: 5

If you've already had a birthday this year, enter 1774. Otherwise, enter 1773: 1774

Enter the year that you were born: 2008

The magic number is "516". That means you are 16!

Example 2

Pick a number between 1 and 10: 8

If you've already had a birthday this year, enter 1774. Otherwise, enter 1773: 1773

Enter the year that you were born: 1997

The magic number is "826". That means you are 26!

Troubleshooting

Having trouble figuring out how to get the age (the final 2 numbers of the magic number)? Using the % operator is very helpful in this situation. By using the % operator, you can get the remainder of an operation. For example, if you wrote the expression 109 % 100, the expression would be equal to 9 because 109/100 has a remainder of 9.

Things to remember for submission

- The file you submit should be named guess_my_age.py
- You should include your name and computing ID as comments in your submission.
- Make sure that your output matches our examples above. Test additional cases in addition to the examples given. Make sure that you don't have extra spaces in your output. One way to make sure that your output text matches the examples is to copy and past our prompts and printed strings directly into your file.
- For any input statement that you use, include a blank space after the question mark as shown in the example runs.
- In this and every future assignment, every **input('some prompt: ')** must end in either a colon or a question mark, and then a space (like the ':' or '?' in the examples above). This is not something required by the Python language, we only require doing this on PA's to make it easier to see the input values as they are entered.
- The red text shown in the example runs indicate text that was input by the user.

- Remember that only 2 examples are given, but your program needs to work with other inputs as well.
- Functions are not needed for this assignment.
- To receive credit for this assignment, you should not use any materials that we have not covered so far in this course (i.e. We will be covering if-statements and string slicing later this semester, but do not use them for this assignment).