SE 5930
Machine Problem 1 (MP1)
Retirement

10 points

Write a Python script that will prompt the user for their name, birth year, and current balance of their savings account. It will then calculate the age of the user, the retirement year, how long that is from now, and the projected balance of their savings account when they retire. Finally, the program will display all of the results of the calculations.

The output of your program must look exactly like the following (of course, the information the user types in will be different)…

```
Let's see how much money you will have when you retire.

What is your name? Mike Liljegren
What year were you born? 1962
What is the balance of your savings account? 400000

Hello, Mike Liljegren!
You turn 61 this year.
You will retire in 2027.
That will be 4 years from now.
Congratulations! You will have $524318.4040000001 by that time.
```

Some things to keep in mind while you are constructing your solution…

- Your program will make use of the `print()` and `input()` functions provided by Python.
- Make use of variables to keep track of the input values and the calculated values that you will be printing.
- You will need to use the `int()` and `float()` constructors to type-cast strings returned by the `input()` function, and the `str()` constructor to type-cast some of the numbers into the desired string output when you use `print()`.
- Your program will make use of some of the basic Python operators. My solution used assignment (=), subtraction (-), addition (+), multiplication (*), an exponent (**), and concatenation (+).

All programs should be well-documented. For this first program, I will give you the documentation that should be included as the first lines of your Python script. Put this exact documentation in your solution (of course, you will use your name)…

```
#
# Machine Problem 1
#
# Mike Liljegren
#
# Description: This script prompts the user for their name, the year they were
#              born, and the balance in their savings account.  A greeting is output
#              along with the projected year of retirement, and an estimate
#              of what their savings account will be worth at that time.  Three
#              assumptions are made. (1) the current year is 2023, (2) retirement
#              age is 65, and (3) the annual rate of growth for the savings
#              account will be 7%.
#
```

For full credit…

- Hand in a hard copy of your script and the output that your script generates.
- Hand in your solution on-time.
- Document your solution appropriately.
- Write clear, well-organized code.
- Use variable names that make sense for the data that they contain.
- Your output that your script generates must be exactly like the desired output.