Algorithm

**1. Print a Welcome Message:**

- Display the message: “This program will help you evaluate population growth or loss, over time.”

**2. Inputs:**

- Ask the user to input the following on different lines:

- Current population: Store this as current\_population.

- Deaths per second: Store this as deaths\_per\_second.

- Births per second: Store this as births\_per\_second.

- Immigrants per second: Store this as immigrants.

- Number of years projected out: Store this as num\_years.

**3. Store Inputs:**

- Store all the user inputs into appropriate variables (current\_population, deaths\_per\_second, births\_per\_second, immigrants, and num\_years).

**4. Calculate Total Seconds in a Year:**

- Calculate the total number of seconds in a year, assuming 365 days:

seconds\_per\_year = 365 \* 24 \* 60 \* 60

**5. Find the amount of “events per year”**

- Divide seconds per year and seconds per death, birth, and immigration to find the number of times each occurs in a year.

**6. Perform Population Change Calculation:**

- Compute the future population using the formula:  
 future\_population = current\_population + ((births\_per\_second - deaths\_per\_second + immigrants) \* seconds\_per\_year \* num\_years)

**7. Output the Future Population:**

- Let the user know: “The future population is future\_population.”

**8. Check for Population Increase, Decrease, or Same:**

- If future\_population > current\_population, print “There has been an increase in population.”

- Elif future\_population < current population, print “There has been a decrease in population.

- Otherwise, print “population has remained the same.”