## Write algorithm for Lab1 here.

## Remember to follow the rules of what makes a good algorithm from Notes #2.

Algorithm

1. Start

2. Input:

- birth\_rate (seconds between births)

- death\_rate (seconds between deaths)

- immigration\_rate (seconds between new immigrants)

- current\_population (current population of the country)

- years (number of years into the future)

3. Calculate the number of seconds in a year:

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

4. Calculate the number of births per year:

- births\_per\_year = seconds\_per\_year / birth\_rate

5. Calculate the number of deaths per year:

- deaths\_per\_year = seconds\_per\_year / death\_rate

6. Calculate the number of immigrants per year:

- immigrants\_per\_year = seconds\_per\_year / immigration\_rate

7. Calculate the total number of births over the given years:

- total\_births = births\_per\_year \* years

8. Calculate the total number of deaths over the given years:

- total\_deaths = deaths\_per\_year \* years

9. Calculate the total number of immigrants over the given years:

- total\_immigrants = immigrants\_per\_year \* years

10. Calculate the future population:

- future\_population = current\_population + total\_births - total\_deaths + total\_immigrants

11. Output the future population:

- Print future\_population

12. Determine if the population increased or decreased:

- If future\_population > current\_population:

- Print "The population increased"

- Else:

- Print "The population decreased"

13. End