

# Exercises - 1

November 16, 2020

## 1 Exercise 1

Write a program where the user can input a year (eg 2003). The program must print if the year is a leap year or not. A leap year is a year divisible by 400 or divisible by 4 but not by 100.

## 2 Exercise 2

Write a program where the user can input the population of two countries and their annual growth rates in %. The program must calculate and print out the number of years it will take for the population of the first country to grow larger than the population of the second country.

## 3 Exercise 3

Write a program where the user can input the positive numbers. The program must then count and inform how many of them fall on the following intervals: [0-25], [26-50], [51-75], [76-100]. The input phase should end when the user inputs a negative number.

## 4 Exercise 4

A worker was hired in 2006 with a salary of 1000 SEK. In 2007 his salary was increased by 1.5%. From 1997 onward, his salary was increased by double the percentage of the increase of the previous year. Write a program that calculates the current salary of the worker.

## 5 Exercise 5

In a long jump competition a jumper has 5 attempts. His best and worse attempts are discarded and the average of the remaining 3 attempts is used as the result. Write a program where the user can input the 5 attempts in any

order, the program must calculate and print the average of the valid attempts as well as the discarded best and worse attempts.