

Your task:

You will find a file named "USPopulation.txt" on Canvas in folder "week 6". This file contains the midyear population of the United States, in thousands. During the years 1950 to 1990. The first line in the file contains the population of 1950, the second line contains the population for 1951, and so forth.

Write a program that reads the file's contents into a list (for practice purposes only, not a good idea is large data processing). The program should display the following data:

- The average population during the time period
- The year with the greatest increase in population during the time period
- The year with the smallest increase in population during the time period
- Use matplotlib to plot a bar chart to show the population of the years
- Use matplotlib to plot a line graph to show the population of the years
- Sort the increases in population in ascending and descending order
- remove a specific year's population.
- add population, for example, user can add population to 1991, or 1949.
- Search by population

Functions:

```
def print_list(nums):
    #print the list, 10 numbers per line
def calcDifference(population_list):
    #returns the list that contains the change of population from the previous year.
    #return change_list
def getAverage(population_list): #returns average population
def getGreatestIncrease(change_list):
    # return the greatest increase, this function has 1 line
    # I could elaborate and ask you to find the year that population changed the most
def getSmallestIncrease(change_list):
    #return the smallest increase, this function has 1 line

def plotBar(population_list):
    #use list comprehension to define left_edge list
    #left_edge represents the years
def sortAscending(change_list):
    #print the sorted list, ascending order, call print_list
def sortDescending(change_list):
    #print the sorted list, descending order, call print_list
def searchPopulation(population_list):
    #search in the list and see if there is a population as user requested.
    #do not use a loop
    #i could have asked you to search for a particular year instead.
```