# the list of items

atoms=["Hydrogen","Helium","Lithium","Beryllium","Boron","Carbon","Nitrogen","Oxygen","Fluorine","Neon","Sodium","Magnesium","Aluminum","Silicon","Phosphorus","Sulfur","Chlorine","Argon","Potassium","Calcium","Scandium","Titanium","Vanadium","Chromium","Manganese","Iron","Cobalt","Nickel","Copper","Zinc","Gallium","Germanium","Arsenic","Selenium","Bromine","Krypton","Rubidium","Strontium","Yttrium","Zirconium","Niobium","Molybdenum","Technetium","Ruthenium","Rhodium","Palladium","Silver","Cadmium","Indium","Tin","Antimony","Tellurium","Iodine"," Xenon","Cesium","Barium","Lanthanum","Cerium","Praseodymium","Neodymium","Promethium","Samarium","Europium","Gadolinium","Terbium","Dysprosium","Holmium","Erbium","Thulium","Ytterbium","Lutetium","Hafnium","Tantalum","Tungsten","Rhenium","Osmium","Iridium","Platinum","Gold","Mercury","Thallium","Lead","Bismuth","Polonium","Astatine","Radon","Francium","Radium","Actinium","Thorium","Protactinium","Uranium","Neptunium","Neptunium","Plutonium","Americium","Curium","Berkelium"," Californium","Einsteinium","Fermium"," Mendelevium","Nobelium","Lawrencium","Rutherfordium","Dubnium","Seaborgium"," Bohrium","Hassium","Meitnerium"," Darmstadtium","Roentgenium","Ununbiium","Ununquadium"]

#main program

choice=""

while choice !="X" :

 print("=======================")

 print("A T O M F I N D E R")

 print("========================")

 print("\n")

 print("A: Append an atom to the list")

 print("B: Remove an atom from the list")

 print("C: Print the list")

 print("D: Sort the atoms in list")

 print("E: the length of the list")

 print("F: edit an atom")

 print("X: Exit the program")

 print("\n")

 choice=input("Choose an option:")

 if choice =="A" :

 name=input("enter the name of an atom to add:")

 atoms.append(name)

 print(name,"has been added to the list")

 if choice =="B":

 name=input("enter the name of an atom to remove:")

 atoms.remove(name)

 print(name,"has been removed from the list")

 if choice =="C":

 print(atoms)

 if choice =="D":

 atoms.sort()

 print(atoms)

 if choice =="E":

 print(len(atoms))

 if choice =="F":

 print(atoms)

 i=int(input("which atom do you want to change?"))

 atoms [i]=input("enter a new atom")

 print(atoms)