#the list of atoms

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","Plutonium","Americium","Curium","Berkelium","Californium","Einsteinium","Fermium","Mendelevium","Nobelium","Lawrencium","Rutherfordium","Dubnium","Seaborgium","Bohrium","Hassium","Meitnerium","Darmstadtium","Roentgenium","Copernicium","Nihonium","Flerovium","Moscovium","Livermorium","Tennessine","Oganesson"]

#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:Sort the list")

 print("D:Print the list")

 print("E:Print the length")

 print("F:Find an atom in the list")

 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":

 atoms.sort()

 print(atoms)

 if choice=="D":

 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)