#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"]  
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 list")  
    print("C:Print the list")  
    print("D:Sort the 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")  
        atoms.append(name)  
        print(name,"has been added to the list")  
         
    if choice=="B":  
        name=input("enter the name has been removed")  
        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)