#the list of atoms

atoms=["hydogen","helium","lithium","beryllium","boron","carbon","nitrogen",

"oxygen","fluorine","neon","sodium","magnesium","aluminium","silicon","phosphorus",

"sulfer","chlorine","argon","potassium","calcium","scandium","titanium","vanadium",

"chromium","manganese","iron","cobalt","nickel","copper","zinc","gallium","germanium",

"arsenic","selemium","bromine","krypton","rubidium","strontium","yttrium","zirconium",

"niobium","molybdenem","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"]

#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 list")

    print("E: the length of 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)