#the list of items

atoms=["hydrogen","helium","lithium","beryllium","boron","carbon","nitrogen","oxygen","flourine","neon","sodium","magnesium","aluminium","silicon","phosphorus","sulfur","chlorine","argon","potassium","manganese","iron","cobalt","nickel","copper","zinc","gallium","germanium","arsenic","selenium","bromine","krypton","rubidium","strontium","yttrium","zirconium","niobium","molybdenum","technetium","ruthemium","rhodium","palladium","silver","cadmium","indium","tin","antimony","tellurium","todine","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 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)