#the list of ions

atoms=["hydrogen","heliun","lithium","berllium","boron","carbon","nitrogen","oxygen","fluorine","neon",

"Sodium","Magnesium","Aluminum","Silicon","Phosphorus","Sulfur","Chlorine","Argon","Pottasium","Calcium","Scandium",

"Titanium","Vanadium","Chromium","Manganese","Cobalt","Iron","Nickel","Copper"

,"Zinc","Gallium","Germanium","Arsenic","Selenium","Bromine","Kyrpton","Rubidium","Strontium","Yttrium"

,"Zirconium","Niobium","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","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("X: Exit the list")

 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 from the list:")

 atom.remove(name)

 prin(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":

 def linsearch():

 name=input("enter a search term:")

 stop=len(atoms)

 for i in range(stop):

 if atoms[i]==name:

 print(name,"is in the list")

 else:

 print(name,"is not in the list")