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 the list")

 print("c: print the list")

 print("d: sort the list")

 print("e: find 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")

 print("\n")

 if choice=="b":

 name=input("enter the name of an atom to remove: ")

 atoms.remove(name)

 print(name,"has been removed from the list")

 print("\n")

 if choice=="c":

 print(atoms)

 print("\n")

 if choice=="d":

 atoms.sort()

 print("\n")

 if choice=="e":

 print("the length of the list is: ",len(atoms))

 print("\n")

 if choice=="f":

 print(atoms)

 i=int(input("Which atom do you want to edit? (chose the number of the element you want to edit, numbering starts at zero): "))

 atoms[i]=input("Enter a new element: ")

 print("The atom has been changed to",atoms[i])

 print(atoms)

 print("\n")