Layan Khaled Bakrman 232310045 Web programming Assignment 2

## Exercise1

## Understanding Particles and Atomic Notation By Layan, March 11, 2025 - 08:55 AM Look around you: the sun rises in the east in the morning, the moon appears at night, and it orbits the Earth within twelve months. There are many other natural orders in the universe. Amazing, right? Even electrons in the smallest particles are arranged neatly following quantum numbers. Wow! What are quantum numbers? Electrons are distributed around the atom in an orderly manner based on energy levels. This distribution is represented by quantum numbers, indicating specific positions of electrons. Imagine if electrons were randomly placed—the universe would be unstable! That's why order is important.

## **Basic Particles and Atomic Symbols**

Atoms consist of three fundamental particles: protons (p), neutrons (n), and electrons (e). The atomic mass formula is:

Atomic Mass = (Proton Mass + Neutron Mass) + Electron Mass

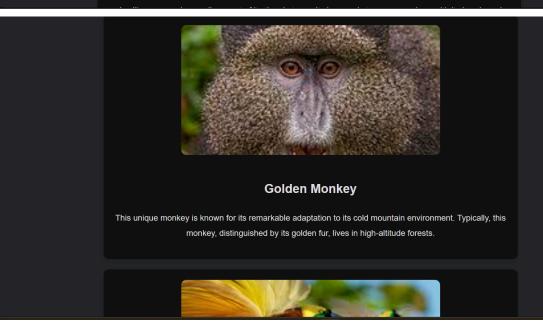
Since electron mass is extremely small, it is often ignored in calculations.

Particle	Symbol	Mass (g)	Charge
Proton	р	1.673 × 10 <sup>-24</sup>	+1
Neutron	n	1.673 × 10 <sup>-24</sup>	0
Electron	е	9.109 × 10 <sup>-28</sup>	-1

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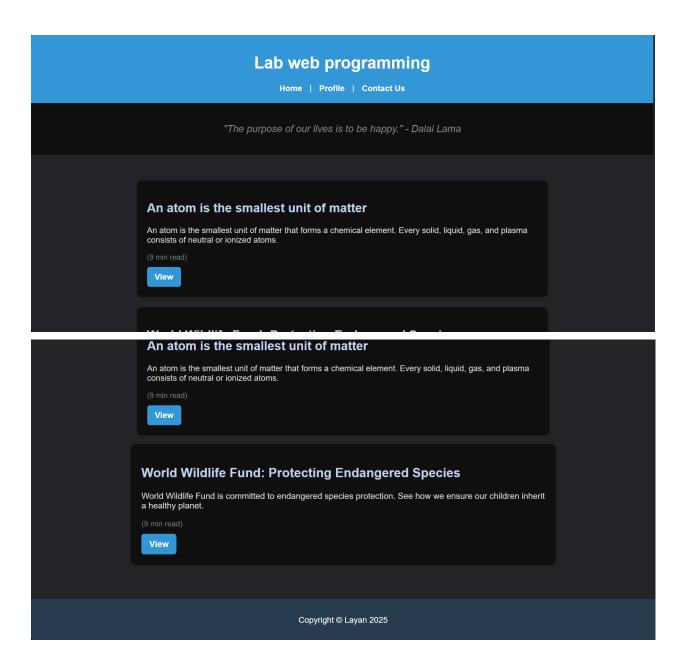
## Exercise 2:



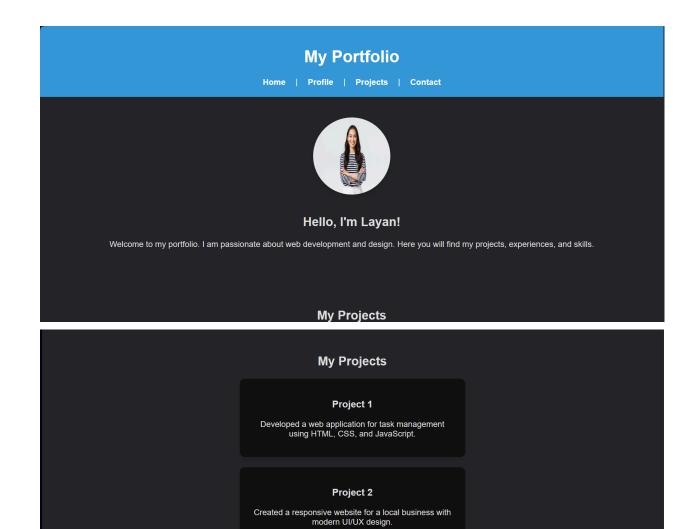




Exercise 3:



Exercise 4:



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