

# Random Knowledge Collection

This document contains a variety of short, factual knowledge snippets from different domains. It is designed to be used as input for an AI system to generate flashcards.

## 1. Science Facts

- Water boils at 100°C at sea level, but the boiling point decreases at higher altitudes due to lower atmospheric pressure.
- The human brain contains approximately 86 billion neurons.
- Light travels at a speed of about 300,000 kilometers per second in a vacuum.
- DNA carries genetic information using four bases: adenine, thymine, cytosine, and guanine.
- Sound cannot travel through a vacuum because it requires a medium like air or water.

## 2. Technology Concepts

- An algorithm is a step-by-step set of instructions designed to perform a specific task or solve a problem.
- The Internet is a global network of interconnected computers that communicate using standardized protocols.
- HTTP stands for HyperText Transfer Protocol and is used for transferring web pages.
- A database index improves query performance by allowing faster data retrieval.
- Artificial Intelligence focuses on creating systems that can perform tasks requiring human-like intelligence.

## 3. Mathematics Basics

- A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself.
- The value of  $\pi$  (pi) is approximately 3.14159.
- In a right-angled triangle, the Pythagorean theorem states:  $a^2 + b^2 = c^2$ .
- The mean of a data set is calculated by dividing the sum of values by the number of values.
- A matrix is a rectangular arrangement of numbers organized in rows and columns.

## 4. Geography Knowledge

- Asia is the largest continent by both area and population.
- The equator is an imaginary line that divides the Earth into the Northern and Southern Hemispheres.
- Mount Everest is the highest mountain above sea level.
- The Amazon River is one of the longest rivers in the world.

- Deserts receive very little rainfall, typically less than 250 mm per year.

## **5. General Knowledge**

- Photosynthesis is the process by which green plants make food using sunlight.
- Democracy is a system of government where power is vested in the people.
- The solar system consists of the Sun and all celestial bodies that orbit it.
- Vaccines help the immune system recognize and fight diseases.
- Renewable energy sources include solar, wind, and hydro power.