COMP0000J Intro to Temporal Engineering

Homework: A Simple Time Machine

Any Student

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Abstract

This project implements a time machine as required by *COMP0000J Intro to Temporal Engineering*.

Question 1.

Formulae for building this time machine.

(a) **Common Operations & Fractions**

$$x + y - z = \frac{a}{b} \cdot \sqrt{c^2 + d^2} \tag{1}$$

$$\sum_{i=1}^{n} x_i^2 = \int_0^{\infty} e^{-t}\,dt = \lim_{x \to \infty} \frac{1}{x} \tag{2}$$

$$\alpha + \beta = \gamma \quad \Delta\theta \neq \pi \quad \lambda \in \mathbb{R} \tag{3}$$

$$\tag{4}$$

(b) **More Formulae**

$$A = \begin{pmatrix} a & b \\ c & d \end{pmatrix}, \quad \det(A) = \begin{vmatrix} a & b \\ c & d \end{vmatrix} = ad - bc$$

and

$$f'(x) = \frac{df}{dx} = \frac{\partial f}{\partial x}, \quad \nabla \cdot \vec{F} = \frac{\partial F_x}{\partial x} + \frac{\partial F_y}{\partial y}$$

$$A \cup B \cap C \subseteq \mathbb{N}, \quad x \in A \implies x \notin B, \quad \forall x \exists y$$

(c) Also let's write some inline formulae like $\sin(\theta) + \cos^2(\phi) = \log(x) + \ln(y) + \binom{n}{k}$.

Question 2. *Propositions, Theorems and Principles.*

You can put your propositions, theorems and principles.

Proposition 1. Time is not fixed.

Theorem 2. Time travel is possible.

Principle 3. Time travel is dangerous.

There are also some predefined boxes with classical colors where you can put your notes.

Green Note

Temporal Engineering is the study of time travel and its implications. It is a very interesting field of study. There are abundant online resources available for learning temporal engineering.

Blue Note

You can make a lot of money after becoming a temporal engineer. The average salary of a temporal engineer is $100,000,000 per year.

Yellow Note

There are many types of temporal engineer, such as frontend time machine engineer, backend time machine engineer, and full-stack time machine engineer. You can also specialize in time machine design, time machine testing, or time machine maintenance. DevOps time machine engineer is also a popular choice.

Question 3. *Coding Question.*

This is the implementation of the "controller" code of the time machine.

```python
def time_machine_controller():
    # This is the controller code of the time machine
    print("Time machine controller is running...")
    print("Please enter the year you want to travel to:")
    year = input()
    print(f"Travelling to {year}...")
    print("Time machine has arrived at the destination.")
    print("ERROR: Time machine has malfunctioned.")
    print("ERROR: You are now stuck in the year 2099.")
    print("ERROR: GOOD LUCK!")
```

Listing 1: Time Machine Demo

Question 12.

By running the *Time Machine*, we jump to question 12 directly!