Practical Assignment: Quality Control in Translation Using Electronic Corpora

Objective:
To develop skills in quality control during the translation of technical texts. Learn how to use electronic corpora to ensure terminological accuracy and apply QA tools in CAT systems.

Steps to complete the assignment:

1. **Translate** the provided technical text (below) from English to Russian. Use any CAT system (SmartCAT, Trados, memoQ, etc.).
2. **Use electronic corpora** to find correct translations for technical terms, phraseological constructions, and fixed expressions:
    - Linguee
    - Reverso Context
    - IATE
    - Glosbe
    - National Corpus of the Russian Language (NCRL)
    - (Optional) Sketch Engine — if access is available
3. **Document at least 5 terms/expressions** that you have analyzed using corpora. For each, include:
    - The English term/phrase
    - The name of the corpus
    - Examples in context (1-2)
    - The final translation and a brief justification for the choice
4. **Perform quality control** on your translation:
    - Run an automatic QA check in the CAT system
    - Manually check: grammar, punctuation, formatting, and compliance with the source text
    - Record the identified errors and how you corrected them in a report (up to 1 page)
5. **Submit:**
    - Final version of your translation
    - The table of corpus analysis (5 terms)
    - A brief QA report (errors and corrections)

Source Technical Text for Translation

The system's cooling mechanism operates through a closed-loop process that utilizes an integrated thermal management controller. This controller monitors the temperature of the processing unit and dynamically adjusts the fan speed and coolant circulation rate to ensure optimal thermal conditions. The system supports dual-mode cooling, allowing for either air-based or liquid-based heat dissipation depending on environmental conditions and performance demands.

Sensors embedded throughout the hardware architecture continuously transmit data to a centralized processing hub, where it is analyzed in real time using machine learning algorithms. These algorithms can predict thermal spikes and proactively regulate the system's performance output, preventing overheating and extending component life.

Additionally, the device includes an autonomous diagnostic module capable of detecting anomalies such as irregular fan behavior or fluid viscosity inconsistencies. Upon detection, the system initiates corrective protocols and notifies the user via the integrated dashboard interface.

Firmware updates for the thermal controller are deployed over-the-air (OTA) and are authenticated through a secure digital signature framework. This ensures system integrity and protects against unauthorized modifications that could compromise safety or performance.

The entire cooling subsystem complies with the latest industry standards for energy efficiency and emissions, as outlined in the ISO/IEC 30134-6:2021 specification. The system also includes fallback routines that allow continued operation under partial failure conditions, minimizing downtime and ensuring uninterrupted service.

Maintenance logs and performance metrics are automatically recorded and stored in a cloud-based repository. These records are accessible to authorized technicians for remote diagnostics and trend analysis, enabling predictive maintenance scheduling and minimizing physical service interventions.