ASSIGNMENT NO. 02

SUBMISSION DATE: 27-11-2025

I. Overview & Objective

This assignment is a comprehensive practicum that bridges the core cognitive theories of multimedia learning with the initial hands-on skills acquired in audio and graphic software applications. The objective is to synthesize your theoretical knowledge by creating an instructional multimedia package (a short video/screencast) and a detailed accompanying analysis. You must choose a specific multimedia principle and design your package to *teach* that principle while meticulously *adhering* to it in the design itself.

II. Required Foundational Reading

A professional understanding of multimedia production begins with research. You are required to read and synthesize information from the foundational scholarly articles listed below. These readings will inform your design choices and the content of your written analysis.

Scholar Focus	**Core Principles Covered**	**Suggested Google Scholar Search Query**	**Note on Access**
Cognitive Load & Design	All Principles, especially Coherence, Signaling, Redundancy, Contiguity	"Mayer and Moreno cognitive theory of multimedia learning" pdf	Use this query to locate the full text of *Mayer, R. E., & Moreno, R. (2003). Cognitive theory of multimedia learning: Implications for design.*

Generative Processing	Modality, Personalization, Voice Principles	"Mayer voice principle modality principle instructional audio"	Use this query to locate relevant articles on how to effectively use voice and conversational style in multimedia.

Access Note: *Please utilize the Google Scholar queries above to locate the full-text PDF of the seminal articles via your institution's library resources or publicly accessible repositories. A thorough reading of these works is mandatory before beginning the practical design.*

III. Part A: The Instructional Multimedia Prototype

Task Instructions

1. **Select a Principle:** Choose **ONE** of the following core multimedia principles as the *topic* of your instructional package:
    - **The Redundancy Principle**
    - **The Signaling Principle**
    - **The Spatial Contiguity Principle**
    - **The Modality Principle**
2. **Select a Toolset (Lab Application):** You must use the software introduced in the labs to create your prototype:
    - **Audio:** Record and edit all narration using **Audacity** (or equivalent).
    - **Vid[1]eo/Screencast:** Combine audio and visuals using **Windows Movie Maker** (or equivalent, e.g., OpenShot, PowerPoint export to video).
    - **Graphics:** Any necessary simple graphics should be prepared in **Adobe Photoshop/Fireworks** (or equivalent).

3. **Prototype Design:**
    - **Content:** Create a video/screencast (1:30 – 2:30 minutes in duration) that clearly and concisely explains your chosen principle (e.g., What is the Redundancy Principle? Why does it work? How do you apply it?).
    - **Meta-Application (CRITICAL):** The design of your video must strictly adhere to the principle it is teaching.
        - *Example 1 (Redundancy):* If you choose the Redundancy Principle, you must **NOT** show the exact spoken text on the screen simultaneously. You must use only relevant visuals/graphics and narration.
        - *Example 2 (Signaling):* If you choose the Signaling Principle, you must use on-screen cues (arrows, highlighting, circling) and voice inflections to draw the viewer's attention to the most important elements of your explanation.
        - *Example 3 (Modality):* If you choose the Modality Principle, you must use **narration** (the audio channel) to explain complex visuals rather than on-screen text.
    - **Quality:** The audio must be high-quality (Audacity editing required), and the overall video must be professionally sequenced and easy to follow (demonstrating competency in the video/screencast tool).

Submission Requirements (Part A: Prototype)

- **File Format:** MP4 or WMV video file (max 2:30 minutes).
- **A simple, engaging Title Screen/Slide.**

IV. Part B: Theoretical Analysis and Rationale Report

Task Instructions

Produce a written report (1000–1200 words) that critically analyzes your design choices based on the cognitive theories and learning outcomes studied in the first eight weeks.

Report Structure:

1. **Introduction (100 words):** Briefly state the selected principle and the goal of your instructional prototype.
2. **Theoretical Foundation (300 words):**
    - Define the principle using concepts from **Cognitive Load Theory**, **Dual Coding Theory**, and **Cognitive Theory of Multimedia Learning (CTML)** (i.e., explain *why* it works in terms of how the brain processes information). Cite your required readings.
    - Explain the type of cognitive load the principle is designed to manage (e.g., Extraneous Processing).
3. **Design Rationale (500 words):**
    - Systematically detail how you applied your selected principle in the video. (e.g., "To avoid violating the Redundancy Principle, I used Audacity to record only the explanation, deliberately ensuring that the text appearing on screen was only the *titles* of the steps, not the spoken script.").
    - Explain the use of other supporting principles: How did you use the **Voice Principle**? How did you use the **Personalization Principle**? How did you ensure appropriate **Segmenting**?
4. **Reflection and Conclusion (100 words):** Summarize what you learned about the difference between *knowing* a principle and *applying* it in a real production environment.

Submission Requirements (Part B: Report)

- **Format:** Word Document or PDF, 12pt font, 1.5 spacing.
- **Word Count:** 1000–1200 words (excluding title page/references).