Name: Aryan Chaudhary

SAP: 500105282

ROLL NO: R2142220238

Batch: AIML-H-B1

**Computational Linguistics and NLP Assignment**

**1. Text Generation**

**a. Meaning Representation**

Thus, an organized system of repression is established (i.e., the patient must adhere to the doctor's recommended dosage). Instead, this input—or input that is not in natural language—is more like a machine-friendly version of the facts. This input is fed into a system that uses grammar rules to convert it into a version that can be understood by humans.

**b. Document Structure Design**

The system must extract the content in a structured manner, such as an introduction, body, and conclusion, or by segmenting the topics into individual slides in order for the content to be presented effectively. This is accomplished by using document structure, which is more adaptable than simply copying the input's order. Bullet points and captions are among the layout components it manages.

**c. Linguistic Style Control**

A system produces text with different tones:

1. A formal: technical style for manuals or reports.

2. Friendly: short sentences in a simple language.

## 2. Multimedia Integration

### a. Focus Points for Adding Multimedia

Multimedia elements are thoughtfully positioned throughout the presentation's content.

Methods → Detailed illustrations

Caution → Icons or symbols that are highlighted

Crucial information → Diagrams or graphs

### b. Representation of Image Style and Meaning

Semantic tags are included in every image to link it to the concepts it represents. The action "remove tablet" is linked by the system to a hand taking a tablet out of foil. The matching process between images and associated text is made possible by the tagging system.

### c. Use of words and images

Images are improved by: captions that provide context for the image's content.
Annotations (such as labels or arrows)
In addition to adding visuals to the content, visual summaries via text overlays allow for instant conceptual understanding.

## 3. Layout and Design

### a. Document Structure and Layout

The system determines the visual appearance of the content.

Slides: One concept per slide; sections divided by topic listsFor actions or circumstances

It builds these using layout languages like HTML or LaTeX. It also regulates text alignment, bullet styles, and font sizes.

**b. Wording representation and layout style**

It is possible to discuss how the layout style affects the text.

It is feasible to write phrases in a buleted list when they are simpler.

In a paragraph layout, complete sentences might be required.

It may be necessary to rewrite the text in order to make it grammatically correct and understandable, depending on the layout you are altering.

**4. Dialogue and Scripting**

**a. scripted dialogue production**

In addition to plain narration, the system creates scripted dialogue for virtual characters. As an illustration, a patient requests to know when to take his prescription.

"Take your doctor's advice," a virtual pharmacist responds.

wherein, structured data used to create this scripted dialogue is transformed into the one used for simulating the natural human interaction.

**b. The animated agents' performance**

The following animated characters are capable of speaking the generated dialogue:

Text-to-speech tools for speech

In the interim, facial expressions and gestures will be employed to improve comprehension.

As a result, the presentation is dynamic and resembles a short film.