

Practice Question 1

Sentence: كتب الطالب الدرس

Q: What type of challenge does this sentence represent?

A:

- **Challenge:** Diacritic Ambiguity
 - **Problem:** It could be interpreted as "kataba" (he wrote) or "kutiba" (it was written).
 - **Solution:** Apply morphological analysis with contextual disambiguation or automatic diacritization.
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Practice Question 2

Sentence: رأيت القطة، فأعطيها الطعام

Q: What kind of anaphora is this, and what challenge does it present?

A:

- **Challenge:** Ambiguous Anaphora
 - **Problem:** "ها" could refer to a human or non-human, machine can't distinguish.
 - **Solution:** Add semantic features (e.g., human/non-human) to the NLP system for resolution.
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Practice Question 3

Sentence: المعلمون المجتهدون حضروا مبكرًا

Q: Identify the syntactic challenge in this sentence.

A:

- **Challenge:** Agreement
 - **Problem:** Adjective must agree in number, gender, definiteness.
 - **Solution:** Use syntactic parsing and grammar rules to ensure full agreement.
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Practice Question 4

Sentence: لم يقل الطالب الحقيقة

Q: What is the morphological challenge here?

A:

- **Challenge:** Defective Verb
 - **Problem:** The root verb has a long vowel that changes when conjugated.
 - **Solution:** Use a root-pattern morphological analyzer for weak verbs.
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Practice Question 5

Sentence: واشنطن / واشينغتون

Q: What is the orthographic issue here?

A:

- **Challenge:** Lack of Uniformity in Writing Styles
 - **Problem:** Named Entity inconsistency (Arabization variance).
 - **Solution:** Normalize names using transliteration tables and lexicons.
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Practice Question 6

Sentence: الطالب يقرأ الكتاب

Q: What type of sentence is this and what syntactic feature does it show?

A:

- **Challenge:** Flexible Word Order (SVO here)
 - **Problem:** Syntactic parsers must handle multiple word orders.
 - **Solution:** Use dependency parsers trained on Arabic text.
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Practice Question 7

Sentence: رأسمالية

Q: What morphological challenge is represented?

A:

- **Challenge:** Annexation (Compound Morphology)
 - **Problem:** Two words ("رأس" + "مال") combined semantically.
 - **Solution:** Segment and process compound nouns semantically.
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Practice Question 8

Sentence: جاء الأولاد / جاءت البنات

Q: What syntactic feature is this?

A:

- **Challenge:** Agreement (Verb-Subject)
- **Problem:** Verb agreement changes with gender/number/order.
- **Solution:** Apply grammar-based parsing for subject-verb agreement rules.

Practice Question 9

Sentence: معقدة، الملاحظة على اللوح

Q: What type of anaphora is hidden here?

A:

- **Challenge:** Hidden Anaphora (Zero Anaphora)
- **Problem:** No explicit subject; causes ambiguity in sentence parsing.
- **Solution:** Infer subject using syntactic structure and context models.

Practice Question 10

Sentence: بالحديد والنار

Q: What kind of lexical structure is this?

A:

- **Challenge:** Multi-Word Expression (MWE, Idiomatic)
- **Problem:** Literal meaning fails (not "with iron and fire").

- **Solution:** Use idiom recognition systems and MWE dictionaries.