

NLP HW3

Sentences

Arthur is the king .
Arthur rides the horse near the castle .
Arthur rides the plodding horse near the castle .
the Holy_Grail is a chalice .
the sensational Holy_Grail is a sacred chalice .
every coconut was carried to the hottest mountains .
sixty strangers are at the Round_Table .
Sir_Lancelot might have spoken .
Guinevere had been riding with Patsy for five weary nights .
Sir_Bedeveve might have been suggesting this quest .
the Britons migrate south frequently .
Arthur and Guinevere ride frequently near the castle .
he suggests to grow fruit at home .
riding to Camelot is not hard .
do coconuts speak ?
why does England have a king ?
when does England drink the coconut ?
why does Britons cover the chalice ?
quest is riding the chalice .

Grammer Rules and changes

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# The start symbol is START.

START -> S1

# This is a very, very, very simple grammar to get you started.

# Sentences
S1 -> NP VP Eos | WhAUX NP VP Eos | WhNP DO NP VP Eos | DO NOT VP Eos | NEW_PHRASES | NEW_PHARS

# Verb phrases
VP -> VerBT NP | VerBT NP PP | VerBT PP | VerBT | BeVerb PastParticiple PP | PluralVerb | BeVerb PP | Modals VP | PassiveVP | PPC PP | MPC NP | PluralVerb ADVP | SingularVerb ADVP

# Noun phrases
NP -> Det NP | Proper | Noun PP | Noun | Det ADJP NP | Det Noun | NonProperPeople | Numbers PluralNouns | PluralNouns | Numbers ADJP | Proper PP | PluralProper | Proper C

# Adverb phrases
ADVP -> adv | adv ADVP | adv PP

# Adjective phrases
ADJP -> adj | adj ADJP | Superlative | adj PluralNouns | NOT ADJP

# Prepositional phrase
PP -> Prep NP | TO NP | TO VP NP

# Defining the Past Perfect Continuous (PPC)
PPC -> VerbTense PastParticiple PresentParticiple

# Defining the model Perfect Continuous (MPC)
MPC -> Modals PluralVerb PastParticiple PresentParticiple

# Defining Conjunction proper Phrase (CNP)
CNP -> Conj Proper

# Defining Wh Auxiliary phrase (WhAUX)
WhAUX -> Wh NP VP Eos
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# Defining coordinative conjunctions(coCP)
CoCP -> Conj NP

# Defining WH noun phrase(WHNP)
WHNP -> WhDet NP

# Introducing PassiveVP for passive construction
PassiveVP -> PluralVerb PastParticiple | BeVerb PastParticiple NP

NEW_PHASESES -> WRB DO NNP VB Det Noun Eos

# Wh-question phrase (WHQ)
WHQ -> WhAUX NP VP Eos

# Wh-words
WRB -> 'How'

# Interrogative determiners
WDT -> 'What'

# Defining Wh question phrase (WHQ)
WHQ -> WhDet DO NP VP Eos

NEW_PHARS -> WRB DO NNP VB Det Noun Eos | WHQ

# Singular and mass nouns.
Noun -> 'castle' | 'king' | 'defeater' | 'sovereign' | 'servant' | 'corner' | 'land' | 'quest' | 'chalice' | 'master' | 'horse' | 'fruit' | 'swallow' | 'sun' | 'winter'

# Determiners
Det -> 'a' | 'another' | 'any' | 'each' | 'every' | 'no' | 'that' | 'the' | 'this'

# Prepositions
Prep -> 'above' | 'across' | 'at' | 'below' | 'by' | 'for' | 'from' | 'into' | 'near' | 'of' | 'on' | 'over' | 'through' | 'with'

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# Proper nouns, this tag is just for people
Proper -> 'Arthur' | 'Guinevere' | 'Sir_Lancelot' | 'Sir_Bedevere' | 'Zoot' | 'Dingo' | 'Patsy'

# Plural proper nouns.
PluralProper -> 'Britons' | 'Saxons'

# Verbs (third person singular present).
VerbT -> 'has' | 'covers' | 'is' | 'drinks' | 'carries' | 'rides'

# Be verbs for passive constructions and states
BeVerb -> 'is' | 'was' | 'were' | 'are' | 'been'

# Plural nouns.
PluralNouns -> 'coconuts' | 'halves' | 'snows' | 'mountains' | 'areas' | 'strangers' | 'inches' | 'ants' | 'nights'

# Personal pronouns.
Perspron -> 'he' | 'her' | 'him' | 'it' | 'one' | 'she' | 'them' | 'they' | 'his'

# More proper nouns, not people.
NonProperPeople -> 'Camelot' | 'England' | 'Holy_Graill' | 'Round_Table'

# Adverbs.
adv -> 'again' | 'already' | 'currently' | 'frequently' | 'precisely' | 'south' | 'successfully' | 'unfortunately'

# Adjectives
adj -> 'plodding' | 'bloody' | 'weary' | 'unable' | 'trusty' | 'further' | 'sacred' | 'hot' | 'lucky' | 'simple' | 'tiny' | 'hard' | 'sensational'

# Coordinating conjunctions.
Conj -> 'and' | 'but' | 'or' | 'either' | 'nor' | 'neither' | 'so' | 'because'

# Numbers.
Numbers -> 'eight' | 'five' | 'one' | '5.5' | 'sixty' | '5,000'

# Modals.
Modals -> 'can' | 'could' | 'may' | 'might' | 'must' | 'ought' | 'shall' | 'should' | 'will' | 'would'

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PluralVerb -> 'have' | 'speak' | 'cover' | 'are' | 'ride' | 'drink' | 'grow' | 'carry' | 'suggest' | 'migrate' | 'know'

#Verbs (past participle).
PastParticiple -> 'spoken' | 'covered' | 'been' | 'ridden' | 'drunk' | 'grown' | 'carried' | 'suggested' | 'migrated' | 'known'

# Wh-adverbs
WhAdverbs -> 'how' | 'when' | 'where' | 'why' | 'who'

# Wh-determiners.
WhDet -> 'that' | 'what' | 'which'

# Verbs (past tense).
VerbPtense -> 'had' | 'spoke' | 'covered' | 'was' | 'were' | 'rode' | 'drank' | 'grew' | 'carried' | 'suggested' | 'migrated' | 'knew'

# Verbs (present participles).
PresentParticiple -> 'having' | 'speaking' | 'covering' | 'being' | 'riding' | 'drinking' | 'growing' | 'carrying' | 'suggesting' | 'migrating' | 'knowing'

# More third person singular verbs.
SingularVerb -> 'speaks' | 'grows' | 'goes' | 'migrates' | 'suggests' | 'knows'

# Verbs (past tense).
VBD -> 'was' | 'carried'
# Plural nouns.
NNS -> 'coconuts' | 'mountains'
# Superlative adjectives.
JJS -> 'hottest'

# End-of-sentence.
Eos -> '!' | '.' | '?'

# 'to'
TO -> 'to'

# 'not'
NOT -> 'not'

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Lexical Rules:

Num - Number

CoCP – coordinative conjunctions

WhAuX – Wh Auxiliary phrase

ADVP - Adverb phrases

ADJP - Adjective phrases

PP - Prepositional phrase

PPC - Past Perfect Continuous

MPC - model Perfect Continuous

CNP - Conjunction proper Phrase

WHNP - WH noun phrase

PassiveVP - PassiveVP for passive construction

Parse Tree: -

['Arthur', 'is', 'the', 'king', '.']

(START

(S1

(NP (Proper Arthur))

(VP (VerbT is) (NP (Det the) (NP (Noun king))))

(Eos .)))

(START

(S1

(NP (Proper Arthur))

(VP (VerbT is) (NP (Det the) (Noun king)))

(Eos .)))

(START

(S1

(NP (Proper Arthur))

(VP (VerbT is) (NP (Det the) (Noun king)))

(Eos .)))

['Arthur', 'rides', 'the', 'horse', 'near', 'the', 'castle', '']

(START

(S1

(NP (Proper Arthur))

(VP

(VerbT rides)

(NP

(Det the)

(NP

(Noun horse)

(PP (Prep near) (NP (Det the) (NP (Noun castle))))))

(Eos .)))

(START

(S1

(NP (Proper Arthur))

(VP

(VerbT rides)

(NP

(Det the)

(NP

(Noun horse)

(PP (Prep near) (NP (Det the) (Noun castle))))))

(Eos .)))

(START

(S1

(NP (Proper Arthur))

(VP

(VerbT rides)

(NP

(Det the)

(NP
(Noun horse)
(PP (Prep near) (NP (Det the) (Noun castle))))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (NP (Noun horse)))
(PP (Prep near) (NP (Det the) (NP (Noun castle))))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (NP (Noun horse)))
(PP (Prep near) (NP (Det the) (Noun castle))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (NP (Noun horse)))
(PP (Prep near) (NP (Det the) (Noun castle))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))

(VP
 (VerbT rides)
 (NP (Det the) (Noun horse))
 (PP (Prep near) (NP (Det the) (NP (Noun castle))))
 (Eos .)))

(START

(S1
 (NP (Proper Arthur))
 (VP
 (VerbT rides)
 (NP (Det the) (Noun horse))
 (PP (Prep near) (NP (Det the) (Noun castle))))
 (Eos .)))

(START

(S1
 (NP (Proper Arthur))
 (VP
 (VerbT rides)
 (NP (Det the) (Noun horse))
 (PP (Prep near) (NP (Det the) (Noun castle))))
 (Eos .)))

(START

(S1
 (NP (Proper Arthur))
 (VP
 (VerbT rides)
 (NP (Det the) (Noun horse))
 (PP (Prep near) (NP (Det the) (NP (Noun castle))))
 (Eos .)))

(START

(S1

(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (Noun horse))
(PP (Prep near) (NP (Det the) (Noun castle))))
(Eos .)))

(START

(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (Noun horse))
(PP (Prep near) (NP (Det the) (Noun castle))))
(Eos .)))

['Arthur', 'rides', 'the', 'plodding', 'horse', 'near', 'the', 'castle', '']

(START

(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP
(Det the)
(ADJP (adj plodding))
(NP
(Noun horse)
(PP (Prep near) (NP (Det the) (NP (Noun castle))))))
(Eos .)))

(START

(S1
(NP (Proper Arthur))

(VP
(VerbT rides)
(NP
(Det the)
(ADJP (adj plodding))
(NP
(Noun horse)
(PP (Prep near) (NP (Det the) (Noun castle))))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP
(Det the)
(ADJP (adj plodding))
(NP
(Noun horse)
(PP (Prep near) (NP (Det the) (Noun castle))))))
(Eos .)))

(START
(S1
(NP (Proper Arthur))
(VP
(VerbT rides)
(NP (Det the) (ADJP (adj plodding)) (NP (Noun horse)))
(PP (Prep near) (NP (Det the) (NP (Noun castle))))))
(Eos .)))

(START
(S1

(NP (Proper Arthur))

(VP

(VerbT rides)

(NP (Det the) (ADJP (adj plodding)) (NP (Noun horse)))

(PP (Prep near) (NP (Det the) (Noun castle))))

(Eos .)))

(START

(S1

(NP (Proper Arthur))

(VP

(VerbT rides)

(NP (Det the) (ADJP (adj plodding)) (NP (Noun horse)))

(PP (Prep near) (NP (Det the) (Noun castle))))

(Eos .)))

['the', 'Holy_Grail', 'is', 'a', 'chalice', '']

(START

(S1

(NP (Det the) (NP (NonProperPeople Holy_Grail)))

(VP (VerbT is) (NP (Det a) (NP (Noun chalice))))

(Eos .)))

(START

(S1

(NP (Det the) (NP (NonProperPeople Holy_Grail)))

(VP (VerbT is) (NP (Det a) (Noun chalice)))

(Eos .)))

(START

(S1

(NP (Det the) (NP (NonProperPeople Holy_Grail)))

(VP (VerbT is) (NP (Det a) (Noun chalice)))

(Eos .)))

['the', 'sensational', 'Holy_Grail', 'is', 'a', 'sacred', 'chalice', '']

(START

(S1

(NP

(Det the)

(ADJP (adj sensational))

(NP (NonProperPeople Holy_Grail)))

(VP

(VerbT is)

(NP (Det a) (ADJP (adj sacred)) (NP (Noun chalice))))

(Eos .)))

['every', 'coconut', 'was', 'carried', 'to', 'the', 'hottest', 'mountains', '.']

(START

(S1

(NP (Det every) (NP (Noun coconut)))

(VP

(BeVerb was)

(PastParticiple carried)

(PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))

(Eos .)))

(START

(S1

(NP (Det every) (NP (Noun coconut)))

(VP

(VBD was)

(VP

(VBD carried)

(PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))

(Eos .)))

(START

(S1

(NP (Det every) (Noun coconut))

(VP
 (BeVerb was)
 (PastParticiple carried)
 (PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))
(Eos .)))

(START

(S1
 (NP (Det every) (Noun coconut))
 (VP
 (VBD was)
 (VP
 (VBD carried)
 (PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))))
(Eos .)))

(START

(S1
 (NP (Det every) (Noun coconut))
 (VP
 (BeVerb was)
 (PastParticiple carried)
 (PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))
(Eos .)))

(START

(S1
 (NP (Det every) (Noun coconut))
 (VP
 (VBD was)
 (VP
 (VBD carried)
 (PP (TO to) (NP (Det the) (JJS hottest) (NNS mountains))))))
(Eos .)))

['sixty', 'strangers', 'are', 'at', 'the', 'Round_Table', '.']

(START

(S1

(NP (Numbers sixty) (PluralNouns strangers))

(VP

(BeVerb are)

(PP

(Prep at)

(NP (Det the) (NP (NonProperPeople Round_Table))))))

(Eos .)))

['Sir_Lancelot', 'might', 'have', 'spoken', '.']

(START

(S1

(NP (Proper Sir_Lancelot))

(VP

(Modals might)

(VP (PassiveVP (PluralVerb have) (PastParticiple spoken))))

(Eos .)))

['Guinevere', 'had', 'been', 'riding', 'with', 'Patsy', 'for', 'five', 'weary', 'nights', '.']

(START

(S1

(NP (Proper Guinevere))

(VP

(PPC

(VerbPtense had)

(PastParticiple been)

(PresentParticiple riding))

(PP

(Prep with)

(NP

(Proper Patsy)

(PP
(Prep for)
(NP
(Numbers five)
(ADJP (adj weary) (PluralNouns nights))))))
(Eos .)))

['Sir_Bedevere', 'might', 'have', 'been', 'suggesting', 'this', 'quest', '']

(START

(S1
(NP (Proper Sir_Bedevere))
(VP
(MPC
(Modals might)
(PluralVerb have)
(PastParticiple been)
(PresentParticiple suggesting))
(NP (Det this) (NP (Noun quest))))
(Eos .)))

(START

(S1
(NP (Proper Sir_Bedevere))
(VP
(MPC
(Modals might)
(PluralVerb have)
(PastParticiple been)
(PresentParticiple suggesting))
(NP (Det this) (Noun quest)))
(Eos .)))

(START

(S1

(NP (Proper Sir_Bedeveve))

(VP

(MPC

(Modals might)

(PluralVerb have)

(PastParticiple been)

(PresentParticiple suggesting))

(NP (Det this) (Noun quest)))

(Eos .)))

['the', 'Britons', 'migrate', 'south', 'frequently', ':']

(START

(S1

(NP (Det the) (NP (Noun Britons)))

(VP

(PluralVerb migrate)

(ADVP (adv south) (ADVP (adv frequently))))

(Eos .)))

(START

(S1

(NP (Det the) (NP (PluralProper Britons)))

(VP

(PluralVerb migrate)

(ADVP (adv south) (ADVP (adv frequently))))

(Eos .)))

(START

(S1

(NP (Det the) (Noun Britons))

(VP

(PluralVerb migrate)

(ADVP (adv south) (ADVP (adv frequently))))

(Eos .)))

(START

(S1

(NP (Det the) (Noun Britons))

(VP

(PluralVerb migrate)

(ADVP (adv south) (ADVP (adv frequently))))

(Eos .)))

['Arthur', 'and', 'Guinevere', 'ride', 'frequently', 'near', 'the', 'castle', '.']

(START

(S1

(NP (Proper Arthur) (CNP (Conj and) (Proper Guinevere)))

(VP

(PluralVerb ride)

(ADVP

(adv frequently)

(PP (Prep near) (NP (Det the) (NP (Noun castle))))))

(Eos .)))

(START

(S1

(NP (Proper Arthur) (CNP (Conj and) (Proper Guinevere)))

(VP

(PluralVerb ride)

(ADVP

(adv frequently)

(PP (Prep near) (NP (Det the) (Noun castle))))

(Eos .)))

(START

(S1

(NP (Proper Arthur) (CNP (Conj and) (Proper Guinevere)))

(VP

(PluralVerb ride)

(ADVP
(adv frequently)
(PP (Prep near) (NP (Det the) (Noun castle))))
(Eos .)))

['he', 'suggests', 'to', 'grow', 'fruit', 'at', 'home', '.']

(START
(S1
(NP (Perspron he))
(VP
(SingularVerb suggests)
(PP
(TO to)
(VP (PluralVerb grow))
(NP (Noun fruit) (PP (Prep at) (NP (Noun home))))))
(Eos .)))

['riding', 'to', 'Camelot', 'is', 'not', 'hard', '.']

(START
(S1
(NP
(PresentParticiple riding)
(PP (TO to) (NP (NonProperPeople Camelot))))
(VP (BeVerb is) (ADJP (NOT not) (ADJP (adj hard))))
(Eos .)))

['do', 'coconuts', 'speak', '?']

(START
(S1
(NP (DO do) (PluralNouns coconuts))
(VP (PluralVerb speak))
(Eos ?)))

['why', 'does', 'England', 'have', 'a', 'king', '?']

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb have) (NP (Det a) (NP (Noun king))))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb have) (NP (Det a) (Noun king)))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb have) (NP (Det a) (Noun king)))

(Eos ?))

['when', 'does', 'England', 'drink', 'the', 'coconut', '?']

(START

(S1

(WhAUX (WhAdverbs when) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb drink) (NP (Det the) (NP (Noun coconut))))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs when) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb drink) (NP (Det the) (Noun coconut)))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs when) (DO does))

(NP (NonProperPeople England))

(VP (PluralVerb drink) (NP (Det the) (Noun coconut)))

(Eos ?))

['why', 'does', 'Britons', 'cover', 'the', 'chalice', '?']

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (Noun Britons))

(VP (PluralVerb cover) (NP (Det the) (NP (Noun chalice))))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (Noun Britons))

(VP (PluralVerb cover) (NP (Det the) (Noun chalice)))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (Noun Britons))

(VP (PluralVerb cover) (NP (Det the) (Noun chalice)))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (PluralProper Britons))

(VP (PluralVerb cover) (NP (Det the) (NP (Noun chalice))))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (PluralProper Britons))

(VP (PluralVerb cover) (NP (Det the) (Noun chalice)))

(Eos ?))

(START

(S1

(WhAUX (WhAdverbs why) (DO does))

(NP (PluralProper Britons))

(VP (PluralVerb cover) (NP (Det the) (Noun chalice)))

(Eos ?))

['quest', 'is', 'riding', 'the', 'chalice', '']

Part 2: -

1. when does England drink the coconut ?

The sentence "When does England drink the coconut?" can be parsed within the given grammar due to overgeneralization. The grammar rule "NEW_PHRASES -> WRB DO NNP VB Det Noun Eos" allows for the formation of a sentence with the structure of a question. In this case, the word "when" (WRB) functions as the interrogative adverb, "does" (DO) acts as the auxiliary verb, "England" (NNP) represents the subject, "drink" (VB) serves as the main verb, "the" (Det) functions as the determiner, and "coconut" (Noun) represents the object.

2. why does Britons cover the chalice ?

Interrogative Word: "why" - This word introduces a question and seeks an explanation or reason.

Verb Phrase: "does cover" - The verb phrase consists of the auxiliary verb "does" and the base form of the verb "cover". In this case, "does" is used to form a present simple tense

question in the third person singular ("does" + base form of verb), and "cover" is the base form of the verb.

Subject: "Britons" - This is the subject of the sentence, referring to a group of people named "Britons".

Object: "the chalice" - This is the direct object of the verb "cover", specifying what the Britons cover.

3. **quest is riding the chalice .**

In the sentence "Quest is riding the chalice," the phrase structure that is not represented by the given grammar is the verb phrase "is riding the chalice." The grammar rules in the provided grammar do not account for a verb phrase in the form of "is riding," where the main verb "riding" is used in conjunction with the auxiliary verb "is." Therefore, this particular sentence cannot be parsed correctly within the given grammar.

```
['when', 'does', 'England', 'drink', 'the', 'coconut', '?']
(START
  (S1
    (WhAUX (WhAdverbs when) (DO does))
    (NP (NonProperPeople England))
    (VP (PluralVerb drink) (NP (Det the) (NP (Noun coconut))))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs when) (DO does))
    (NP (NonProperPeople England))
    (VP (PluralVerb drink) (NP (Det the) (Noun coconut)))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs when) (DO does))
    (NP (NonProperPeople England))
    (VP (PluralVerb drink) (NP (Det the) (Noun coconut)))
    (Eos ?)))
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['why', 'does', 'Britons', 'cover', 'the', 'chalice', '?']
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (Noun Britons))
    (VP (PluralVerb cover) (NP (Det the) (NP (Noun chalice)))))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (Noun Britons))
    (VP (PluralVerb cover) (NP (Det the) (Noun chalice)))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (Noun Britons))
    (VP (PluralVerb cover) (NP (Det the) (Noun chalice)))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (PluralProper Britons))
    (VP (PluralVerb cover) (NP (Det the) (NP (Noun chalice)))))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (PluralProper Britons))
    (VP (PluralVerb cover) (NP (Det the) (Noun chalice)))
    (Eos ?)))
(START
  (S1
    (WhAUX (WhAdverbs why) (DO does))
    (NP (PluralProper Britons))
    (VP (PluralVerb cover) (NP (Det the) (Noun chalice)))
    (Eos ?)))
['quest', 'is', 'riding', 'the', 'chalice', '.']

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