Feature grammar:

grammarString = """

S[SEN=?s] -> NP[SEN=?s, NUM=?n, PER=?p] VP[SEN=?s, TENSE=?t, NUM=?n, PER=?p] |
CC NP[SEN=?s, NUM=?n, PER=?p] VP[SEN=?s, TENSE=?t, NUM=?n, PER=?p] |
NP[SEN=?s, NUM=?n, PER=?p]

S[SEN=neut] -> NP[SEN=pos, NUM=?n, PER=?p] VP[SEN=neg, TENSE=?t, NUM=?n,
PER=?p] | NP[SEN=neg, NUM=?n, PER=?p] VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] |
CC NP[SEN=pos, NUM=?n, PER=?p] VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p] | CC
NP[SEN=neg, NUM=?n, PER=?p] VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] |
VP[SEN=neut, TENSE=?t, NUM=?n, PER=?p] | S[SEN=pos] S[SEN=neg] | S[SEN=neg]
S[SEN=pos]

SBAR[SEN=?s] -> WHNP S[SEN=?s]

NP[SEN=?s, NUM=?n, PER=?p] -> PRP[SEN=?s, NUM=?n, PER=?p] | NNP[SEN=?s,
NUM=?n, PER=?p] | NNS[SEN=?s, NUM=?n, PER=?p] | JJ[SEN=?s, NUM=?n, PER=?p] NN |
DET[SEN=?s, NUM=?n, PER=?p] | DET JJ[SEN=?s, NUM=?n, PER=?p] NN | DET
JJ[SEN=?s, NUM=?n, PER=?p] JJ[SEN=?s, NUM=?n, PER=?p] NN | JJ[SEN=?s, NUM=?n,
PER=?p] NN | NP[SEN=?s, NUM=?n, PER=?p] PP[SEN=?s, NUM=?n, PER=?p]

NP[SEN=?s, NUM=?n, PER=?p] -> JJ[SEN=?s, NUM=?n, PER=?p] NN NN | VB NP[SEN=?s,
NUM=?n, PER=?p] PP[SEN=?s, NUM=?n, PER=?p] | NP[SEN=?s, NUM=?n, PER=?p] CC
NP[SEN=?s, NUM=?n, PER=?p] | NP[SEN=?s, NUM=?n, PER=?p] NP[SEN=?s, NUM=?n,
PER=?p] | NP[SEN=?s, NUM=?n, PER=?p] VP[SEN=?s] | NP[SEN=?s, NUM=?n, PER=?p]
SBAR | DET NNS | DET NN

NP[SEN=?s, NUM=?n, PER=?p] -> JJ[SEN=?s, NUM=?n, PER=?p] NNP[SEN=?s, NUM=?n,
PER=?p] NNS | ADJP[SEN=?s, NUM=?n, PER=?p] NN | ADJP[SEN=?s, NUM=?n, PER=?p]
NN NN

NP[SEN=pos, NUM=?n, PER=?p] -> NP[SEN=neut] VP[SEN=pos, TENSE=?t, NUM=?n,
PER=?p] | NP[SEN=pos, NUM=?n, PER=?p] VP[SEN=neut, TENSE=?t, NUM=?n, PER=?p] |
DET JJ[SEN=neg, NUM=?n, PER=?p] JJ[SEN=pos, NUM=?n, PER=?p] NN | DET
JJ[SEN=neut, NUM=?n, PER=?p] JJ[SEN=pos, NUM=?n, PER=?p] NN | DET JJ[SEN=pos,
NUM=?n, PER=?p] JJ[SEN=neut, NUM=?n, PER=?p] NN

NP[SEN=pos, NUM=?n, PER=?p] -> NP[SEN=neg, NUM=?n, PER=?p] CC-B NP[SEN=pos, NUM=?n, PER=?p] | NP[SEN=neut, NUM=?n, PER=?p] CC NP[SEN=pos, NUM=?n, PER=?p] | NP[SEN=pos, NUM=?n, PER=?p] CC NP[SEN=neut, NUM=?n, PER=?p] | NP[SEN=neut, NUM=?n, PER=?p] PP[SEN=pos, NUM=?n, PER=?p]

NP[SEN=neg, NUM=?n, PER=?p] -> NP[SEN=neut, NUM=?n, PER=?p] VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p] | NP[SEN=neg, NUM=?n, PER=?p] VP[SEN=neut] | DET JJ[SEN=pos, NUM=?n, PER=?p] JJ[SEN=neg, NUM=?n, PER=?p] NN | DET JJ[SEN=neut, NUM=?n, PER=?p] JJ[SEN=neg, NUM=?n, PER=?p] NN | DET JJ[SEN=neg, NUM=?n, PER=?p] JJ[SEN=neut, NUM=?n, PER=?p] NN

NP[SEN=neg, NUM=?n, PER=?p] -> NP[SEN=pos, NUM=?n, PER=?p] CC-B NP[SEN=neg, NUM=?n, PER=?p] | NP[SEN=neut, NUM=?n, PER=?p] CC NP[SEN=neg, NUM=?n, PER=?p] | NP[SEN=neg, NUM=?n, PER=?p] CC NP[SEN=neut, NUM=?n, PER=?p] | NP[SEN=neut, NUM=?n, PER=?p] PP[SEN=neg, NUM=?n, PER=?p]

NP[SEN=neut, NUM=?n, PER=?p] -> NP[SEN=pos, NUM=?n, PER=?p] VP[SEN=neg] | NP[SEN=neg, NUM=?n, PER=?p] VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] | NP[SEN=neg, NUM=?n, PER=?p] CC-A NP[SEN=pos, NUM=?n, PER=?p] | NP[SEN=pos, NUM=?n, PER=?p] CC-A NP[SEN=neg, NUM=?n, PER=?p]

NP[SEN=neut] -> NP[SEN=pos] PP[SEN=neg] | NP[SEN=neg] PP[SEN=pos]

VP[SEN=?s, TENSE=?t, NUM=?n, PER=?p] -> VBZ NP[SEN=?s, NUM=?n, PER=?p] | VB NP[SEN=?s, NUM=?n, PER=?p] | VBZ RB VP | VBZ RB JJ[SEN=?s, NUM=?n, PER=?p] | MD RB VP[SEN=?s, TENSE=?t, NUM=?n, PER=?p] | VBN[SEN=?s, TENSE=?t, NUM=?n, PER=?p] PP[SEN=?s, NUM=?n, PER=?p] | VBD[SEN=?s, TENSE=?t, NUM=?n, PER=?p] ADVP | VBZ[SEN=?s, TENSE=?t, NUM=?n, PER=?p] VBN[SEN=?s, TENSE=?t, NUM=?n, PER=?p]

VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] -> VBZ RB-N VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p] | VBZ RB-N JJ[SEN=neg, NUM=?n, PER=?p] | MD RB-N VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p]

VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p] -> VBZ RB-N VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] | VBZ RB-N JJ[SEN=pos, NUM=?n, PER=?p] | MD RB-N VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p]

VP[SEN=neg, TENSE=?t, NUM=?n, PER=?p] -> VBZ RB-N VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p] | VBZ RB-N JJ[SEN=pos, NUM=?n, PER=?p] | MD RB-N VP[SEN=pos, TENSE=?t, NUM=?n, PER=?p]

VP[SEN=neut, TENSE=?t, NUM=?n, PER=?p] -> VBZ RB-N VP[SEN=neut, TENSE=?t, NUM=?n, PER=?p] | VBZ RB-N JJ[SEN=neut, NUM=?n, PER=?p] | MD RB-N VP[SEN=neut, TENSE=?t, NUM=?n, PER=?p]

PP[SEN=?s] -> IN NP[SEN=?s, NUM=?n, PER=?p] | ADVP IN IN NP[SEN=?s, NUM=?n, PER=?p]

ADVP -> RB

WHNP -> WP

ADJP[SEN=?s] -> RB JJ[SEN=?s] | ADJP[SEN=?s] CC ADJP[SEN=?s] | ADJP[SEN=?s] JJ[SEN=?s] | JJ[SEN=?s]

ADJP[SEN=pos] -> RB-N JJ[SEN=neg] | ADJP[SEN=neg] CC-B ADJP[SEN=pos] | ADJP[SEN=neut] CC ADJP[SEN=pos] | ADJP[SEN=neg] JJ[SEN=pos] | ADJP[SEN=neut] JJ[SEN=pos]

ADJP[SEN=neg] -> RB-N JJ[SEN=pos] | ADJP[SEN=pos] CC-B ADJP[SEN=neg] | ADJP[SEN=neut] CC ADJP[SEN=neg] | ADJP[SEN=pos] JJ[SEN=neg] | ADJP[SEN=neut] JJ[SEN=neg]

ADJP[SEN=neut] -> RB-N JJ[SEN=neut]
"""

# Lexicons
grammarStringLex = """
NN[SEN=neut, NUM=sg] -> "story" | "impact" | "example" | "movie" | "making" | "way" | "sweater" | "dog"

NNS[SEN=neut, NUM=pl] -> "dogs" | "films" | "people"

NNP[SEN=neut, NUM=sg] -> "mess" | "hazard" | "sakib" | "holocaust"

PRP[SEN=neut, NUM=sg, PER=3] -> "it" | "he" | "her" | "i"

VB[SEN=neut, TENSE=inf] -> "have"

VBZ[SEN=neut, TENSE=pres, NUM=sg, PER=3] -> "is" | "likes" | "has" | "does"

VBN[SEN=neut, TENSE=past] -> "told" | "gave"

VBD[SEN=neut] -> "were" | "was" | "saw"

VBD[SEN=neg] -> "attacked"

DET[SEN=neut, NUM=sg] -> "a" | "an" | "the" | "The" | "this"

JJ[SEN=pos] -> "perfect" | "happy" | "well-intentioned" | "compelling" | "long" | "entertaining"

JJ[SEN=neg] -> "low" | "gut-wrenching" | "manipulative" | "rancid" | "ugly" | "sad" | "dull" | "scary"

JJ[SEN=neut] -> "dramatic" | "other" | "little"

CC -> CC-B | CC-A

CC-B -> "but"

CC-A -> "and"

RB -> "there" | "shamelessly" | "mainly"

RB-N -> "not"

IN -> "because" | "too" |"with" | "of" | "by"

MD -> "may"

WP -> "who"
"""