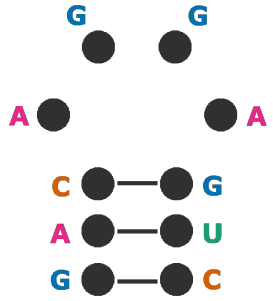
Context-free grammar for stem:

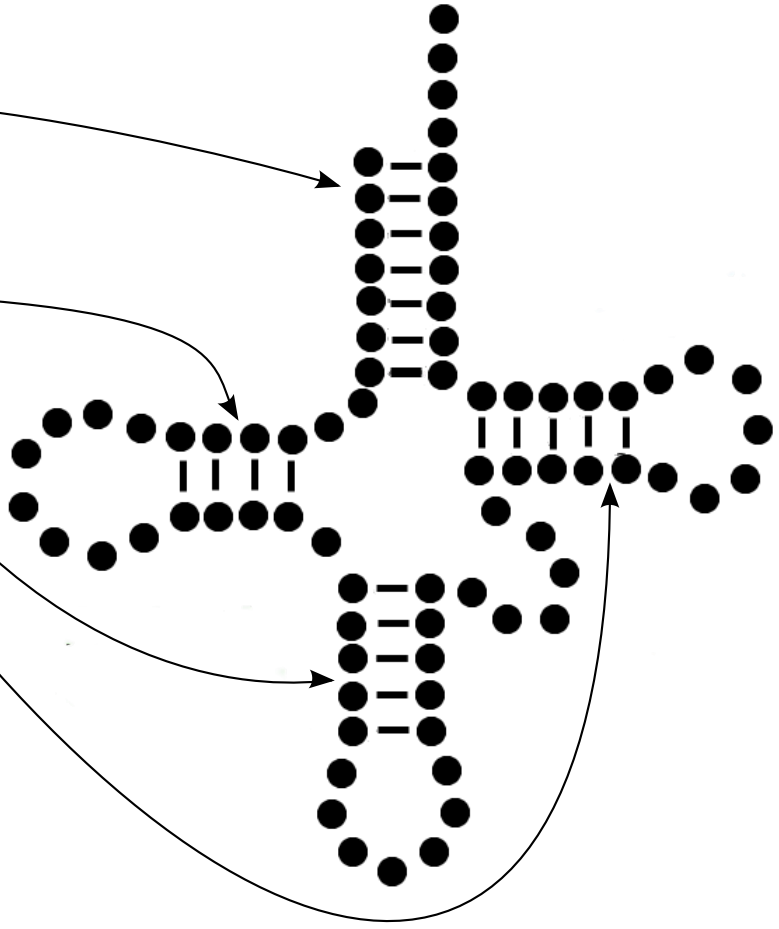
stem<s> ->
A stem<s> U
| U stem<s> A
| G stem<s> C
| C stem<s> G
| s

Arbitrary string with limited length: ***any*[i..j]***, where ***i*** is a lower bound of length and ***j*** is a upper bound.

stem<A G G A>



stem<(
any[i1..j1]*
stem<any[i2..j2]>*
any[i3..j3]*
stem<any[i4..j4]>*
any[i5..j5]*
stem<any[i6..j6]>*
any[i7..j7]*
)>
any[i8..j8]*



\+ =>

Result: all paths with specific secondary structure.

Metagenomic assembly is a directed graph: