⇒ S → A ##
A → aAd / BC
B → bBc / λ
C → ac / ad

$first_2(S) = first_2(A) \cdot f_2(\#) \cdot f_2(\#) = f_2(A) \cdot \{\#\#\}$

$f_2(A) = \{aa, ab, ac, bb, bc, ad\}$

$f_2(C) = \{ac, ad\}$

$f_2(B) = \{bb, bc, \lambda\}$

$f_2(S) = \{aa, ab, ac, bb, bc, ad\}$

$fl_2(S) = \{\lambda\}$

$fl_2(A) = \{\#\#, d\,fl_2(A)\}$

$= \{\#\#, d\{\#\#, d\,fl_2(A)\}\} = \{\#\#, d\#, dd\}$

$fl_2(B) = \{f_2(C) \cdot fl_2(A), c\,fl_2(B)\}$

$= \{ac, ad, c\{ac, ad, c\,fl_2(B)\}\} = \{ac, ad, ca, cc\}$

$fl_2(C) = fl_2(A) = \{\#\#, d\#, dd\}$

⇒ look ahead :-

$LA_2(S \to A\#\#) = f_2(A) \cdot f_2(\#)\, f_2(\#) \cdot fl_2(S)$

$= \{ac, ad, bb, bc, aa, ab\}$

$LA_2(A \to aAd) = f_2(a) \cdot f_2(A) \cdot f_2(d) \cdot fl_2(A)$

$= \{aa, ab\}$

$LA_2(A \to BC) = f_2(B) \cdot f_2(C) \cdot fl_2(A)$

$= \{bb, bc, ac, ad\}$

$LA_2(B \to bBC) = f_2(b) \cdot f_2(B) \cdot f_2(C) \cdot fl_2(B)$

$= \{bb, bc\}$

$LA_2(B \to \lambda) = fl_2(B)$

$= \{ac, ad, ca, cc\}$

$LA_2(C \to ac) = \{ac\}$

$LA_2(C \to ad) = \{ad\}$

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⇒ Is G strong LL(2) ?

Yes. Because all rules have no intersection in look ahead.

⇒ S → Aabd / cAbcd

A → a / b / λ

⇒ $FI_2(A) = \{a, b, \lambda\}$

$FI_2(S) = \{a, b, \lambda\} \cdot \{abd\}, c\{a, b, \lambda\}bcd\}$

$= \{aa, ba, ab, ca, cb\}$

⇒ $FI_2(S) = \{\lambda\}$

$FI_2(A) = \{ab, bc\}$

$LA_2(S \to Aabd)$

$= \{a, b, \lambda\} \cdot \{abd\}$

$= \{aa, ba, ab\}$

$LA_2(Aabd, A \to a)$

$= \{a\} \cdot FI_2(A) = \{aa\}$

$LA_2(Aabd, A \to b)$

$= \{ba\}$

$LA_2(Aabd, A \to \lambda)$

$= \{ab\}$

$LA_2(S, S \to cAbcd)$

$= c\{a, b, \lambda\} \cdot \{bcd\}$

$= \{ca, cb\}$

$LA_2(cAbcd, A \to a)$

$= \{ab\}$

$LA_2(cAbcd, A \to b)$

$= \{bb\}$

$LA_2(cAbcd, A \to \lambda)$

$= \{bc\}$

⇒ IS G LL(2) ? Yes but not strong LL(2).

Note :-

G → strong LL(k) → when S has one rule.

→ LL(k) → when S has more than a rule.