SOLUZIONE

$$\begin{cases} S \to AA \mid a \\ A \to SS \mid b \end{cases}$$

$x = aab$

RISULTATI

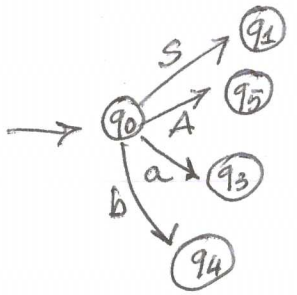
BERNARDI	20
DI SAVERIO	insufficiente
MANUEL	23
USAI	insufficiente

ESERCIZIO 1

È un calcolo di routine con l'algoritmo CYK.

ESERCIZIO 2

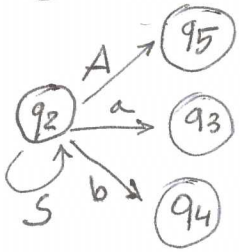
* Automa delle preformule *



$q_0 = \{S' \to .S, S \to .AA, S \to .a, A \to .SS, A \to .b\}$

q_1 ("pozzo")

$q_1 = \{S' \to S., S \to .AA, S \to .a, A \to .SS, A \to S.S, A \to .b\}$



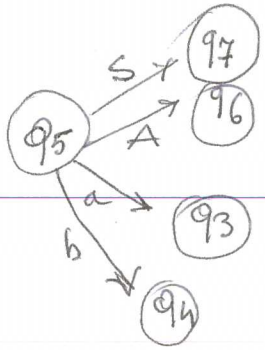
$q_2 = \{S \to .AA, S \to .a, A \to .SS, A \to S.S, A \to SS., A \to .b\}$

q_3 ("pozzo")

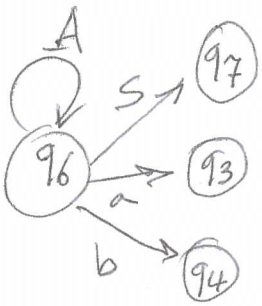
$q_3 = \{S \to a.\}$

q_4 ("pozzo")

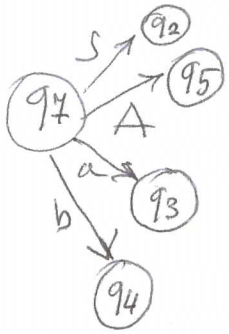
$q_4 = \{A \to b.\}$



$q_5 = \{S \to .AA, S \to A.A, S \to .a, A \to .SS, A \to .b\}$



$q_6 = \{S \to .AA,\ S \to A.A,\ S \to AA.,\ S \to .a,\ A \to .SS,\ A \to .b\}$



$q_7 = \{S \to .AA,\ S \to .a,\ A \to .SS,\ A \to S.S,\ A \to .b\}$

* Tabella delle azioni"

$J(S) = \{a, b, \$\}$
$J(A) = \{a, b, \$\}$

	a	b	$
q_0	T	T	
q_1	T	T	A
q_2	T R(A→SS)	T R(A→SS)	R(A→SS)
q_3	R(S→a)	R(S→a)	R(S→a)
q_4	R(A→b)	R(A→b)	R(A→b)
q_5	T	T	
q_6	T R(S→AA)	T R(S→AA)	R(S→AA)
q_7	T	T	

* Procedura di riduzione *

pila	buffer	azione
q_0	aab$	T
$q_0 a q_3$	ab$	R(S→a)
$q_0 S q_1$	ab$	T
$q_0 S q_1 a q_3$	b$	R(S→a)
$q_0 S q_1 S q_2$	b$	?

I° TENTATIVO

$q_0 S q_1 S q_2$	b$	T
$q_0 S q_1 S q_2 b q_4$	$	E

II° TENTATIVO ("backtracking")

$q_0 S q_1 S q_2$	b$	R(A→SS)
$q_0 A q_5$	b$	T
$q_0 A q_5 b q_4$	$	R(A→b)
$q_0 A q_5 A q_6$	$	R(S→AA
$q_0 S q_1$	$	A

DERIVAZIONE DESTRORSA DI aab

(S, AA, Ab, SSb, Sab, aab)

ESERCIZIO 3

$$\begin{cases} S \to AA \mid a \\ A \to SS \mid b \end{cases} \longrightarrow \begin{cases} S \to AA \mid a \\ A \to AAS \mid aS \mid b \end{cases} \longrightarrow \begin{cases} S \to AA \mid a \\ A \to aSB \mid bB \\ B \to ASB \mid \varepsilon \end{cases}$$

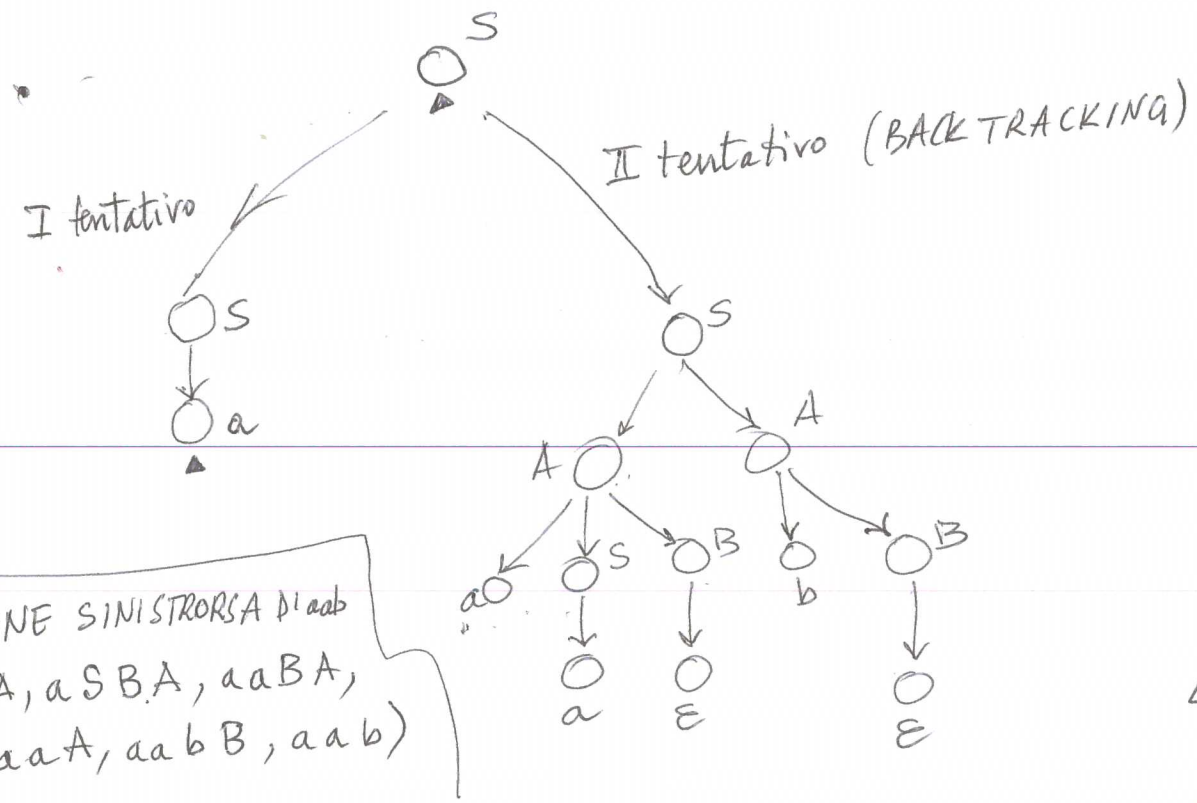
$J(S) = J(A) = J(B) = \{a, b, \$\}$

$I(S) = I(A) = \{a, b\}$ $\quad I(B) = \{a, b, \varepsilon\}$

* TABELLA DEL PARSING *

	a	b	$
S	$S \to a$ $S \to AA$	$S \to AA$	
A	$A \to aSB$	$A \to bB$	
B	$B \to \varepsilon$ $B \to ASB$	$B \to \varepsilon$ $B \to ASB$	$B \to \varepsilon$

* ANALISI A DISCESA RICORSIVA



DERIVAZIONE SINISTRORSA DI aab

(S, AA, aSBA, aaBA, aaA, aabB, aab)