find the longest palindromic subsequence

Important

Str = "abkccbc"

(bccb) → o/p

LPS

page 1

s(abcd)

-	-	-	-
-	-	-	d
-	-	c	-
-	-	c	d
-	b	-	-
-	b	-	d
-	b	c	-
-	b	c	d
a	-	-	-
a	-	-	d
a	-	c	d
a	b	-	-
a	b	-	d
a	b	c	-
a	b	c	d

str = abcd

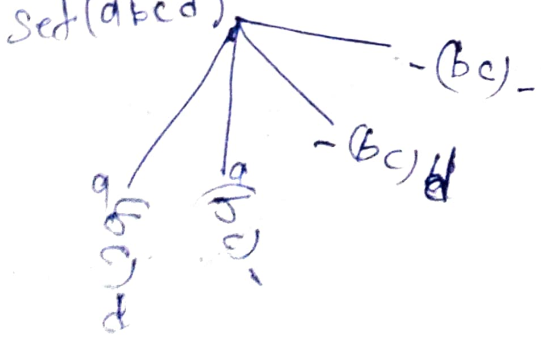
a
ab
abc
a
ab
ac
ad

	Week
a	w
ab	we
abc	wee
abcd	week
b	e
bc	ee
bcd	eek
c	e
cd	ek
d	k

from the set(bc) we make string of abcd.
suppose that i have

set(bc)

set(abcd)



$$\begin{array}{c} - \\ - \\ - \\ - \end{array}\begin{bmatrix} - & - \\ - & c \\ b & - \\ b & c \end{bmatrix}\begin{array}{c} - \\ - \\ - \\ - \end{array} \qquad \begin{array}{c} - \\ - \\ - \\ - \end{array}\begin{bmatrix} - & - \\ - & c \\ b & - \\ b & c \end{bmatrix}\begin{array}{c} b \\ b \\ b \\ b \end{array}$$

$$\begin{array}{c} a \\ a \end{array}\begin{bmatrix} - & - \\ - & c \end{bmatrix}\begin{array}{c} - \\ - \end{array} \qquad \begin{array}{c} a \\ a \end{array}\begin{bmatrix} - & - \\ - & c \end{bmatrix}\begin{array}{c} d \\ d \end{array}$$

append (last

pretended (start)

page 2

s(abcd) → s(bc)

s(abcd) → as(bc)

s(abcd) → s(bc)d

s(abcd) → as(bc)d

f(abcd) → s(abcd) → s(bc)

f(abcd) → s(abcd) → as(bc)

f(abcd) → s(abcd) → s(bc)d

f(abcd) → s(abcd) → a's(bc)d

longest of palidromstring depends of set of (abcd), and set of abcd or string abcd, set of (bc) follow bc subset

str = c1 m c2

like as we can say it as

$\underbrace{a}_{c_1}\ \underbrace{b\ c\ d\ e\ f}_{m}\ \underbrace{g}_{c_2}$

$l(str) = l(c_1 m c_2) \rightarrow s(c_1 m c_2)$ → $s(m)$ 1

$l(str) = l(c_1 m c_2) \rightarrow s(c_1 m c_2)$ → $c_1 s(m)$ 2

$l(str) = l(c_1 m c_2) \rightarrow s(c_1 m c_2)$ → $s(m) c_2$ 3

$l(str) = l(c_1 m c_2) \rightarrow s(c_1 m c_2)$ → $c_1 s(m) c_2$ 4

$c_1 == c_2$	$c_1 != c_2$
if $c_1 == c_2$ then your answer will be only set of (4) either 1, 2, 3. ~~(1) (2) (3)~~ ✗ or 4 (4) ✓	if $c_1 != c_2$ then your answer will be only set of 1, 2 and 3 either 4. (1) (2) (3) ✓ (4) ✗ may be (1 & 2 & 3)

if c_1 and c_2 are equal so largest palindrom subsequence will be only (4). how?

Answer —: (1) we says that i have equation (1) have largest palindrom. then i say ok. let check. suppose that i have xyz have lps

xyz → is already lps.

c_1 xyz c_2 — both are equal.

then it is not possible.

(2) We says that i have equation (2) have largest palindrom. then i say ok. let check. suppose that i have subset ⇒ xyz set in equal $c_1 S(m)$. we seen that c_1 is not completed. equal to c_1 and c_2.

(2) c_1 xyz

(3) ⇒ three equation in will not present an lps.

(4)

if c_1 & c_2 are not equal so largest subsequence palindrom subsequence will be equation 1 or 2 and 3. only how?

Answer —:

condition 1

$\boxed{\max(l(c_1 m), l(m c_2))}$

Explan.

–	–	–
–	–	c
–	b	–
–	b	c
a	–	–
a	–	c
a	b	–
a	b	c

$\boxed{-S(bc)}$ + $\boxed{a\ S(bc)}$

$S(c_1 m) = -S(m) + c_1 S(m)$

S. No.	Date	Title	Page No.	Teacher's Sign

$l(\ldots) = = c_2)$

$l(str) = 2 + l(m)$

$s(mc_2) = s(m) - s(m)c_2$

$s(abc) = s(ab) + s(bc)\,c$

$$\begin{bmatrix} - & - \\ - & b \\ a & - \\ a & b \end{bmatrix} \begin{matrix} - \\ - \\ - \\ - \end{matrix}$$

$$\begin{bmatrix} - & - \\ - & b \\ a & - \\ a & b \end{bmatrix} \begin{matrix} c \\ c \\ c \\ c \end{matrix}$$

$l(c_1 m) \to s(c_1 m) \to s(m)$, $c_1 s(m)$

$l(mc_2) \to s(mc_2) \leftarrow s(m) - s(m)c_2$

cl b k c c b c

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Formula:

$l(str) = l(c_1 m c_2) \to s(c_1 m c_2)$

- $s(m)$ — ①
- $c_1 s(m)$ — ②
- $s(m) c_2$ — ③
- $c_1 s(m) c_2$ — ④

lps$(c_1 m)$ represent of 1 and 2

$l(c_1 m) \to s(c_1 m)$

- $s(m)$
- $c_1 s(m)$

lps$(m c_2)$ represent of 1 & 3

$l(m c_2) \to s(m c_2)$

- $s(m)$
- $s(m) c_2$

lps (str)

$c_1 == c_2$	$c_1 \neq c_2$
4 = 2 + 1	① ② ③
lps(str) = 2 + $l(m)$	lps(str) = max($l(c_1 m)$, $l(m c_2)$)

lps (str)

$c_1 == c_2 \to 2 + l(m)$

$c_1 \neq c_2 \to \max(l(c_1 m), l(m c_2))$

str = " a b k c c b c "
0 1 2 3 4 5 6

end

start

	a_0	b_1	K_2	c_3	c_4	b_5	c_6
a i=0	a 1	ab 1	abK 1	abkc 1	abkcc 2	abkccb 4	abkccbc 4
b i=1		b 1	bK 1	bkc 1	bkcc 2	bkccb 2+2=4	bkccbc 4
K i=2			K 1	KC 1	Kcc 2	kccb 2	kccbc 3
c i=3				c 1	cc 2	ccb 2	ccbc 1+2=3
c i=4					c 1	cb 1	cbc 3
b i=5						b 1	bc 1
c i=6							c 1

prefix

sufix

mid

if character c1 and c2 is not equal to then for str taking prefix and sufix taking max value.

① cbc = $\boxed{arr(i+1)(J-1)}$

② for prefix and sufix
↓ ↓
i, J-1 J, i+1 → i+1, J