

SED(1)

UNIX 3P6É

SED(1)

34Ái

sed - 1ÉÊi¼à`Ç£¿

·Á¼i

sed [-n] [-e script] [-f sfile] [file] ...

µÇ½ÀÀi

sed a|ç°úçôÇ»ØÄê·ç 0 ,Ä°Ê¾åî files (ÇÇÕÇ©ëÉ½àÆpî)
òÉ½à½ÐîÊ³Öj¼·.p¹j£
¹½îÈçÇ³P6Éî script ð½¾ÃÆÊÔ½,òª³Êpp¹j£

ÆüËÜ,µÇ½i

Õçjçèl¾ªèóÕçjçëÃæîÆ¥¹ÉðEUCÊ,»ú¬»ÉÍÑÇpp¹j£
¹¹ÜÆî½èíy|ç¥ÐçÉÃ±°ìÇîîÊ-Ê,»úÃ±°ìÇª³Êîìp¹j£

1. Àµ¬É½,½ []

Àµµ¬É½½ [] αòÍÑαααÆ¡¢Èï°ï»ØÄêαòα^aα³αÊα|¾¹ç¡¢°ÛαÊαë¥¾¼¥É¥»¥Ã¥ÈαËαβα
¿α¬αëÈï°ïαò»ØÄêα¹αëα³αÈα¡αÇααβα»αó¡£
°ÛαÊαë¥¾¼¥É¥»¥Ã¥ÈαËαβα¿α¬αëÈï°ïαò»ØÄêα.α
¿¾¹ç¡¢¢Èï°ïαò»ØÄêα¹αë°Ç½éαÈ°Ç,åαÎÊ,»úαËα¡αß°ïÃ×α.αβα¹¡£
Îãα``αÐ¡¢[α-°¡] α¡¡¢[α°¡] αÈÆ±°ï»ëαµα¡¡¢'α' αβα¿α¡'°¡' αÈ°ïÃ×α.αβα¹¡£[^α-°¡] α¡¡¢[^α°¡] αÈÆ±
°ï»ëαµα¡¡¢'α' , '°¡' °Ê³αÎα¹αÛαÆαÎÊ,»úαÈ°ïÃ×α.αβα¹¡£

¡Î¥^a¥×¥·¥Ç¥ó¡ï
Æ±°ïαÎ¥^a¥×¥·¥Ç¥óαòÊ£¿,Ä.«αêÊÖα.αÆ»ÈÍÑα¹αëα³αÈα¬αÇααβα¹¡£

-n
¥Ç¥Õ¥©¥ë¥ÈαÎ½ÐÎïαòÍΒÀ©α.αβα¹¡£

-e script
ÊÔ½,¥³¥Β¥ó¥É script αò¼Ä¹Ôα.αβα¹¡£-e ¥^a¥×¥·¥Ç¥óα¬°ïαÄαÀα±αÇ -f
¥^a¥×¥·¥Ç¥óα¬αÊαα¾¹çα¡¡¢-e ¥Õ¥é¥°αò¾ÊÎ¬αÇααβα¹¡£
-e ¥^a¥×¥·¥Ç¥óαòÊ£¿,Ä»ØÄêα.α¿¾¹çα¡¡¢»ØÄêα.α
¿½çÊÖαÇÊÔ½,¥³¥Β¥ó¥Éαò¼Ä¹Ôα.αβα¹¡£

-f sfile

$\mathbb{Y}^1\mathbb{Y}^\frown\mathbb{Y}\hat{\mathbb{e}}\mathbb{Y}\times\mathbb{Y}\mathbb{E}\mathbb{Y}\tilde{\mathbb{O}}\mathbb{Y}|\mathbb{Y}\mathfrak{a}\mathbb{Y}\mathfrak{e}$ sfile $\mathfrak{a}\ll\mathfrak{a}\acute{\mathfrak{e}}\mathbb{Y}^1\mathbb{Y}^\frown\mathbb{Y}\hat{\mathbb{e}}\mathbb{Y}\times\mathbb{Y}\mathbb{E}\mathfrak{a}\partial/\mathbb{E}\acute{\mathbb{E}}\mathfrak{a}\beta^1\mathfrak{p}\mathfrak{a}\beta\mathfrak{a}\mathfrak{p}\mathfrak{a}^1|_{\mathbb{E}}$
 $-f\ \mathbb{Y}^{\mathfrak{a}}\mathbb{Y}\times\mathbb{Y}^\frown\mathbb{Y}\zeta\mathbb{Y}\acute{\mathfrak{o}}\mathfrak{a}\partial\hat{\mathbb{E}}\mathbb{E}\zeta\hat{\mathbb{O}}\mathfrak{A}\mathfrak{A}\mathfrak{a}\cdot\mathfrak{a}\zeta^{3/4}1\zeta\mathfrak{a}|\mathfrak{f}\mathfrak{c}\gg\mathfrak{O}\hat{\mathbb{A}}\hat{\mathbb{e}}\mathfrak{a}\cdot\mathfrak{a}$
 $\zeta^{1/2}\zeta\hat{\mathbb{E}}\hat{\mathbb{O}}\mathfrak{a}\mathbb{C}\mathbb{Y}^1\mathbb{Y}^\frown\mathbb{Y}\hat{\mathbb{e}}\mathbb{Y}\times\mathbb{Y}\mathbb{E}\mathfrak{a}\partial^{1/4}\hat{\mathbb{A}}^1\hat{\mathbb{O}}\mathfrak{a}\cdot\mathfrak{a}\mathfrak{p}\mathfrak{a}^1|_{\mathbb{E}}$

$$\begin{aligned} & \mathbb{Y}^1 \mathbb{Y}^\top \mathbb{Y} \hat{\mathbb{E}} \mathbb{X} \mathbb{Y} \hat{\mathbb{E}} \mathbb{A}^3 / \mathbb{A}^1 \hat{\mathbb{O}} \mathbb{A} \hat{\mathbb{E}} \mathbb{A}^1; \mathbb{C} \mathbb{A}^{1/2} \mathbb{A} \mathbb{A}^3 / \mathbb{A} \mathbb{A}^0 \mathbb{A} \hat{\mathbb{E}} \hat{\mathbb{O}}^{1/2}, \mathbb{Y}^3 \mathbb{Y} \mathbb{B} \mathbb{Y} \mathbb{O} \mathbb{Y} \hat{\mathbb{E}} \mathbb{A} \mathbb{O} \mu - \\ & \frac{1}{2} \hat{\mathbb{O}} \mathbb{A} \cdot \mathbb{A} \mathbb{B} \mathbb{A}^1; \mathbb{E} \hat{\mathbb{E}} \hat{\mathbb{O}}^{1/2}, \mathbb{Y}^3 \mathbb{Y} \mathbb{B} \mathbb{Y} \mathbb{O} \mathbb{Y} \hat{\mathbb{E}} \mathbb{A}^1; \mathbb{C}^{1/4}; \mathbb{A} \mathbb{A} \mathbb{E} \mathbb{A}^1 \mathbb{A} \hat{\mathbb{E}} \cdot \hat{\mathbb{A}}^{1/4} \mathbb{A} \mathbb{C} \mathbb{A}^1; \mathbb{E} \end{aligned}$$

```
[address [, address] ] function [arguments]
```

[illegible]

address ǎĭ;ç¹/₄;ǎĭǎǎǎ⁰ǎĭǎ«ǎĭ·Á¹/₄^oǎÇǎ¹;£

Æþĭĭ!ÔÈÖ¹æðòÊ£¿ôǎĭ¥Õ¥ĭ¥ð¥ëðËðð¿α¬αêĭßÀÑÅªË¥«¥ĭ¥ó¥Èª¹æ 10 ¿Ê¿ô
Æþĭĭǎĭ°Ç¹⁄²ª¹Ôðò¹⁄₄''ª¹`\$'

[illegible]

¥`¥¹¥±;¼¥×¥.¼¥±¥ó¥¹ `n' ¢pattern space ¢ËËä¸á¹¸¸¸à¸
 ¿Éüµ¢²¸¹ÔÊ,»ú¸È°ĩÃ×¸.¸¸¸¹;£

address $\alpha \partial \gg \emptyset \hat{A} \hat{e} \alpha \cdot \alpha \hat{E} \alpha \alpha \forall^3 \forall \mathcal{P} \forall \phi \forall \mathcal{E}^1 \hat{O} \alpha \dot{\jmath} ; \mathcal{C} \alpha^1 \alpha \dot{\cup} \alpha / \mathcal{E} \alpha \dot{\jmath}$ pattern space $\alpha \partial \hat{A}^a \hat{A} \partial \alpha \cdot \alpha \mathcal{P} \alpha^1 \dot{\jmath} \mathcal{E}$
address $\alpha \partial \circ \dot{\imath} \alpha \hat{A} \alpha \hat{A} \alpha \pm \gg \emptyset \hat{A} \hat{e} \alpha^1 \alpha \hat{e} \forall^3 \forall \mathcal{P} \forall \phi \forall \mathcal{E}^1 \hat{O} \alpha \dot{\jmath} ; \mathcal{C} \alpha^1 \frac{1}{2} \alpha \dot{\jmath}$ address $\alpha \ddot{E} \circ \dot{\imath} \tilde{A} \times \alpha^1 \alpha \ddot{e}$ patternspace
 $\alpha \partial \hat{A}^a \hat{A} \partial \alpha \cdot \alpha \mathcal{P} \alpha^1 \dot{\jmath} \mathcal{E}$

address ¢ðÆó¸Ä»ØÄê¸¹¸ë¥³¥¢¥ó¥É¹Ô¸î;¢°Ç¹½é¸î address ¢Ë°îÃ×¸¹¸ë patternspace
 ¢««é;¢ÆóÈÖìÜ¸î address ¢Ë°îÃ×¸¹¸ë pattern space ¢¢Ç¸îÈ¹î(°Ç¹½é¸ÈÆóÈÖìÜ¸î address
 ¢´¸¸à)¸ðÁªÂ¸¸.¸¸¹;£(ÆóÈÖìÜ¸î address ¢¬»ØÄê¸¹¸ë¹ÔÈÖ¹æ¸¬;¢°Ç¹½é¸î address
 ¢¬»ØÄê¸¹¸ë¹ÔÈÖ¹æ°Ê²¼¸î³¼¹;¢;¢°î¹Ô¸À±ÁªÂ¸µ¸ì¸¸¹;£)¸³¸î²áÄø¸ð.«¸êÊÖ¸.¸¸ ¢¢
 ¢È¸Ç;¢°Æ¸Ó°Ç¹½é¸î address ¸ð.¸°÷¸.¸¸¹;£

ÈÝÄê±é»»»Ò`!` (,å½Ò)ò»ÉÍÑα¹æσÈ;ϕÁªÂòμαìσÊσσ pattern space
αÊÂÐσ.σÆ;ϕÊÔ½,¥³¥Þ¥Ø¥ÉòòÅ-ÍÑα¹æσ³σÈσ-αÇσσÞσ¹;£

°Ê^{21/4}αî±é»»»Òαî¥ê¥¹¥ÈαÇαî;¢³Æ±é»»»ÒαÇ»ÈÍÑ²ÄÇ^{1/2}αÊ address
αî°ÇÂÇ,ÄÇôαòα«αÃα³αîÃæαîÇô»úαÇ^{1/4}·α·αβα¹;£

°úÇôαî text αÊαî;¢°î¹ÔαβαÇαîÊ£Çô¹Ôαò»ØÄêαÇααβα¹;£α
ÇαÀα·;¢°Ç^{1/2}α¹Ôαò¹/²üα¯α¹αÙαÆαî¹Ôαî¹ÔËöαËαî;¢²β¹ÔÊ,»úαò¥`¥¹¥±;¹/4¥×α¹αëαÇαá `\' αòÉÕα
±αβα¹;£text Ãæαî¥Ð¥Ã¥¯¥¹¥é¥Ã¥·¥åαî;¢ `s' ¥³¥β¥ó¥ÉαîÃÖ
´¹Ê,»úíóÃæαî¥Ð¥Ã¥¯¥¹¥é¥Ã¥·¥åαÈÆ±ÍíαË¹/4èαê°·αîαìαβα¹;£αβα
Ç;¢³Æ¥¹¥¯¥ê¥×¥È¹Ôα«αé;¢¹ÔÆ¬αî¶ðÇòÊ,»úαä¥Ç¥Öα¬;¢¹/4èαêµîαéαìαëαîαòËÉα°α
ÇαáαËαâ»ÈÍÑαÇααβα¹;£

°úÇôαî rfile αä wfile αî;¢¥³¥β¥ó¥É¥é¥α¥óαî°Ç,åαË»ÈÍÑα·αβα¹;£α¹/²α·αÆ;¢
α³αìαéαî°úÇôαÊ±é»»»ÒαÊαî;¢°,Äαî¶ðÇòÊ,»úαÇ¶èÀÚαéαÊα¯αÆαîαÊαêαβα»αó;£³Æwfile
αî;¢¹/²èíýα¬»ìαβαëÁ°αË°îαéαìαβα¹;£°úÇôαî wfile αî;¢°ÇÂÇ 10 ,ÄαβαÇ»ØÄêαÇααβα¹;£

(1)a\
text

ÄÉ²Ã(Append)¥³¥β¥ó¥É;£¹/4;αîÆβî¹¹ÔαòÆÉαβ¹/4èαëÁ°αË;¢text αò¹/²Ðîα·αβα¹;£

(2)b label

label αÇ»ØÄêαµαìαë `:' ¥³¥β¥ó¥É¹ÔαËÊ¬´ô(Branch)α·αβα¹;£ label α¬Ä,°βα·αÊα

α³/₄ι¹çαĩ;ϕ¥¹¥¬¥ê¥×¥Êαĩ⁰Ç,åαËÊ¬´ôα.αβα¹;£

(2)c\
text

ÊÑ¹¹(Change)¥³¥β¥ó¥É;£pattern space αò³/₄Ãμîα.αβα¹;£0, Äαβαçαĩ 1, Äαî address
αÇ»ØÄêα.αç¹Ôαä 2, Äαî address αÇ»ØÄêα.αçÊĩ⁰îαĩ⁰Ç, åαĩ¹ÔαÇ text αò¹/₂Ðĩîα.αβα¹;£
α¹/₂αĩ, å;ϕ¹/₄;αî¥μ¥α¥¬¥ëαò³«»îα.αβα¹;£

(2)d

pattern space αò³/₄Ãμî(Delete)α.αβα¹;£α¹/₂αĩ, å;ϕ¹/₄;αî¥μ¥α¥¬¥ëαò³«»îα.αβα¹;£

(2)D

pattern space αîÀèÆ¬α«αé⁰Ç¹/₂éαĩ²p¹ÔÊ,»úαβαÇαò³/₄Ãμî(Delete)α.αβα¹;£
α¹/₂αĩ, å;ϕ¹/₄;αî¥μ¥α¥¬¥ëαò³«»îα.αβα¹;£

(2)g

pattern space αîÆâîÆαò hold space αîÆâîÆαËÃÖ´¹(Replace)α.αβα¹;£

(2)G

hold space αîÆâîÆαò pattern space αËÃÉ²Ã(Append)α.αβα¹;£

(2)h

hold space $\alpha \hat{I} \mathcal{A} \hat{a} \mathcal{I} \mathcal{A} \alpha \rightarrow$ pattern space $\alpha \hat{I} \mathcal{A} \hat{a} \mathcal{I} \mathcal{A} \alpha \ddot{E} \tilde{A} \ddot{O}^1$ (Replace) $\alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$

(2)H

pattern space $\alpha \hat{I} \mathcal{A} \hat{a} \mathcal{I} \mathcal{A} \alpha \rightarrow$ hold space $\alpha \ddot{E} \tilde{A} \ddot{E}^2 \tilde{A}$ (Append) $\alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$

(1)i\

text

$\hat{A} \beta \mathcal{A} \mathcal{E} \mathcal{P}$ (Insert) $\mathbb{Y}^3 \mathbb{Y} \mathcal{P} \mathbb{Y} \acute{O} \mathbb{Y} \acute{E}; \mathcal{E}$ text $\alpha \rightarrow \acute{E}, \frac{1}{2} \hat{a} \frac{1}{2} \mathcal{D} \tilde{I} \alpha \ddot{E} \frac{1}{2} \mathcal{D} \tilde{I} \alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$

(2)n

pattern space $\alpha \rightarrow \acute{E}, \frac{1}{2} \hat{a} \frac{1}{2} \mathcal{D} \tilde{I} \alpha \ddot{E} \mathbb{Y}^3 \mathbb{Y} \hat{O}; \frac{1}{4}$ (Copy) $\alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$ pattern space
 $\alpha \rightarrow \frac{1}{4}; \alpha \hat{I} \mathcal{A} \mathcal{E} \mathcal{P} \tilde{I}^1 \hat{O} \alpha \ddot{E} \tilde{A} \ddot{O}^1$ (Replace) $\alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$

(2)N

$\frac{1}{4}; \alpha \hat{I} \mathcal{A} \mathcal{E} \mathcal{P} \tilde{I}^1 \hat{O} \alpha \rightarrow; \mathcal{E}^2 \mathcal{P}^1 \hat{O} \hat{E}, \gg \acute{u} \alpha \hat{a}^1 \mathcal{P} \alpha \acute{a} \alpha \mathcal{A}$ pattern space $\alpha \ddot{E} \tilde{A} \ddot{E}^2 \tilde{A}$ (Append) $\alpha \cdot \alpha \beta \alpha^1; \mathcal{E}$
($\alpha \frac{1}{2} \alpha \hat{I} \alpha \ddot{E} \alpha; \mathcal{E}, \frac{1}{2} \acute{O} \mathcal{B}^1 \hat{O} \ddot{E} \ddot{O}^1 \mathfrak{a} \alpha - \hat{E} \tilde{N} \alpha \ddot{I} \alpha \hat{e} \alpha \beta \alpha^1; \mathcal{E}$)

(2)p

pattern space $\alpha \in$ hold spaces $\alpha \models \text{AE} \hat{\alpha} \models \text{AE} \alpha_0, \partial^1(\text{Exchange}) \alpha \cdot \alpha \vdash \alpha^1; \mathcal{E}$

Ê,»úÃ±°ïãĤÖ´¹(Transform)¥³¥þ¥ó¥É;£string1 ÆæãĤ³ÆÊ,»úðð;£ÂÐ±þ±¹æ string2
 ÆæãĤÊ,»úæĤÃÖ´¹±.±þ±¹;£ÃÖ´¹ãĤĤ¹ÔãĤ¹Ç½éæĤ,½ððæÂÐ¾¼ÝÊ,»ú±Â±±ÇãĤĤ±Ĥ;£
 ±¹±Ù±ÆãĤÂÐ¾¼ÝÊ,»úæ±±±±±Æ¹ÔãĤãĤ±þ±¹;£string1 ±È string2 ãĤÊ,»úĤðãĤĤ¹±.±±±±
 ±ãÐ±Ê±ê±þ±»±ð;£

ÈÝÄê±é»»»»Ò;£address ¢Ë¢èãÃ¢ÆÁªÀðµàì¢Ê¢ª¹Ô¢Ë function ¥³¥¢¥ó¥É (function ¢¬ '¢ ¢¹³¼¹¹¢¢¹Ê£¿ô¢¹¥³¥¢¥ó¥É)¢ðÂ¬ÍÑ¢.¢¢ª¹;£

³³ªî¥³¥³¥³¥³¥³ªîÊªËªâ¼Â¹Ôª.ªªª»ªó|£`b'ªªª¿ªî`t'¥³¥³¥³¥³¥³ªÇÊ¬´ôª¹ªë label
 ªò»ØÄÊª.ªªª¹|£

$$\frac{1}{2}\beta^1\hat{O}\hat{E}\hat{O}^1\alpha\alpha^0\hat{i}^1\hat{O}\alpha\hat{E}\alpha.\alpha\hat{A}\hat{E}\frac{1}{2}\hat{a}^1\frac{1}{2}\hat{D}\hat{I}\hat{i}\alpha\hat{E}^1\frac{1}{2}\hat{D}\hat{I}\hat{i}\alpha.\alpha\beta\alpha^1;\mathcal{E}$$

(2){

pattern space $\alpha \rightarrow \hat{A}^a \hat{A}^0 \alpha \mu \alpha \dot{\alpha} \zeta \frac{3}{4} \dot{\alpha}^1 \zeta \alpha \ddot{E}, \hat{A} \alpha \hat{e} \dot{\imath} \zeta \hat{A} \hat{D} \pm p \alpha^1 \alpha \ddot{e} \text{ `}' \alpha p \alpha \zeta \alpha \hat{E} \mathcal{E}$
 $\zeta \hat{o} \alpha \hat{I} \mathbb{F}^3 \mathbb{P} \mathbb{Y} \acute{o} \mathbb{Y} \acute{E} \alpha \dot{o} \frac{1}{4} \hat{A}^1 \hat{O} \alpha \cdot \alpha p \alpha^1 \dot{\imath} \mathcal{E}$

(0)

$\mathbb{F}^3 \mathbb{P} \mathbb{Y} \acute{o} \mathbb{Y} \acute{E} \alpha \ddot{E} \alpha \hat{E} \alpha \ddot{E} \alpha \hat{a} \gg \emptyset \ddot{A} \hat{e} \alpha \cdot \alpha \hat{E} \alpha \alpha \alpha \mathcal{E} \dot{\imath} \zeta \alpha \frac{1}{2} \alpha \hat{I}^1 \hat{O} \alpha \hat{I} \dot{\imath} \mu \gg \ddot{e} \alpha \mu \alpha \dot{\alpha} p \alpha^1 \dot{\imath} \mathcal{E}$

$\dot{\imath} \hat{I} \emptyset \dot{\imath} \zeta^1 \dot{\alpha} \dot{\imath} \ddot{U} \dot{\imath} \dot{\imath}$

ed(1), grep(1), awk(1), lex(1)

3.3J $\mathbb{F} \hat{e} \mathbb{F} \hat{e} \dot{\imath} \frac{1}{4} \mathbb{F}^1 \mathbb{F} \hat{I} \dot{\imath} \frac{1}{4} \mathbb{F} \mathcal{E}$ UNIX $\mathbb{F}^3 \mathbb{P} \mathbb{Y} \acute{o} \mathbb{Y} \acute{E} \mathbb{F} \acute{e} \mathbb{F} \alpha \mathbb{F} \ddot{O} \mathbb{F} \acute{e} \mathbb{F} \hat{e}$

$\dot{\imath} \hat{I} \zeta \zeta \tilde{A} \zeta \dot{\imath} \dot{\imath}$

label $\alpha \dot{\imath} \dot{\imath} \zeta^o \zeta \hat{A} \zeta 7 \hat{E} \gg \acute{u} \alpha p \alpha \zeta \alpha \zeta \alpha^1 \dot{\imath} \mathcal{E}$

w $\mathbb{F}^3 \mathbb{P} \mathbb{Y} \acute{o} \mathbb{Y} \acute{E} \alpha^a \alpha \ddot{e} \alpha \acute{O} s \mathbb{F}^3 \mathbb{P} \mathbb{Y} \acute{o} \mathbb{Y} \acute{E} \alpha \hat{I} w \mathbb{F} \tilde{O} \mathbb{F} \acute{e} \mathbb{F}^o \alpha \zeta \gg \emptyset \ddot{A} \hat{e} \alpha^1 \alpha \ddot{e} \mathbb{F} \tilde{O} \mathbb{F} \dot{\imath} \mathbb{F} \alpha \mathbb{F} \ddot{e} \alpha \dot{\imath} \dot{\imath} \zeta^o \zeta \hat{A} \zeta 9 \ddot{A} \alpha p \alpha \zeta \alpha \zeta \alpha^1 \dot{\imath} \mathcal{E}$