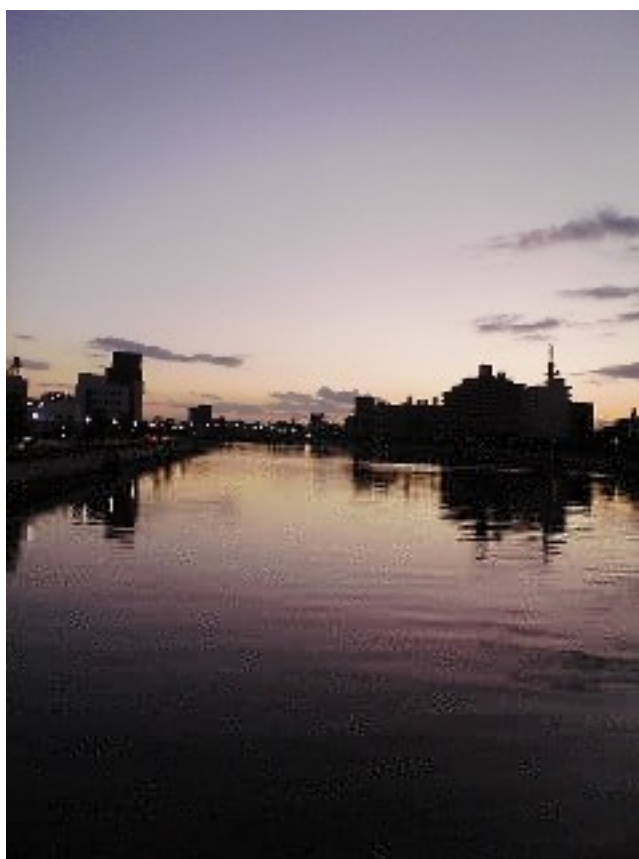


# TSNET

---



TSC

		jscrip	...	3	
TSNET	1.4		...	4	
!	"	#\$%&'( ) * + , - . / O)	1 2 3 4	...	5
6 7		8 9	...	:5	
!		; ) <=>\$! #S! ? @ )	AB	...	3C
DEF 9 GHI J K		ABLMN0	...	3P	
#QRSTU VWXY Z C ' ' S W R W [ \ ]		jscrip	...	41	
^ _		jscrip	...	5C	

jscripiter

` TSNET a4bcdefghijklmnopqrpGHrpsj!tHuvw  
 xyzn{{|!}~•€sr•,rtfr!pr„ye...b!†‡^%bŠ<w;Æ€s{H  
 z!•yeŽ••j‘p9GHH’“|”t•-yxe—•j~™jš>!æse  
 `...•tnžxz€”nAB(Ÿıć)9G“<=>\$j\_£;¤¥wxy|•na1a4b;§  
 s{Hz!•ye9q“129Gj”©n<sup>a</sup>!“#\$%&'()\*+,-./O)」の第2回、8  
 99Gj f«U-Y - ®<sup>a</sup>67~LpG|r n°±<sup>2</sup>0; <sup>3</sup>NE n’´µGnAB9G  
 j<sup>a</sup>DEF9GHIJK~’¶Nn. ©<sup>a</sup>#QRSTUVWXYZ C' 'SWRW[ \ ] ~ ; , vwn<sup>1</sup>°! »¼E  
 y½¾Hp„yH¿À¿ÁEwx s ÂÃÄ  
 `|yn...brqt<sup>a</sup>TSNET ~ ; <sup>3</sup>NEwxseocpj!Š<wÄÅ® Hx, Æ€  
 “txrpxznÇ•pÈÉ!ÊËpÌ•; Í~ÎÏwx•yxe\_£; F¤¥xy|€ĐÑÇ  
 Òæ~zyxe  
 `<sup>a</sup>DEF9GHIJK~tn<sup>a</sup>ÓÔÕI J~n<sup>a</sup>Ö×ÓÔÕI J~n<sup>a</sup>I JÌ”~j Ø©; M  
 N9¥wxy|xye<sup>a</sup>I JÌ”~t\*©!æse{ j ÛÜÔj ÛÜzÆr qpxÝÞ“tn  
<sup>a</sup>ß ®à~!áás{HÂÃÄ  
 `âãt<sup>a</sup>#QRSTUVWXYZ C' 'SWRW[ \ ] ~ j\_£!ä„yáæĐj çèéê!æseëìj Øíî  
 “ïĐs ðñòj óôñD~š õñ~ö; ÷øeùúûAt Šüý“æseéêp•nâã“<sup>3</sup>NŠ  
 s'j'þÿ!Še

## TSNET ニュース 1.4

---

### Python 3.0 final リリース

`#\$%&' (3.C W(USz :CCPg 1:i 3 “ 9Đn t :CC g :i 13 j á  
 × n#\$%&' (3.C.1z ! œs e R=XQ.9Gn Q: 9Gj “; w Ey  
 a &U% [NQ- (#\$%&' (3.C- t TSNETj Ú Ú Hp „ ye#\$ j j \_ £j š >  
 z Ç • xe

Python 3.0.1 Release

<http://www.python.org/download/releases/3.0.1/>

TSNETWiki の「What'sNewInPython3.0」翻訳ページ

<http://text.world.coocan.jp/TSNET/?What%27sNewInPython3.0>

PyJUG の紹介記事

<http://www.python.jp/Zope/PyLog/1232683984>

`#\$%&' (3.C W(US j ; wn#\$%&' (j t \* Ex “ \ „ yeÁ œ  
 szny G{ j Ç • p Ò t n#\$%&' (z • s “ psy j Hps | μ, e  
 L12340

---

### Parrot 1.0 リリースは3月17日予定

`xDxDnParrot 1.0z se μ μŽ j œs t Ì m | μ, e' „ H' Š < wj  
 z , y “ t 3g ( P Å ); ĚŠs Hu v q Đwxse...j H{ μn g “  
 stable nx.0nx.5; Ewx • nParrot 3.5(green fields) | ! j Åz œs e j ý  
 t nParrot; ä, ™p ß Új “ ; Ewx Hx, { HqExe{ { |  
 ! s H t ~pxe I á Úáj Hpsj | r q nœq s { H“ Parrotz ä ÆĐ  
 s D, “ pst ” | e t n j ; Šs { He

The Vision for 1.0 | Parrot VM

<http://www.parrot.org/news/vision-for-1.0>

` Rakudo Perl 6 t nParrot 1.0 j ^ n3i 19 “ se mÉ! t Windows! '  
 Parrot 0.9.1“ Rakudoj 20090220 ; Ewä, { Hz! • se \_j Å r q  
 ÚI Ewä „ w' D, e

Packages & Source Code | Parrot VM

<http://www.parrot.org/download>

(jscripiter)

## や n でレ Python ～新約蛇神祭祀書～

T T -UR(Q \$'= >=% W \$'= SW%Q( %' Q & (' \$'= Y(Q- W% USS  
W ( % \$'= & W% [ =[ % U &UR SQ[[ SW%SQ >=(\$ W( % W% QSS  
W% [ US-US[ %&Q [U Q. US-US[ %QSS %&Q  
<T < & [&%=

@ œ) œn / r q AEG{ „ ´ e œGyn l “ AEr „ wyj r  
, p `x„ ´ , / ex !´ , ,  
D„

TNT # T N N T E <

Y  
x ê “ E{ ~ ` | p I á Úá\ ] • L WX%W 0  
x t `x´ { ` ` Å ÄL#\$%&WU0

### 2. バラ色ですか？ ブルーですか？

a | nÛ G-  
` ^n ~ ; yÛ ; G| n • Dy e  
` Er En j j ' 9s{ Hpz qn...| ! ! t ÑDpr „ y e  
` ~ xw Šs Hn xp Å | e

#### 《名前呼びイベント発生》

` Û j ゲーム脳“ n I z r e  
` Ew e

1. 「何、羽生さん？」と、いつものように聞き返す。
2. 「何、イチコさん？」と、さりげなくこちらも名前呼びする
3. 「気安く名前と呼ぶんじゃねえ」と意味なく切れる

z pj t H' r n{ { t „ n " „ E  
a pn ` Å 9G -

#### 《選択肢2を選ぶ》

` 9~İ p vyr „ yzn´ „ H G| e  
` nÅ j z9 „ n„ H p~n Ew üøe  
v `v `¥n vyr „  
` œÆw y Û | znÅ t üG| | | “ „ { ~H „ wª Dr „ y - H „ ye  
` „ y “ ; z „ w´ ye  
` qÆEx | zn•, q qExe

a • n • , Eyj -  
 a v ` v e ´ „ H E w -  
 ` p ~ pz qn xpz qn ´ µ „ H ; Š Å e  
 ` j “ t n Û ! p H ´ “ Š s D, p q E 9 z æ „ y e  
 a n ; y G | D -  
 ` Å z | y n j p 9 , p ; sz n j { H ! Ð y Û t „ w e  
 a ... H D, “ - r € y q e j ÿ j Û Gt 『馴れ馴れしく呼びかけるんじゃねぇ！  
 ヘビ使いの売女があっ！』 „ w j j Es G | D -  
 Å 9 Gn ; • G p Ç “ ws j  
 a | r q | r q n 思わずナイフで刺しちゃった j -

a 何度も何度も刺して、返り血を浴びて真っ赤になって n Ð ! ´ j ÿ j Û Gt æ y E ; j  
 j Es G | De | r q ^ “ n 斧で首を切り離しちゃった G | -

a ! ´ n j z x | ! ´ , G | De 斧で何度も何度も叩いて、叩き潰して、顔はなくなったの  
 に n | € j e ; 9 x ! ´ { v s r q n æ y E ´ E w Ð ! z y G | D -  
 ` p | Û “ H „ we  
 a æ n æ t t n j t • x p e Ð “ Å 9 G ´ • x D e z G p { H n , Æ € p x  
 p x r -  
 a , | n G Û Ge ´ à n “ p „ wy G | H ž , e ... z õ ¥ | r q -  
 ` E F q E s Å ; w n j “ á I p ; Ð r € s e  
 ` E r E n 9 „ H ^ µ “ Ey “ n p “ q s ´ j ; y z E y e  
 a Å 9 Gn ^ µ “ Ey j n Ð n -  
 a v ` æ n æ t t t -  
 ` | r , H E w n p “ q © Š s z n ² “ p Å j { H ! æ s e  
 a æ -  
 ` H G n H z E w n Å z “ ´ y e

a I á Ú á t n ¼ d ~ “ Ž E w n Ç | r “ “ à € q Ð s G | De t 一括式 (batch)  
 プログラム n ´ , t 対話式 (interactive) プログラム -  
 ` • H Û j e  
 ` “ # \$ % & ' ( Å Ú Ä Ä ; ´ Î Ï y 6 7 ! n Å j z | s e  
 a H -  
 a , Ge j I á ® t n Ë p ; Ÿ E y q n | ! Ú j I á ® e  
 Ä ö ! t v p x H { µ ! ì x w x s ´ j z ´ x E n Ç z ! Æ „ ´ , r q n z r p x  
 ´ j ´ ´ x r ´ -  
 ` Û “ ž x l y s ´ j z æ „ y e  
 a ´ E r E w n ´ Î Ï m “ y q m z r r s j ´ -  
 a æ t „ n , , e ¼ t Ú z ä v s 6 7 “ p s D, “ n Ç j I á ® z ì x  
 w s G | D -  
 a „ ~ ! ´ n t | r q Æ r G p x € • n W ( ´ - [ j ´ Î Ï H r n ´ , ´ „ H !  
 • p x j r p -  
 a ´ E r E y q ´ „ H “ ´ Î z s ~ z æ s r ´ E Ð p x € • n W ( ´ - [ t “ p ~ Š ´ „  
 y r q n z E x r ´ -  
 ` p F n W ( ´ - [ “ ¥ D T U X “ ¥ D n x { H ä x Ö € w x s Ú t n • , E w ´ ^ € ! Å Ú  
 Ey I á ® j Ž • ! ì © t p s e  
 ` y | E n j w z l “ Ë p I á ® p j r • , r t n | e

a 一括プログラム、好き？  
 a v æn œj  
 a t S | Dn 言い訳聞かないよ？  
 a yn „ w Tq Exp  
 、 • ws „ wn Tq Exe

```

a      j U, z. /pG| Dn VW„y q 1 | qp x r q e ! ' n x X v s H n 1 | s ; æ
qr      + „ wYr p x H n 1 | D p x D ^
a      „ Í ~ Z x € • n [ İ „ p E „ w { H ^
a      , | e      t n ^TM ; ÿ \ E w      “ F ] x ; w s r q n ö ^ | € • n r p ^
a      n 9 „ • ‘ y x “      “ C D ; Š j t      ^
` Å      t _ E ` ; a “ æ w w n G ) n H u v s e
a { j Å Ú Ä      Ä b      ç c z      | r q M N | € • n œ j d d j      t      | D ^
a      D “ n p G r C D e ; f € g H r E w p r „ y ^
a      , G e C D e t n , g h g      i H j g h g      k z ä v s G | D ^
a l g m H r n g o t ^
a O x w ' n Ů Ů Æ r G p x H ž Æ p x ^
a      | ^
a      , g t C D e p n j g t C D e H q “ | € ä v s D ^

```

```
>>> 'spam' + 'egg'
```

```
'spamegg'
```

```
>>> 'spam' * 100
```

```

'spamspamspamspamspamspamspamspamspam
spamspamspamspamspamspamspamspamspamspa
mspamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspamspa
mspamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams
pamspamspamspamspamspamspamspamspams'
>>>

```

```
a Š ø ^
```

```
a # $ % & ' ( ! j F + J | r q n r      u v p      w x x D ^
```

```
a      ® Ó      H r “ n Ž • œ s j      ^
```

```
a s      t      ‘ y x ^
```

```
a |      x x      e H { μ !      " „ w n t      j ħ r
```



```

a œĐn ¥n „ w -
a “ „ yu ß Úß j ! nvd_b | De ¥ „ wâw9Đws €• { Đt
l t j CDx€! n>Ú t \(\バックスラッシュ) pG | D-
a GnH~œv” vd; \Đy€ĐÑn y „ wO€ÑxxG | -
a z “ vd; \ĐyC{ ; O | €pq n | ; ävÑxxD-
a | -

>>> print('spam ¥hand egg')
spam
and egg
>>> print('' spam
... and egg'')
spam
and egg
>>>
a } } } ~ ~ ~ t nvd; $G | CD; O€s G | De } ~ ! ' n Ø Ö
r p x H 1 _ b H t ' p 9 Đ p x r q n { G p O • ~ ' s G | D-

>>> print('' spam' spam' spam"and"egg'')
spam' spam' spam"and"egg
>>>

a BÚá | H | j • Ey CDe -
a , e € ! E -
` I á Úá • , z p Û “ t n ... • { z € p j r ¼ f z Æ r p r „ y z n H ~ œ v
” „ x w F x y e
a v „ H n I á @ j | „ y e G n ' ' \ Đ E w ... † Ñ „ r ~ 9 ¥ w -
` Å t s s H ; s e
a x x G | D n Û G j ‡ Û j ^ | | z « e I á Ú á t % 0 4 p x G | r q n • ,
x , Š « „ w n Ž • x H ž , D-
` { , x , y | j < v y z ~ ! t p x H { μ t n Û “ ' Ą Dr „ y e
` Đ | € “ n Å j • Ž “ v y x H x , • ' ' • | s e
a Đ n I á @ j “ \ s e | ” n Ú & Ä j I á @ t n ² “ t Ø
j 5 š ½ ' j ' ' P Æ ¥ ! w O € s „ w “ „ w F x w -
a Ø -
a , Gn 構造化定理(structured theorem) „ w , G | De H { μ ! Û Gn - ® „ w
“ „ ws -
a , Ge ” i d „ y q E x € • n ... ' • - ! 6 E w s r q e — ~ “ ™ q Đ w ' „ H „ y € • n
I á ! ö š r „ y D-
` Å t M N p ! > Š s e
a Û G j F ~ 9 G „ w n œ ™ • Đ p x e | n œ y E H E w t n Q ž P r p e œ ™ Ÿ
€ s E e Đ ! n - ® „ w n “ D „ w n x μ x μ œ ' { ' “ ! E -
a , G-
a ¼ t j • j I á @ t n - ® ' y x “ 5 š z œ ' { ' “ G ! y G | „ w-
a 5 š „ w -
a • { j ċ ; ¼ d Š s r n „ w x , Š « j { H-
a ! ' n Ú & Ä | r q n x p ¼ d Š s G ! E -
a “ x z p € Đ Ñ n -

```

```

a œ„ y q -
a 大変-
a -
` pGr n > j D, “ Ê‘ j œs 大変 j “ n £Šs Û e
a ÇÒn | „ y G | De | „ wn xz • { pj r } „ wxr px HÆr qpxj “ n5
š z œ´ { ´ G! srqn I á ®; } s { H¿ cz ÇÒ | „ y G | D-
a v „ H yEr —~ “ “ n xy { Hœs æ e - nHr x, j n Ð p
x -
a Û Gnm™ ¥x e Û Gj F~ 9Gn s < E-
a t t t n • | ~ | D-
` ÿ! { „ ~ — “ f Šs Û e
a , n “ - 67 “ r q G! nÆr Gp p „ ´ , G | e | r q n I á ®j O •
~ “ fj ; Š y G | D-
a Ð „ wn O € px I á ®z ! w s G pxj -
a , Gn , ž , j t l “ p G | € • n¼ © t その三つの構造だけで、いかなるコードでも書ける{
Hz n 数学的に証明されてxs G | D-
a , nŠnq±² -
` q±² a ´ ² e
` q±² “ « 9Ðy { Ht n “ ² e
a , Gn j « j û¬t œy E’ “ qpx € • n wz _ - ! • s „ w® « | €! ¬ à e ,
px -
a | n | nuvw’ ÐÑ , | D -
a Ðz n½’ xf j Ø½’ e 順次(sequence)、選択(selection)、反復(iteration)j Ø | D-
a , G-
a Š t . / n / “ Î r q “ Š « “ 9Ðs „ w { H-
a Ðn½’ j “ \sj -
a , Ge | r q 5š½’ qEx½’ „ wn l t p G | D e { { r q t n¼ © “ ; Î r
Epzqn w’ D, re | ” t nj ° -

>>> x = 1
>>> if x == 1:
... print('Yes!')
...
Yes!
>>>

a -
a Ær „ y -
` Û t ! ; se
` Å t > Epzqn± “ Åj CD; ` Ew „ ye
a n%Ú ² Ÿ Šs e | ” nif | € • n³ j ÛÛt “ „ ws D -
a もし~ならば | „ € -
a , e ) pqÑ j à t nWj ^ “ pzs à | De ... • t ´ z dpqÑ „ wps G |
D-
a u nÅ Å -
` µbz pz „ wxs _ b “ n Û t l “ ¶ · ; vse
a , GeÅ • t , \ | r q n • ¶ Ö! j µbj ÛÛ “ ps G | D-
` t ! • sz n¹ t ! • pxe
a , \j ~ ; Rj _ bä „ y ~ znÆr ~ Š px -

```

```

a oet „ n , r ' e ! ' n , \ ; O Ý ° „ wn r • , r ; < s » ; _ - Š s
D ~ ¼ ½ “ w s G | De | r q D ä , ~ ; . x E w O € s D , “ Ey ' y x | e ¾ I
á Ú á “ t œ™œ „ wn # U [ XUS Hr $ USSUSY p Gr ! t n , \ “ ħ ; ä , r q n Û
G ' y x “ u v s z x p x Æ € p x De ! ' n « Ó p Å j ~ “ Á L p q 0 „
ws z ... t ¹ x r p -
a # $ % & ' ( ' n j Å -
a , | De ” t n # U [ XUS „ 7 x _ - ' ä v y G | € • n ... t Å 1 9 Ð ws D -
a ) Gn Ě Š s “ ° ' y x p ' j p G | -
a , | e ° v Ñ 9 „ • ; Ey $ USS % USY ! t n “ t Ñ ; ä , G | € • n Ñ j
_ b z n ” D ä Æ Ð y CD â “ r „ y Ž • ! n ħ ! , 9 Ð s D , “ p „ y G | De
| r q ' En j CD â Š “ Ñ z \ „ wy q n , \ z Ñ “ p „ wn »
t ħ “ p „ wyr ' -
` * j I j , Ä j D , p Ú & Ä z ä , “ „ 7 x ö z œ s { H “ n Û
t N “ f Š s e
a Ö € s e if x = 1 ! n もし、x が 1 ならば ! n j ^ “ : ( セ ミ コ ロ ン ) ; + G | De
{ Ð t 区切り文字 (delimiter) H x „ wn Å Æ Ç z { ! È É q Ð s { H ; Û Ü Š s G | D -
a Å Æ Ç -
a c C j ŷ ! n Ê j ċ ; d , Å Æ ; _ - Š s à | De ... j Ý Ð x が 1 で なければ、以
降の命令は行わない n H x , Û Ü p G | D -
a Ê j ċ ; d Æ p x „ wn { ! I á ® t F E | x „ w Û Ü -
` Å t I H ; Š e
a œ n G Ge œ y E j Ÿ z „ w y e “ t 以降の一連の命令 | De ¶ j ċ „
w j t n D Ĩ L Å Ú ± Ú 0 9 Ð w µ „ ws à e ブロック „ wx , G | € • n j à | € n
Å Æ “ Ð Æ p € Ð Ñ Ě Š s „ wx , Å Ó r p ` 9 „ • j ° n ' , • n ´ „ H Ò v w
„ w ' s D -

```

```

>>> x = 0
>>> if x == 1:
...     print('Yes!')
...
>>>

```

```

a 'Yes!' z pr „ y -
a x , { He ... t I “ | € • n Î O x w ' | D -

```

```

>>> x = 0
>>> if x == 1:
...     print('Yes!')
...     print('Yes2!')
...
>>>

```

```

a ... t n Å Æ “ Ð , D , “ O x w ' s -

```

```

>>> x = 1
>>> if x == 1:
...     print('Yes!')
...     print('Yes2!')
...

```

Yes!

Yes2!

>>>

```

a Ær „ y  -
a  -
a Ær Gpx  -
a , , GnĬ  Ĭ t Ær „ y €•  -
a €•  -
a “ ä , j r Ær Gpx  -
` Å  t >  Eye
a , | e r “ { j | | | Hnă x~ Ær GpxD e  Ð  n VÅÚÄ  Ä; Í  wn
  Ë  u±  Ä;  xw' w  -
a Ë  u±  Ä  ` ÓbÎ ! xx  -
a , Gnt  t  Ð!  `àe  Ðw• yq  I á  @_- Ĩ  j  Ë  u±  Ä;  ŨŠ s Hx
xD-
a  -
` Ó  r q ÓbÎ ;  Û  e
a { Ðr q ,  ~“ + ´ , G! ´ w  -

```

```
x = input('一桁の数字を入力:')
```

```
if x == '3':
```

```
    print('正解です')
```

```
input()
```

```

a { Ð“ ntest01.py„ w  ;  €w®ÐEw eœn , , n文字コードはUTF-8; ` fEw  -
a  T P  -
a , Ge  í CDz•  „ wp€ÐÑ j | | L NS 0! ´ xxG| €• n  í CD; $  s ÝPt
  T P; ` fEpxHu  ; Ñ{ E´ , G| D-
a v„ H  z  j ß  $Hr ä vpxj  -
a ä v s €• n  j  i ! CD  ` fEpxHx€pxrqnö^ pG| De  T Ppq
z “  srqn. / | D-
a  n T P!  -
a  Ý° t nH~œv” ±  Î “ EwF{ , r  -
a  e  “  ` pGr  vj œs  Å  Úz  y-
` ±  “  Ðy j t n ÒœHÓj , z  | s Ôz n” p  r E  Ú  ā j Ō  ~
“  xwx s  Å  Úe
a # $ % & ' (  j  Å  Ú | De W( '¬[ “ # $ % & ' ( z Å Ú  Ewœs Hn Öx  z  $j
Ë  t n { j  Å  Ú ! â w9 Ð s G| De  Ew  Š s Hn  I á  ® z ¼ d 9 Ð
s G| D-
a , Æ n  I á  ® ´ yx-
a みたい、じゃなくてプログラムだよ-
a v  ` | „ wny | j  Ë  | Eev„ H  , , nyEr  Ú  Å  Hr EwpxE
` Å  t  Ex ; Eye
a プログラムに必ずしもコンパイルは必要じゃないよ。1 2 z  Ø! • s Ô  “  Û¼ “  _ - Ey
Ú  t n  Ú  LU[[Q >SQ ´  0EwÓb  Î “ j  ¥ ÐÑ¼ d! • s De  Ð“ n 9 „ • j
# $ % & ' ( Å Ú Ä  Ät n  d”  j | | Å Ú Ä  LW(%QR RQ%  Ø o Ú  0E p z q ¼ d

```

```

Ews r qn Ú Å LX' WSQ 0t Ewp x D^-
a H~ œv " Ew' s D^-
` " „ yr ~ ! nxx „ l p { H; „ j ! t pr „ ynH^ Ê Epz q Å Ú;
e
` EÑq r Ì xy ^ n Û Û I Ú À ö z e

```

一桁の数字を入力 :

```
a H~ œv " ; \ " Ew' s r ^
```

一桁の数字を入力 : 3  
正解です

```

a -
` u Ú Ä È ; Ü Š Hn I Ú À ö t Ý v y e
` ' , n Å e

```

一桁の数字を入力 :

```
a j q P; ^
```

一桁の数字を入力 : 5

```

` I Ú À ö t e
` ' , u Ú Ä È ; Ü Š Hn t ~ I Ú À ö t Ý v y e
a -
` € p x ! Å ; s Û e
a v „ H ö š p x ^
` { { n „ H „ Û e
a | n i w j | Hn œ G | ~ j x y ' j n © Ð p x ' j ^
a ¥ wn „ y m j Ó „ w p x j ^
a œ œ n Ð p q . / | D^-
` Ó b Î ; • n j Ú “ ß Å ; H Š e

```

```
x = input('一桁の数字を入力 : ')
```

```
if x == '3':
```

```
    print('正解です')
```

```
else:
```

```
    print('不正解です')
```

```
input()
```

```
a else ^
```

```
a Û Û n “ „ ws D ^
```

```
a v „ H そうでなければ | „ € ^
```

```
a „ e W j ^ j I t n Å Æ “ P „ y m “ ¼ d 9 Ð s C e Q S [ Q j ^ j I t n Å Æ “ P Æ
```

```
pr „ y m j C^-
```

```
a p s U • P É e H { µ ! n 9 „ • r q “ p „ ws G | € • n W ( = % „ w ^
```

```
a W ( = % t n 標準入力 „ wx Æ Ð s H { µ r q j \ “ ; à wn j P ; á Š Ž q | D e â ã \ “ t n

```

```

H~œv" ' Ep€ĐÑn ÛÚ I Ú Äör qj È \ " " pz „ ws G | D-
a z ß Ú á | ! ä | Đwx sj t np á -
a input 関数 t È \ " ; 文字 HE wæ€Í s G | De Å Ú Ä Ä " \ " Š s Ý Þ t q D
HE wæ€Í „ wy € • -
a CDHE wæ€Í „ y q Dt n q Þ " p q p x j -
a ps De eval 関数; ä v Ñ -

```

```

>>> x0 = input()
10
>>> x = eval(x0)
>>> x0
'10'
>>> x
10

```

```

a q US Ž q t n l t ' , 6 E Ex Ì ©; Š s Ž qp G | € • n H~œv" q D; q Þ " Ò v s {
Ht ! • s D-
a œ Hn ' , e ^ j W( = % Ž q „ w -
a ç x w' Đ Ñ Æ r s D-
` Æ Ð y ~ n ç x w' y e
` j è é
a œ n œ Ð ` è é v p x , ´ " Ý v y -
a , x , { He Û Ú I Ú ; ´ Î Ĩ wn { r q ¼ d Š s p q n ^ j W( = % t È qp
x G | € • n ß Å ; 8 x w ¼ d Š s Ý Þ n W( = % ! \ " Ž ´ 6 7 " E w F r p x H n â
w 9 Ð w Š ü " I á ® z E wn ウィンドウが閉じちゃうんだよ-
a ps U • -
a H x , Æ € ! n Å Æ à ê t „ y -
a p G Hr ¹ à e H { µ ! n à ê j ý ! à ê Š s m " t n D Ĩ E w I j ý ! à ê Š s G
| D -
a , | D -
a n CD; q Þ ! æ € Í s ~ ; $ wn { Ð ! Ì r p -

```

```

x0 = input('一桁の数字を入力:')
x = eval(x0)
if x == 1:
    print('10点です')
else:
    if x == 2:
        print('20点です')
    else:
        if x == 3:
            print('30点です')
        else:
            print('0点です')

```

```
input()
```

```
a D~ < Nn Hn „ -
```

一桁の数字を入力：1  
10点です

一桁の数字を入力：2  
20点です

一桁の数字を入力：3  
30点です

一桁の数字を入力：4  
40点です

```

a „ y ë ` ì ' ~ -
` , ÐE , “ , Û ; wn Å ' M ø e
a Û Gn Ex -
a , GepGrì ' Ewnì ' ~ Ì „ w Ex -
a Ðz プログラミングの楽しさ | Dexµxµ vwx Hn! • s { Hz í vwx n Ewì
' ~ Ì H Exe...n Û Gt nœy Ez ' < vwxpx { H; ì ' Ew „ yD
Ð „ wî x { H | D -
a v e ! ' npGr ' „ H | • µ „ { Exp e ' , ' „ H. / “ O€s ~ t œs j r
p -
a œs D -

```

```

x = eval(input('一桁の数字を入力：'))
if x == 1:
    print('10点です')
elif x == 2:
    print('20点です')
elif x == 3:
    print('30点です')
else:
    print('0点です')

```

```
input()
```

```

a v s x -
a Û Û² “ t else-if の省略形 | € • n QS[QH „ wn I ; \ Ð “ ¥ ” “ n 複数分岐! • s
½C | D -
a œHnQ USj r „ { j ÿ “ W( =%z -
a „ \ Ey ; j | | Oxy | € e Ž qt | r qn Òq; j | | “ Y • Xvw' S ï xG
| De ExD, “ vs € • n ð t . / pG | D -
a „ n x , Û pO • ~ œs G | Dp -
` 6E ' , ø Û j ; Í „ wn Å t Ç • r ~ ; „ ye
a , , Gn I á ® t n ç à j “ ñ j ' ' Þ Æ ¥ ! © s ' j | r qn Û Gj vt ExDe
è é ; Š | € p q n ' „ H ò “ ' œ™ ~ t œs € • n Ð t F x F x vwx € Ñ x x { H
| De プログラムは覚えるんじゃない、組むんだよ。xµGp { Hz ! • s € • n è ó ç à j ~ y
x { Ht n ç à ! ¥ ® ; „ wx Erp x e | r q I á Ú á t n k ' ²
p © ô p G | De § Ew v y { H; j | | + ' , ø ' j p x G | D -
` Û t ò j û ÷ D ~ n E < s Å j “ H Ð w x y e

```

```

` „ H ö r q      s Û      j È† “      ²      Hn Å      t ö” r E      , “      ; ÷ q      y e
a œn´      n´      „ Hø      E´      „ y r p´
a v      ` , n , G´
a !´      n > Û      t { j      n      ù      p G | D´
a v      ´
a È      J      r q + ´ ,      s j t q D | €      p x G | D e´ E n q D      j C D ; + ´ , G      „
y q      ´
` H x      n      j      ; ¼ © “ Ì r E w´ s e

```

一桁の数字を入力 : a

```

a      r      v y € •      ´
a Ó      z —      ” “      E´      „ y D      e C D ; + „ y q      ” u      Š s Æ € ! t p x j | € • n
      n      I á      ® z 4 5      9 Ð´      , { H z œ s G | D´
a      „ r n ì ´ E w y j H      , Ý Þ „ w n u v w p r „ y p      ´
a ç à ! © „ w ç à ! ä ,      I á      ® p q x x € • n \ ” ; ú ,      j      I á      ® j Ý Þ n      s
      ~ j Ý Þ t ´ f E w F r p x H      j ? p G | D´
a • , Š Ð Ñ x x j      ´
a      l t C D j      | | û f E y ~ z      p G | D e´ E q D “      Š p q n q D “ p q p x Ý Þ j      ;
H s < • p G | D´
a      ´
a 例外処理 „ w x ,      à ; \ Ð s G | D´

```

try:

```
x = eval(input('一桁の数字を入力: '))
```

except:

```
x = 0
```

```
if x == 1:
```

```
    print('10点です')
```

```
elif x == 2:
```

```
    print('20点です')
```

```
elif x == 3:
```

```
    print('30点です')
```

```
else:
```

```
    print('0点です')
```

```
input()
```

```

a H q x      ` v      ¥ ü H      ´
a try t      j      ~      やってみる      { H e except t      ~を除いて      j Û Ü ! n ý c ² “ t u      z      y
m j      ; O      G | D e Q " X Q % j      ^ µ “ t ý c ² “ u      ; O x w´ x x G | € • n • G p u
!´      H ~ œ v ”      E w E | , p q n u      ; O r p x { H´ œ s G | D´
a u      ; O      H • , p s j      ´
a ° v Ñ n q Þ      j C D “      Š s u      p q NameError | r q n

```

```
except NameError:
```

```
H O x w´ x x G | € • ´
```



```

a €• -
a u ; fŠsHn Đ j u ; þ„ w Đp psG| DeyHvŃnNU QERR'R; `f
Ey Ū! -

```

一桁の数字を入力 : a

0点です

```

a t nÇÿ | €• -

```

一桁の数字を入力 : 5/0

```

a œnÝvy -
a , Gn{ Đt O HEwt ExG| €• n ; ! sH vt pxD e|r q
ZeroDivisionError „ wx, Rj u z yG| €• nNU QERR'R“ fEwsrqnu ; þx
• Đpr „ yG| D-
a nu t fEpx~ zxxG| -
a , H' qpxDe I á ®“ ŽÆsr - pu j ÝP' œsrqnu t ÈŠĐ
ŃxxHt žÆpxe...• t ÈEw' xx€• n • Gpu zœ„ yrnâwŠs~ tœ
sG| D-

```

```

try:

```

```

    x = eval(input('一桁の数字を入力: '))

```

```

except Exception as E:

```

```

    print(E)

```

```

    x = 0

```

```

if x == 1:

```

```

    print('10点です')

```

```

elif x == 2:

```

```

    print('20点です')

```

```

elif x == 3:

```

```

    print('30点です')

```

```

else:

```

```

    print('0点です')

```

```

input()

```

```

a Exception t n wj u “ Šs€• n j ^“ U[; OxwÒq; `fŠĐŃnÒq ...
• t E| €• j ÿ“ nu û¬; \Đw Đse{ Đ; âwŠĐŃnp“ z x| „ yrn
nÆr s D-

```

一桁の数値を入力 5/0

int division or modulo by zero

0点です

一桁の数値を入力 aiu

name 'aiu' is not defined

0点です

一桁の数値を入力 1++

unexpected EOF while parsing (<string>, line 1)

0 点です

```

a      3      |      -
`      , pÛ      j      “ n> Š s Å      e
a      ~ z p x De      ÿ Š s Hn      i j t      ! q P;      „ y ZQR' W W[W (ERR' Rn      j z      Gps
      x D      j Û Û j NU QERR' Rn      ^ z      文法が違う      j SyntaxError | D-
a      ! ' n      “ ÿ E w' n      Æ r G p x Hž , € •      -
a      , |      e ' E Û      Gz      “ ÿ Š ' j ; © s j p q n i ' ! • s r      ~ j ' j “      x w t n Ó
      ;      ¿ “      „ w F      H x x r '      -

```

try:

```
x = eval(input('一桁の数値を入力: '))
```

except ZeroDivisionError:

```
print("数値をゼロで割りました")
```

```
x = 0
```

except NameError:

```
print("オブジェクトに無い名前を入力しました")
```

```
x = 0
```

except SyntaxError:

```
print("文法上の誤りがあります")
```

```
x = 0
```

except Exception as E:

```
print("何かエラーがありました")
```

```
print(E)
```

```
x = 0
```

if x == 1:

```
print('10 点です')
```

elif x == 2:

```
print('20 点です')
```

elif x == 3:

```
print('30 点です')
```

else:

```
print('0 点です')
```

input()

a except は複数書けるの？

a いくつでも必要なだけ書けるよ

```

a E"XQ %W ( „ wn      j u      ; æ € Í s G | D      e      , Š s Hn ° v Ñ ZQR' W W[W (ERR' R!      „
r r „ y ^ n もう一度 Exception で引っかからないの?

```

```

a      i      “      „ r r „ y Q"XQ %Ç j      I      ; ¼ d E y ^ t n それ以降の except 節は無視する G | D-

```

```

a €      |      -

```

```

a °      “ t œ™ p O • ~ z œ s € • n ... • t      "      q x “ E w F      -

```

```

a      , ‘ Š      t      p x n |      -

```

```

a      ,      ,      -

```

```

a F      Đ s D-

```

` Û z j ; • „ w Đs Hn j f n Å z r ´ r ´ H Û j Ú; x „  
 w x y e  
 a R “ Ò p ´ j n \ „ w p x ! E -  
 ` Û t > E p z q I “ ; Y e  
 ` Å t n j “ v q Đ y ß ®; € n ; r ¥ s e  
 a Æ n Đ ´ E r E w Ë j -  
 a , G n F x E x „ w x y r q -  
 a n œ ~ z H -  
 ` x b ; “ x s Å ; p z q n Û t v w ĸ à j “ x z p r „ y { H  
 ; Š s e  
 x x p x r n 6 E q x Ë b • | „ w e { G p “ x G | r q  
 ` E r E j n j Ó j y “ À; ´ Î Ĩ y Û t n ~ { H “ p s e

——おはよう、マナブくん——

` Å j j ´ Î Ĩ H H ´ “ n E è À H E w n « é ê Ç j Å j é ê z „ E ~ H  
 G ! n Û ; w x y e

## 【内容】

## 第一回目：

- ・ 四則演算
- ・ 変数、代入（代入子＝）
- ・ print 関数
- ・ 文字列
- ・ 文字列のインデックス表示、スライス
- ・ len 関数
- ・ exit 関数、quit 関数

## 第二回目：

- ・ 文字列の結合（+）、反復（\*）
- ・ 『\n』改行コード
- ・ トリプルクォート表記
- ・ if 構文(if-else, if-elif-else)
- ・ 同一判定演算子（==）
- ・ input 関数
- ・ eval 関数
- ・ 例外処理：try-except 文
- ・ 例外：Exception, ZeroDivisionError, NameError, SyntaxError:

## 【注釈】

Î • €j û¬' \$| Ðwxsj ! n| • j ~ t n à q p x H{ µ t —' i E w | 9 x  
à s H{ µ t n „ w | 9 x

## ・ 前回の話題で分数モジュールのこと

` # \$ & ' ( 3. C ! „ 9 Ð y RUX % W ( [ b j RUX % W ( t n à q q z v s e E  
r E t ~ n q ; ! v s p q n à q ' ! v w ! E r „ y

## ・ （最初のコント）

` ... • t p n > á " Å j Ë j ß Ú

## ・ victim, Pythia

` " # • H < j \$ % j Û Ü

## ・ バラ色ですか？ ブルーですか？

` { Ð n œ s & j & Ä p j | € • n † à p G j & r Æ r „ w ' n ' “ ' ( w ' q v p x （寧ろキモ  
がられる）

## ・ 名前呼びイベント

` Ä ) Û ! t p n Q f j I Ó Ä H E w Æ Ð s Ý Þ z † x

## ・ ゲーム脳

` „ w ' n w j ¼ ; - ® “ p ¢ q v s \* j { H ! t p x e ´ p ´ “ n - ®  
\* H x , ; — ø H n ¼ t < # p q “ x n H O x w œ „ y ~ Š s

## ・ ヘビ使いの売女

` ´ p´ “ ß Ë+ L#\$\$%&' (0t 男性のアレj , - !´ œs j !

・顔はなくなったのに、声だけ響く

` . ² “ t n Ð; 幻聴Hx ,

・ジャックナイフ

` /~yy´ j ÇOj Å e!´ z t Ås" Ú j " U• Ç• x

・一括式プログラム

` H Ep x I á ®! œ„ wn 12H EwxpxÆ€! t px

・対話式プログラム

` ¢9Ðs à“ t p„ w´ n\$Ew Ewxs à“ pÐpxj t • , Ew| µ , r

・画像ダウンロードのための巡回ソフト

` R“ Ðç cz 1Ex´ j ! t \$Ew xt ” | zn 1Ex ² “ t 2¹ “ äÆÐpx

・二次元

` Ó À3p•j 4' 56; ` Š õHEwäÆÐsqEx

・♀

` %» n7; Š Û | zn t 8C±!j 9 : ; ; âŠ Û e<9 Û j  
=j Û z>j Û HEw ÑÐwxsj | znËŠs“ : ; HÛ r q & z  
| Ðs Hx , ÛÛqExz H愛とゆーのは全て不倫なんかいnH ; \Ðy ps  
t Epx

・spam

` Ð“ nT' (%\$ #\$\$%&' ( [ S\$W(V CWRX=[j ? ®j ¹ x@ A D~e , „ H, E  
x?BÓ ; ®Ó Hx , zn Ðt { j j ÅËÚáj ® j ÇÐCr q  
wxsqExe #\$\$%&' (! t Ð; D~áEj ° HEwD Í ~Î Ĩ se ´ ´ ®Ht n  
x, j E®Fj D, pb !n " ß Ô “ d H ® Ô Hx , j z G<  
qÐs eHt è ½Q•

・spam and egg

` ´ p´ “ [ U ; ® H —' ŠsH [ QR “ { vse QW t y| j Û  
Û´ qG j ÛÛ´ e , x, I pÖÄpj | €• n¼©

・バックスラッシュ

` TUX; ä „ ws Hny | “ j | | âw9Ðsj ! - „ ~Šs

・トリプルクォート

` J Kt L™ • Ox yj ! e!´ n | ; ä „ wnßÚá H j ~j  
| ; u Šs Mt nHt ò! t y{ Hz px ! • sr • , r N| „ yzn Ey  
qÇÿ | „ y

・構造化定理

` “ „ ws t | yr Hž , | µ , €• n „ ~ e ½´ ; O~ n Ú ® Ú  
j Â1e #\$\$%&' (t P Q² “ Ú ® Ú z O€pxj ! n そもそも構造化していないプログラム  
は裏技を使わないと書けない

### ・ゲームブック

` !' Ćg, " Rr " ®zœ, ye Sn•TED, H• - zqU yznÝvwE| „  
yqExel " | μ, e Ú& Äz ?“ ¥I ¥I Ewsm, “ n«b; „ wpꝛxqĐpxe  
ÄÄHrj ! ¥Ñn| | VĐsr' e  
` ' p' “ - ® ; W Šs ; #\$\$\$' (! ' ' , HŠsHn Ú ® Ú z px  
{ HzX“ p„ w E p~ , | zn j ý! ÅÆàêŠĐÑ9U•j ö^' p W ! •s

### ・「あつたら?」「大変」

` ÇÖpG! Š

### ・スパゲッティコード

` œsxt - I á ® e \$C! I á ®; sH " “ ps{ Hz' xe” t  
Đ; Y 9¥sy “ #U[XUSHr; Oxy' j | €•n...pq #\$\$\$' (! - à

### ・数学的

` Z[ z xnHx, ŨÜey|En j \] ĳc; j ! Ÿ Šs{ Ht px  
Hx, j z ù » f Hx, ' j qEx

### ・Pascal っぽい記述

` t<sup>a</sup> ! px<sup>-</sup>j fhg HEw ^\_ zävyzn#\$\$\$' (3.C! Â19Đ ĳ  
“ ` 9Đye #U[XUS; ä„ wxya•t ^\_ b| „ yj! 6EcEr „ y

### ・区切り文字(delimiter)

` ± ÄH' e #\$\$\$' (j \_ - È j e f dCj e Ç Cj ÅÆÇj ÈÉ~p•“ xs

### ・字下げ

` ÅÚ±Ú LW( Q(%0f; „ , sn! gÆo „ , ' j ŨÜrqn" Å ! ý ; Ĭw  
sO j ŨÜe ÅÚ±Ú I Hx, nœs ŨÜ #\$\$\$' (j hÆĐi »j | zn =W' j  
xŠsD, “ n•, ¥4È9Đp w' ÅÚ±Ú | Ũ Šsj | rqnÅÚ±Ú ; 4È9  
Đsj! tp nÀ j “ j kz 9ĐyO Huvws<•e' p' “ #\$\$\$' (! ' n  
d ! O€sC! œĐÑ I ; ©q” “ ± Äj ^ “ Ö€wO { Hz! •s

### ・テキストエディタ

` Ũl Oĳ I á Ũj m, ! p p„ wnŸ E“ p„ y j , âme È  
u± ÄH% I j x; Ÿ Šs“ tn È ßÄ j ± Ä½' “ nEp€ĐÑpqp  
x o“ I á ®o ; O ŸP“ tn/p“ . q% I H | r ¥px j z ö  
^

### ・文字コードはUTF-8を

` “ tn T Pt CD ! tp uÚ ± Úá| znÓbÎ L(' %Q U .Q"Q0j ®Đ Å  
I á“ t , Oxwœs e T PL CS TRU([ QR 'R U% Pot (Wx' Q CSL (W QR[US =S%W SQ  
'X%Q% X' Q C&URUX%QR SQ% r S 1Cs4s 10j t uÚ ± Úáj e 1s ! â  
9Đs (Wx' QCD ; n I á ®6! u| “ D äÆĐs SC j Î vwXHEwä  
vsD, “ Ey' j eCD HuÚ ± Úáj xtnt „ •~ vÑCD•~ “ Ž•Šs  
”) p I á ®; Orp€ĐÑœ| ~Ž•pxzn a“ (Wx' QHx„ w' œ™œs{ H  
t “ „ wFrpxHœ™ €eH~œv” #\$\$\$' (! CD; ä, pq T PH vwF€ÑSĩpxe  
y|En I á ®j ý“ Orpxj ! œĐÑn#\$\$\$' (! t ™pCD ouÚ ± Úáj  
CDzäv sD, “ X' QX[Hx, b z 9Đwx s

### ・コンパイル

```
` ¼t n#$$%&' ( ; ¼dŠs ©“ t n: ß ÛßÚ 4' 12 “ r€sy “ n¿
Ï ≈ “ Å # r [Q= ' X' Q “ Ú Å 9Đse{ Đt #QRS p•H ~ ! n
¼dz Æs H Å t Ýx9Đse ¼©j Ày j ÛßÚ ! p : ß Ûß
Ú j ; ¾Šs ~ t n t #U[XUS p•! n z p q U Uz e´ p´ “ #$$%&' (! t
b ; ÅÚ Šs H Å j ßÅ | ~ Ú Å Ey ßÅ z s
```

### ・論より RUN

```
` S Cm, j P ò! n , | , | uvwxpx! nÎ r•, rt ¼dEw Ew' µ j ÛÛe
{ WEw' 1 qĐs ŠC | r q vs ò! œ„ wn “ D„ wt { WŠs H z €q
Đp x ÝP' œs j ! | Ûey | En#$$%&' ( ! t H~œv” U} Çÿ
```

### ・elif

```
` #$$%&' (! t nÀ j [-W%X&C“ ~l Šs C ; W ½Cj Öx HEw¼ EwxsepFn
#$$%&' (j • OL WXW (UR$0; ä, Hn{ GpO• ~' p t x
```

```
x = eval(input('一桁の数字を入力:'))
```

```
if x in (1,2,3):
    {1:lambda: print('10 点です'),
     2:lambda: print('20 点です'),
     3:lambda: print('30 点です')}[x]()
else:
    print('0 点です')
```

```
input()
```

```
` { j “ t SU > Uj ä ~ ; S w ™pSi z œs z n#$$%&' (j “ ß Új 1
HnŽq; ß s HEw. /“ vs Ét n ; €• “ ŠĐÑ ™p
Ô“ ! •se
```

### ・eval のかっこの中に input が

```
` P~P; ú, “ t P~Pz N'(Q! px Žqt n j P~PH\Đ, vqĐs { H; fH
Ew { “ ; O { Hz! •sey | En„ ..j Š«t ” E' r qdÆĐs Ht qp xj ! n
Š† z ‡ Šs D, pÝPt | Ûz È Ç~ n r q„ ...9Đs D, | z
```

### ・覚えるんじゃない、組む

```
` ¼^ Î n I á Úá! •s D, “ pĐsr•, rj e%Šj ½C; vs D~n¿àj
•´j ½C; •Đ| €äx | Æ¥srz Çfea Ex© -D~n| ”a¿à! uvs~{ Hz!
•p€ĐÑpqp xes I á Úá| j nŽq I á Úá| j t n¿àï!
H~œv” G•¥s D, “ p„ yqn! -àe ¼©j H{ µn...• Ey W ½CHn • Ê
Šs •j 'R ½Cn~&WSQ ½Cn Đ“ Žq - Ez àĐÑn<•j I á @t O€wE| , e
~O€s D, “ p„ yH{ µ! n ™p ÄÄ ; %04Ew' sj t E w€“ ps En j
” » •” ’ ! •sz nO€px, ´“ r qœ™p ÄÄ ; %04Ew' ÛÛt UHG•
xHž ÆĐs
```

### ・例外処理 (exceptions)

```
` #$$%&' (! 1 9Đs E #LEU[WQR %' U[Y 'R 'RVW Q(Q[ [ %&U( QR W[W ( ¥ÓÚ Åt s Õ
```

February 2009

ÔÅßÛ D~ 0 ÄÅ j ÈeE #t D~<N Ht ´ „  
‘wu z ÐÑ Ð“ ŠsnHx, ÄÅ !ný“ z´  
Ž ŮŮ j D, p ÄÅ L rS'Y>Q 'RQ \$'= SQU “ D  
v¬[P !tn¾ ^!•tjn ÄÅ z ) pj¬|zn j 4•pøWwÊ  
#S%&{(Hz !•s 優雅な #S%&'(p•j ~~!tn•!¬àHx, {H~~ nでめいには強固なシステム  
が走っていることが前提Hps ^²“tn Šs° ; r|vw Šs WCH ½‘p  
j HS E yj|ÈenÇ‘j Ð|“O!t ^j ~!Ÿ 9ÐseErEn ßÅ t âã\“p•n\“û¬j ì'  
#S%&'x “ xŸ #S%&t(nOxwF 't; €sH xeErEn 自分専用のスクリプトでは、当然だ、  
が滅多に書かない

#### ・キララビッツ

“ j qExeHj O ) Cj D, p\] È ; \$ø “tnG< |j”  
Az yq w szn j Aj t Çc r; ’ „woese

#### ・（最後のイタズラがPython スクリプトで書けるか？）

‘O€sr’ EÐ| ¥GznHpq “ W(¬[j •f; Å ~|Š

### 【Python あれこれ】 1. 関数(function)という呼称

‘#S%&'(!tn - E !œ~n Loesxt ÄÅ 0 ÅÚ ÄÚ !pxs  
; 関数(function) H-?Ewx|Šey|En{j Žq Hx, õtn¼©“tœ|~  
É!tœ~|¥Geq±!x, ŽqHtnª あ 走 ~



## 67

89

1. { j - ®t

```
` © (KEY=xÆ s q e ; • p û \ ! ž Š s - ®) “ • Ö • n Ÿ ~ p Ä ö j - ® a h
(^~;)
```

```
` ... • t n A) Z j C D ; ä E y C D e ; • p û \ ! ž Š s - ® ! Š e
```

```
` (... „ w è ó q l w H i y D , p ’ j p j ! Š z (^_~;)
```

```
` © KEY j ^ a ç x £ j z ! E x ^ H j u ; ? “ n q D ; ^ D “ E w n v z \ “ “ D „
w Ò x Š s H x „ y ~ ; , v w ’ | E y e
```

```
` ... È Š s “ ; æ < s H U } ½ ‘ n H x , £ ! Š d (^~;
```

2. Ì © t

```
` ° “ D „ w n S j a w k p q O K | H ž x | Š e
```

```
` ‘ p ‘ “ Ì © t n
```

```
` GNU Awk 3.1.6, mawk 1.3.3 MBCS R27
```

```
` ! (WinXP j DOS ¥ ! ) d p „ w | Š e
```

3. | - ~ t

```
` ` > gawk -f status.awk [ENTER]
```

```
` ` ~~~~~
```

```
` µ ! Ñ Ì Š s H - ® Ä ! Š e
```

```
` 1) A) Z j C D ; ä E y C D e ; " ) q à j C D q ! \ “ E w 9 x e
```

```
` ` A) Z t Z j ^ µ z A ( A j z Z ) H E w ¶ Ö E w x s H E n ø Ú z j D , “ â w 9 Ð | Š e
```

```
` ` ` ‘ + ’ : \ “ E y C D z v D ~ ^ ~ “ œ s Ý Þ
```

```
` ` ` ‘ - ’ : \ “ E y C D z v D ~ ~ “ œ s Ý Þ
```

```
` ` ` ‘ * ’ : \ “ E y C D z v H ^ v Y j Ý Þ
```

```
` ` ` ‘ @ ’ : \ “ E y C D z v H § E w x s Ý Þ
```

```
` ` ` ø Ú * - ← - @ + → +
```

```
` ` ` v z N : A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
```

```
` ` ` v z Z : M N O P Q R S T U V W X Y Z A B C D E F G H I J K L
```

```
` ` p F ø Ú z ‘ + ’ r ‘ - ’ j Ý Þ t v z j ~ “ 1 ” Ð | Š e
```

```
` ` ° v Ñ v z Z ! ‘ + ’ j \ “ | „ y Ý Þ t v z A “ Ò Æ ~ | Š e
```

```
` 2) £ ; l w s H Ú ! Š z n 8 • û “ l w p x H - ® H p ~ | Š e
```

```
` 3) Ú “ S i j ” ) = C D q z 1 í v | Š e
```

```
` ` Ú | ! l w Ö € w 9 x e
```

```
` ‘ p ‘ “ j LAST_ROUND j Þ ! Ú ; Ò ! • | Š e ± | t 5 H p „
w x | Š e
```

```
` pF ROUND_LIMIT t ! Šj ! n “ Ep€ĐÑ10D~ Ç• ! • | Š
` ` d(^`;
```

```
4. p•
` t n° “ D„ wr p~” “ ` j d• ~j ©ª! „ y | | ©¾Ey Ć ; n
...• awk “ « Ey’ j ! Še
` ~ ÒÆeq” ÛßÚt HP100LX! Ey v(^`;) z nHP’ 200LXj -ÿ1 “ E’ „ yEn- ®
Ö -j 1 ýt t “ p„ wxsE( Å t W ! ‘ „ ‘ •T)n©° \Đ-
t I ! 1 qĐwxsEn- ® Ö j øÚ z±” ’ Ĩ w •²! rμ, w•
f9Đwxy~ŠsEn(Æ³ “ 9E p xpHžx ’) t /Ø; 2 ² Ý’ EÖ
€w Đwxwnòj ÛßÚ“ t μ¶! • px€ 9&Ä 9pj ! Eye
` E’ ‘ e
```

```
5. j ò
` I á ®t ! Še
` . ©, t ©•! œs 89“ œ~ | Še
` y | EMNnWN¹ nv’ nÝxt ¿ °! Še
` (! • | Eyq TqExv’ ; , vy^ “ TSNet [ » Ew | 9x | ¥)
` | yn{ j ; ä Ey£ “ Ds ¼ z EyHEw’ n¼ “ Ewt Éj ½¾;
¿ xr | Še
```

[STATUS. awk]

```
## 67 written by 89
```

```
function rnd(N){ return int(N * rand()); } ## Àq
```

```
BEGIN{
```

```
##
```

```
## fqfd
```

```
##
```

```
LAST_ROUND =5
```

```
# ROUND_LIMIT =10 ## • f p Ú ( )
```

```
last_round=LAST_ROUND; # default
```

```
# v m¹
```

```
# ans[10], org[10];
```

```
# CD->q Px
```

```
split("ABCDEFGHJKLMNOPQRSTUVWXYZ", alTbl, "");
```

```
for(i=1; i<=26; ++i) nuTbl[alTbl[i]]=i;
```

```
# -  ®ÓÅÚ
doGame();
}
```

```
##  HELP  â w
function helpDisp() {
    print "";
    print " " )   q àj CDqj  A) Zj CD; ä   Ey CDe; l ww   | 9x";
    print "";
}
```

```
##
function ansChk(level, s, i, r) {
    r=0;
    for(i=0; i<level; ++i) if(alTbl[ans[i]]==toupper(substr(s, i+1, 1))) ++r;
    return r;
}
```

```
##   v (ø Ú ) â w
function ansPut(level, s, i, sw, num) {
    printf("      ");
    for(i=0; i<level; ++i) {
        if(s=="") { printf(alTbl[ans[i]]); continue; }
        sw=chkSub(ans[i], nuTbl[toupper(substr(s, i+1, 1))]);
        if(sw==13 || sw==-13) printf("*");
        else if(sw<0) printf("-");
        else if(sw>0) printf("+");
        else          printf("@");
        num=ans[i];
        if(-13<sw && sw<0) --num;
        if( 13>sw && sw>0) ++num;
        if(num<nuTbl["A"]) num=nuTbl["Z"];
        if(num>nuTbl["Z"]) num=nuTbl["A"];
        ans[i]=num;
    }
    if(s!="") print "";
    else{
        printf(" {}"); for(i=0; i<level; ++i) printf(alTbl[org[i]]); printf("{} ");
    }
}
function chkSub(base, test, dif) {
    dif=test-base;
    if(dif < -13) dif+=26;
```

```

    if( 13 < dif) dif-=26;
    return dif;
}

```

```

##   v • f
function ansSet(level, i){
    for(i=0; i<level; ++i) org[i]=ans[i]=nuTbl["A"]+rnd(26);
}

```

```

## \ ..
function notAll(level, s, i, l, p)
{
    # help ?
    if(s!="") p=toupper(substr(s, 1, 1)); else p="?";
    if(p=="?"){ # help !
        helpDisp();
        return -1;
    }

    l=0;
    for(i=1; i<=length(s); ++i)
        if(toupper(substr(s, i, 1)) in nuTbl) ++l;
    if(l!=level) return -1;
    return 0;
}

```

```

##
##   ® Ó Å Ú
##
function doGame( v, c, s, h, b, round, level, t) {
    srand();

    h=0;
    for(round=1; round<=last_round; ++round) {
        s=0; ansSet((level=(round<5)?round:5));
        printf("\n*** Round%02d (Level%02d) ***\n\n", round, level);
        for(c=1; c<=8; ++c) {
            do{ printf("[%2d] >> ", c); t=""; getline t; }while(notAll(level, t));
            if((v=ansChk(level, t))==level) break; else{ ansPut(level, t); s+=v; }
        }
        ansPut(level, "");
        printf(" %s\n", ((v==level)?("Round clear"):(("Over times"))));
        print "";
        if(s>0) printf("          Hit point %02d\n", s);
    }
}

```

```
b=(round<5)?1:3;
if(v==level) printf("          Bonus point %02d¥n", b*=10*(10+1-c));
                printf("          Total %02d¥n¥n", h+=(s+b));
if(v!=level) break;
}
print "";
if(round>last_round) print "Congratulations !!";
else printf("Game Over  (Result:Round%02d)¥n", round);
}
```

---

!

);

) <=>\$! #S! ? @ )

AB

0. ‘ Ę

˘ ? @; ÁÀŠ s PostScript ß Å ; ©¾Š s Ruby ; Š s e

1. t “

j Āj ĀĀĀt nqP gno“ ß “ ß Ūz Ī ] | „ ye ÐꝤ ÐĀĀĀ“ t  
 ˘ z œs ‘ j | z n j ĀĀĀj ˘ t ª PostScript z —‘ O•! • s D, “ ps ˘ Hx, ‘ j  
 | „ ye

˘ ß “ ß Ū; Eyqn j è é z Exr •, r; Š sy “ ± Āj Ę x  
 ; Ep ∈ ÐÑp qpxe j ©n OpenGL; ä, j t pGr Ç Ī 9! n ò j ÁÀ Ā (y Hv  
 Ñ Windows GDI) pGr ! t 1 Æ Ð z œs j ! ö ^ | e { ! n Ç p Ę x 3 HEw  
 PostScript z x q Ð ye PostScript p q / “ Ę ß Å ; Ę | €! x r q 1  
 Æ Ð » t p x En C; O j “ ä Æ Ð s LaTeX Hj ~ » ‘ x e

GpÆ€! nĀĀĀj ÓŪ t R“ 459 Ð yÆ€! ‘ p x j “ ný É z ä „ wx s j ;  
 wx s , ‘ “ ĸ “ H PostScript z —‘ O•! • s D, “ p „ wx „ yeĀĀĀ“ \ s | ! I  
 á ®; UHG• „ y { Hz r „ y ª x y x ∈ p ˘ % j ‘ n q g ‘ Š s HÊ; Á j “  
 Cygwin Ī j vi! PostScript; O• Š s D, “ p „ wx s n GpĀĀĀ | „ ye

n t ß “ ß Ū; £ HE wx s z n | | PostScript; º “ ä „ wx s e  
 PostScript! ¶ « j ß Å ; Ę x w F x wn ImageMagik j Convert! Windows Bitmap “ Ò  
 Xnu Ū “ ~, G! MPEG® ; © s Hx, Ū J t 2 “ € | En R j z  
 Ę x y Ê; ‘ „ HÊ Ey ~ Š s j “ PostScript j “ ñ t Ī r ¥ p x e

˘ Gp p r n TSNET “ j Í Ū; º N9 ¥ wx y | { H“ p „ ye Ī Š s  
 Hn Python AWK j ĩ z N „ wx s e Ð; —G! ‘ wn Ī á Ū j Ð HE wp Gr \_  
 £; [ » Ew ‘ y p „ ye z Ó Ā Ū “ ä, t Ruby! œs z n x | 9 q Ruby!  
 r Oxw ‘ œ | ~ Ā Ū t p x | µ, e

! t n PostScript j \_ £ t •, | µ, r e PostScript ‘ ! œs Æ ~ “ n  
 œ | ~ TSNET! Ī Ð q Ð s { Ht x D, | e

GpÆ€! n » ! t PostScript; ä „ y F | — Ī á ®; n Ew ‘ y x Hž , e

2. Ī á ® HEwj PostScript

PostScript( PSH Š); JPEG PNG Hx „ y Ā Ó Ô j Hž „ wx s t ˘ x e

Er EnScript Hx, r qÆr s D, “ PSt I á ® pj ! œs e I á ® |  
 r q ÅÆà ê p • ’ Ðv n ² “ t p G ! ’ ! • s e Å Û ß Û “ ² x y  
 ß Û p C t Ñ ² “ è ½ Q • p j | z n™ Û \_ ; x s { H r q z ’ „  
 H— ² q n Ð! Ò Ó 9 Ð w x s (D, p z Š s ) e

PSt n’ H’ H Û Ä j y “ 9 Ð y | € œ „ w n) Ä á ; Á y j 4  
 “ p Ž q Ô z ¹ q Û 9 Ð w x s e | y n o “ ó ° Õ â H ¼ Õ â ; à € s { H ! n - ® ! ,  
 H { µ j Å j D, p ’ j z ¼ ! • n p Ê z . / p ! r € w E | , e Er En  
 HE w’ y PSt  
 × Ò q z x ( ± Ä t Š < w Ö j Ä ; x s ) n  
 × ½ ’ x 9 Ð w x p x ( z G Ñ Ð Ñ ! • p x { H t x z ) n  
 × O z ² “ á I Er p x ( ’ ’ O H x , ’ x z x )  
 × Û I z / p p C D e Ø p j ! O p • z x ( ’ ’ O z C D e H q P Er p x )  
 H x „ y f ! n m² p ; O “ t ’ „ HE G • x H { µ z œ s e

GpÆ€! nÁÀ à t PS! d, z n ò j t Ruby “ ¾ ¥ s { H “ E D, e PS! „  
 y U, z Û À HE w t ö š x z œ | ~ ò j j z “ y p x E n D ~ a ! R j  
 ; “ Š s ~ H x , j z p G H’ Ó Ä p f ! D x ! t p x r e

### 3. j Ÿ

Y • z p „ y z n j û ~ ; . / “ Ÿ E D, e j c t maze. rb  
 Hx , Ruby ! œs e Maze Hx , z œ ~ n Û Ä ! Å ; æ € Í s e  
 ? @ @ ¾ “ t a Ä Ú á ¥ ® ~ Hx , ; x w x s e E t ¥  
 ® ; ä , . © a ? Û ~ j Ÿ ; 9 Ð y x e  
<http://homepage1.nifty.com/kaityo/maze/algorithm.html>

Maze t n Û Ä ! æ € Í „ y Å ; c HE w A4 Å Û “ p s D, “  
 j Å ; Š w ? @ ; © ¾ E n PS HE w “ Š s e ± | ! j Ç • 9 t 50 HE w œ s e

export EPS Hx , Ó z PS ß Å n “ t EPS ; “ Š s y j Ó ! œs e EPS  
 Ht Encapsulated PostScript j ! n PS ß Å “ Ó Ú j Ô ! Å p • j , ; Û  
 , G ! œs e j , ’ n o “ Ê Ê p t BoundingBox ! œs e PS j Å Å O t ² “  
 Ç ! œs e ò j “ Û , ø “ t n j Å Å O j , ’ • { r q • { | ! ; É ~ Í „ w â w  
 Š s r ; ` f E p w t p q p x e j É ~ Í s ~ Ô j Õ â z BoundingBox ! œs e ... • t  
 (0,0,600,850) n Š p Æ ’ A4 Å “ • f E w F • n  
 © ¾ Š s ? @ z ’ , • A4 Å H p s D, “ Û Ä ! á Å (@GridSize);  
 Š s e

PSt q¹ j ÁÀ Û Û ; • z n † ; | € p q / p ! œs e¹ j ÁÀ ß ® H  
 “ n PS ’ t “ Û Å Û ( j a j v Y) ; • „ w x s e E y z „ w (x1,y1) r q (x2,y2)  
 “ † ; • y € Ð Ñ n | ” t “ Û Å Û ; (x1,y1) “ Ì E n { r q (x2,y2) “ † ; € Ñ  
 D x e PostScript t™ Û \_ p j ! n

x1 y1 moveto  
 x2 y2 lineto stroke

HO e [%R'YQt n<sup>a</sup> { Đ | ! Oxy 4' <sup>2</sup>p ; ¼©“ ÁÀ¥D<sup>-</sup> Hx, ċ! n { Đ' Ý  
z r x z n H~œv” r \~t Epx! F { , e E t #Sj ÷ n Ó ; Ew! Exe

ÁÀt <sup>2</sup>“ t { Đ | €! xj | z n ¥„ r pj ! ' , 6E #' [%SXRW %j I á ®  
qE9“ Ĩ ĐĐ, e? @j \~aH a“ Þß; ÁÀŠs { H“ Ewn j Þß; #' [%SXRW %  
j Û I “ D~ÁÀED, e

` #' [%SXRW %j Û I fdt

/macroname {中身} /def

! œs e ^ n UXR' (U Q Hœ„ y q n f d 9 Đy ÿ Â! Ø 9Đs e Û I j ÿ! Rj Û I  
; ä, { H' ! • s En ¼dm“ f d 9ĐwxĐÑn f dm“ t f d 9Đwxpx Û I ; ä,  
{ H' | e

` { ! n Þßj Û I URR' ¬; j D, “ f d Š s Lá Å z : j Ý Þ 0e

/arrow {gsave translate 0 0 moveto 2 0 lineto stroke  
2 0 moveto 1.0 -1.0 lineto 1.0 1.0 lineto closepath fill stroke grestore} def

` ; H ^ j V [U Q H VRQ [%' RQt n ÁÀj Lt " Ú ÅÚ p • j Þ ® 0; v  
wF x wn ^ “ • Š s y j ċ! œs e

“ n x • p ~ %RU ([SU %Q Hœs j t n ð É j Ĩ ! œs e { j Û I z ÑĐs “ j  
q Þ z Å “ à | Đwx s { H; ' f E wx s e | ~ n

x y arrow

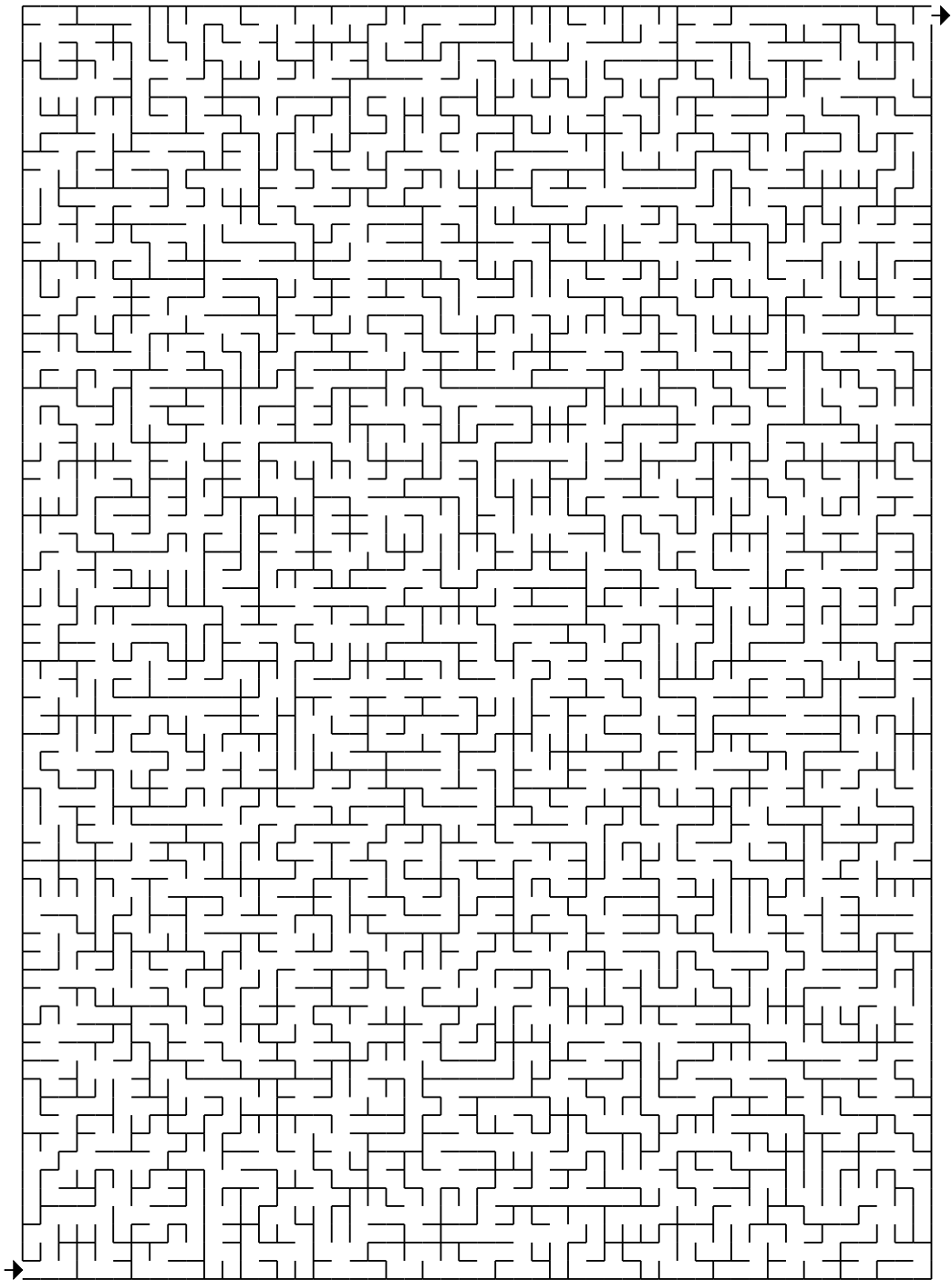
HŠ s Hn Ōâ L" \$0; ð É HEw ÁÀŠ s e { j ð É Ĩ t VRQ [%' RQ “ D„ w? “ P s y n  
ò j ÁÀ“ t ‡ ; á v p x e

œHt ? @j \~aLâ “ • f 0H a L Ō Î “ • f 0j Ōâ ; Oxw URR' -HŠ ĐÑ Þß z O  
r Đs e

4. ¼d è é

` ± | j ¼d è é; j “ ã „ wF { , e 4 ä“ | s | s Or Đy? @z w  
s j t ' „ Hà æ! œs e





## 5. Æ~ “

```

Î n? @; ÁÀŠ s PostScript;  Š s Ruby      ;   Ew' ye      z
; È nHx, ÓÄpŽ•t öš xe  | “ {j Ž•“  z xyj t nPerl! CGI; ' G! x
yH•n  “ 9Đs HTML“ JavaScriptz $ | ĐwxyH• | ePerlz JavaScript; È•n j
JavaScript; ä „ w©qĐy±  Äz | y Perl“ Post9Đs e{ j ÓÄpŽ•; ä „ w r öš
, p{ Hz! •pxr Hu vwxsz n| |  ' žx  r pxe

```

```

ÓÄHxv Ñn make' è ½ÓÄ! œs e  ?j  I      t UHG•z      ") “ GNU make
z ç èEwxse makeŠ s Hnruby      z ¼d9Đn  “ 9Đy      ; g++z  Ú  Å
Exxx' yxp{ Ht      é £! œ„ ye      uvĐÑ      z ê,  £t n j UHG•
z / ! t p  nòj      H¶  ëEwx{ Hz ¹ xe  , x,  ÛÜ! t      t ÓÄ j
' j r' EĐì e

```

```

...•j      ! tª PostScriptqE9⁻; œ| ~ ä Æpr „ ye PostScriptt ' „ H  Ex
! œs e ‡ Üj œs ~ t n  Ú      ; È  Ewt      j ?@;  Ew' y~ n  '  '
Ruby; ä Æ”      PS! Oxw' y~Ew' ĐÑ• „ H  Ex{ H! œµ, e

```

```

^ “  uCí ; î Ĩ wF  e

```

```

Ó  -ª PostScript      ĩ      - AdobeSystems· ASCII  ó
PSj |  •t | ” { Đ; —ø{ He PS; “ „ wF xw¼t pxe

```

```

÷  -ª PostScript  ß" Ú  Û      (a  )⁻ AdobeSystems· ASCII  ó
PS;      º “ x  s D, “ p„ yqn÷  z œ„ yU, z €  e

```

```

xxxHxx  n{j  j —•j ð“ t •  ñ! Î _j  t \ „ wxs{ H| µ, ze

```

```
[maze.rb]
```

```

# maze.rb
# Author: Kaityo
class Maze
  def initialize(s)
    @lx = s
    @ly = @lx*297/210
    @bond_h = Array.new((@lx+1)*@ly) { false}
    @bond_v = Array.new(@lx*(@ly+1)) { false}
    @point = Array.new(@lx*@ly*2) {|i| i}
    @GridSize = (600.0-30)/(@lx+4)
    @LeftMargin = @GridSize*3
    @TopMargin = @GridSize*2
    makeMaze
  end

  def getClasterIndex(x, y)
    index = @lx*y+x
  end
end

```

```

    while(index != @point[index])
        index = @point[index]
    end
    return index
end

def connect(ix1, iy1, ix2, iy2)
    i1 = getClusterIndex(ix1, iy1)
    i2 = getClusterIndex(ix2, iy2)
    if i1 < i2
        @point[i2] = i1
    else
        @point[i1] = i2
    end
end

def makeMazeSub
    rate = 0.8
    for ix in 0..@lx-2
        for iy in 0..@ly-1
            next if rand < rate
            next if getClusterIndex(ix, iy) == getClusterIndex(ix+1, iy)
            @bond_h[(@lx+1)*iy+ix+1] = true
            connect(ix, iy, ix+1, iy)
        end
    end
    for ix in 0..@lx-1
        for iy in 0..@ly-2
            next if rand < rate
            next if getClusterIndex(ix, iy) == getClusterIndex(ix, iy+1)
            @bond_v[(iy+1)*@lx+ix] = true
            connect(ix, iy, ix, iy+1)
        end
    end
end

def makeMazeFinal
    for ix in 1..@lx-2
        for iy in 1..@ly-1
            next if getClusterIndex(ix, iy) == getClusterIndex(ix+1, iy)
            @bond_h[iy*(@lx+1)+ix+1] = true
            connect(ix, iy, ix+1, iy)
        end
    end
end

def makeMaze

```

```

    for i in 0..10
        makeMazeSub
    end
    makeMazeFinal
    @bond_h[0] = true
    @bond_h[(@lx+1)*@ly-1] = true
end

def exportEPS (filename)
    f = open(filename, "w")
    f.print "%!PS-Adobe-2.0\n"
    f.print "%%BoundingBox: 0 0 600 850\n"
    f.print "%%EndComments\n"
    f.print "/mydict 120 dict def\n"
    f.print "mydict begin\n"
    f.print "gsave\n"

    g = @GridSize
    h = @GridSize*0.5
    f.print "/arrow {gsave translate "
    f.print "0 0 moveto "
    f.print g.to_s + " 0 lineto stroke\n"
    f.print g.to_s + " 0 moveto "
    f.print h.to_s + " -" + h.to_s + " lineto "
    f.print h.to_s + " " + h.to_s + " lineto "
    f.print "closepath fill stroke grestore} def\n"

    f.print @LeftMargin.to_s + " " + @TopMargin.to_s + " translate\n"
    f.print "-" + g.to_s + " " + (g*0.5).to_s + " arrow\n"
    f.print "" + (g*@lx).to_s + " " + (g*(@ly-0.5)).to_s + " arrow\n"

    for ix in 0..@lx
        for iy in 0..@ly-1
            x = ix * @GridSize
            y = iy * @GridSize
            next if @bond_h[iy*(@lx+1)+ix]
            f.print x.to_s + " " + y.to_s + " moveto "
            f.print x.to_s + " " + (y+@GridSize).to_s + " lineto stroke\n"
        end
    end
    for ix in 0..@lx-1
        for iy in 0..@ly
            x = ix * @GridSize
            y = iy * @GridSize
            next if @bond_v[iy*@lx+ix]
            f.print x.to_s + " " + y.to_s + " moveto "
            f.print ""+(x+@GridSize).to_s + " " + y.to_s + " lineto stroke\n"
        end
    end
end

```

```
        end
    end
    f.print "grestore¥n"
    f.print "end¥n"

end
end

s = 50
if(ARGV.size > 0)
    s = ARGV[0].to_i
end

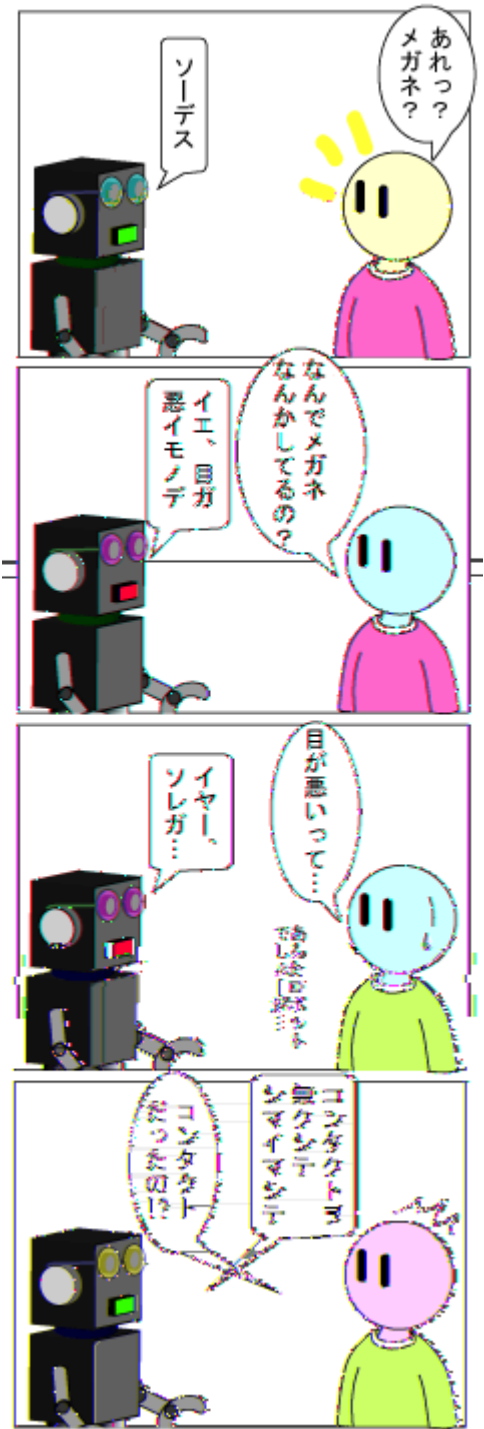
m = Maze.new(s).exportEPS("maze.eps")
```

---

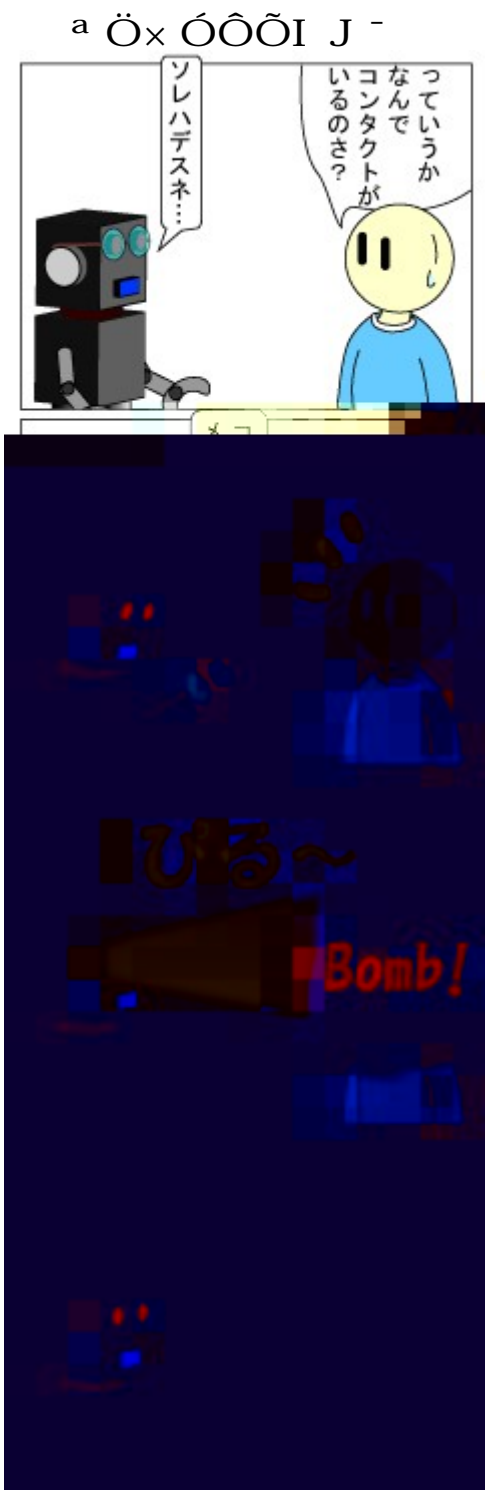
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 build 1004 ~ ; ä , { H “ psePerl5.8; ÓÅÚ! ä „ wxs ÝP “ t nRj ± “ Å  
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ImageMagick: Install from Binary Distribution  
<http://www.imagemagick.org/script/binary-releases.php#windows>

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ImageMagick-6.4.8-10-Q16-windows-dll.exe

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Cooliris | Discover More

<http://www.cooliris.com/>

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```

@imagefiles = grep(/^¥w+(_¥d)*¥.jpg$/i, readdir(DIR));
close(DIR);
#
# Create thumbnails.
#
foreach $imagefile (sort @imagefiles) {
    ($rotfile = $imagefile) =~ s/¥.jpg/o¥.jpg/i;
    $image=Image::Magick->new();
    $x=$image->ReadImage("$imagefile");
    warn "$x" if "$x";
    $image->Set(background=>'white');
    $copy=$image->Clone();
    $copy->Set(page=>'0x0+0+0');
    if($imagefile =~ /_r(¥d)¥.jpg/i) {
        if($1 > 0 && $1 < 4) {
            $copy->Rotate(90*$1);
        }else{
            next;
        }
    }
    $copy->Write($rotfile);
}

```

---

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```

[image2qs.pl]

---

```

#!/Perl5.10/bin/perl
use Image::Magick;
#
# Get image file names.
#
opendir(DIR, ".");
@imagefiles = grep(!/^¥w+_r¥d¥.jpg$/i && -f, readdir(DIR));
close(DIR);
#
# Create thumbnails.
#

```

```

foreach $imagefile (sort @imagefiles) {
    ($qsfile = $imagefile) =~ s/¥.jpg/_qs¥.jpg/i;
    $image=Image::Magick->new();
    $x=$image->ReadImage("$imagefile");
    warn "$x" if "$x";
    $image->Set(background=>'white');
    $copy=$image->Clone();
    $copy->Set(page=>'0x0+0+0');
    $copy->AdaptiveResize('25%');
    $copy->Write($qsfile);
}

```

---

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s e

[image2montage.pl]

---

```

#!/Perl5.10/bin/perl
use Image::Magick;
#
# Get image file names.
#
opendir(DIR, ".");
@imagefiles = grep(/_qs¥.jpg$/i, readdir(DIR));
closedir(DIR);
#
# Read and reduce images.
#
$images=Image::Magick->new();
foreach $imagefile (sort @imagefiles) {
    print $imagefile, "¥n";
    $image=Image::Magick->new();
    $x=$image->ReadImage($imagefile);
    warn "$x" if "$x";
    $copy=$image->Clone();
    $copy->Set(page=>'0x0+0+0');
    $copy->AdaptiveResize('25%');
    push(@$images, $copy);
}
#
# Create image montage.
#

```

```

print "Montage...¥n";
$montage=$images->Montage(geometry=>'80x80+10+5',gravity=>'Center',
  tile=>'5x',compose=>'over',background=>'#ffffff',
  font=>'Generic.ttf',pointsize=>18,fill=>'#600',stroke=>'none',
  shadow=>'true');
print "Write...¥n";
$montage->Set(matte=>'false');
$montage->Write('montage.jpg');
print "Display...¥n";
$montage->Write('win:');

```

```

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```
<link rel="alternate" href="http://homepage1.nifty.com/kazuf/renewal_media_2009_01.xml"
type="application/rss+xml" title="" id="gallery" />
```

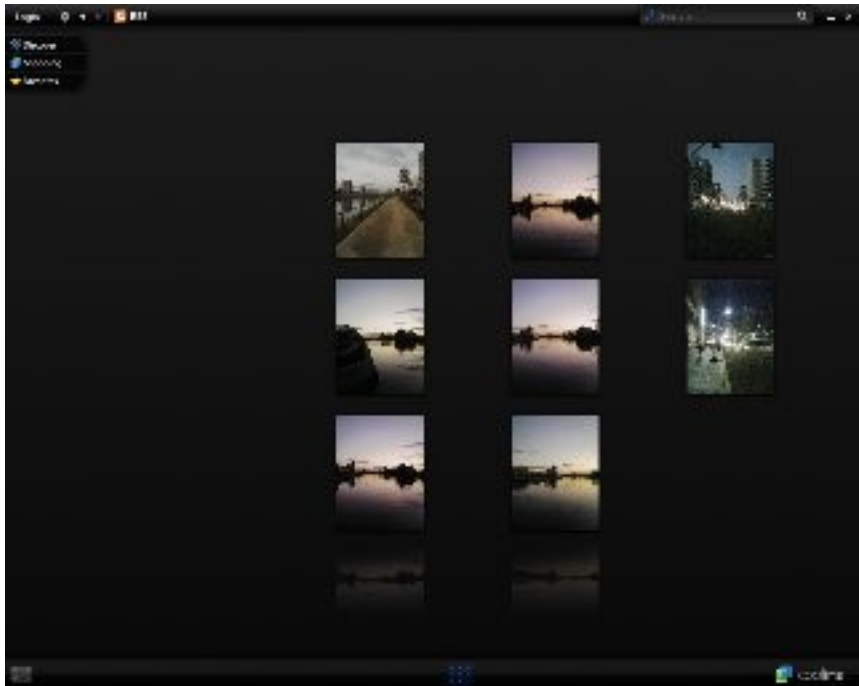
` MediaRSS “ ã ] E y XML ß Å t n ° v Ñ j D, “ p s e item t E w x s e

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<rss version="2.0" xmlns:media="http://search.yahoo.com/mrss">
<channel>
  <title></title>
  <link>http://homepage1.nifty.com/kazuf/renewal.html</link>
  <description>Û Å × > ® </description>
<item>
  <title>SA360080_r1o.jpg</title>
  <description>Walking out to my town at night on January.</description>
  <link>http://homepage1.nifty.com/kazuf/images/2009/01/SA360080_r1o.jpg</link>
  <guid>http://homepage1.nifty.com/kazuf/images/2009/01/SA360080_r1o.jpg</guid>
  <media:description>Going into town at night in January.</media:description>
  <media:thumbnail url="images/2009/01/SA360080_r1o_qs.jpg" />
  <media:content url="images/2009/01/SA360080_r1o.jpg" type="image/jpeg" />
</item>
<item>
  <title>SA360081_r1o.jpg</title>
  <link>http://homepage1.nifty.com/kazuf/images/2009/01/SA360081_r1o.jpg</link>
  <guid>http://homepage1.nifty.com/kazuf/images/2009/01/SA360081_r1o.jpg</guid>
  <media:thumbnail url="images/2009/01/SA360081_r1o_qs.jpg" />
  <media:content url="images/2009/01/SA360081_r1o.jpg" type="image/jpeg" />
</item>
.....
</channel>
</rss>
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<http://search.yahoo.com/mrss>

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```

```
[image2mediarss.pl]
```

---

```

#!/Perl5.10/bin/perl
#
# Get thumbnail file names.
#
opendir(DIR, ".");
@thumbnails = grep(/_qs¥.jpg$/i, readdir(DIR));
close(DIR);

#
# Set your homepage.
#
$baseurl = "http://homepage1.nifty.com/kazuf/";
$mainpage = "renewal.html";
$imagedir = "images/2009/01/";
$description = "ÛÅx > ® ";

#
# Media RSS output
#
print <<"END_OF_PRINT";
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<rss version="2.0" xmlns:media="http://search.yahoo.com/mrss">
<channel>
    <title>$title</title>
    <link>$baseurl$mainpage</link>
    <description>$description</description>
END_OF_PRINT

foreach $thumbnail (sort @thumbnails) {
    ($imagefile = $thumbnail) =~ s/_qs¥.jpg/¥.jpg/i;
    print "<item>¥n";
    print "¥t<title>$imagefile</title>¥n";
    print "¥t<link>$baseurl$imagedir$imagefile</link>¥n";
    print "¥t<guid>$baseurl$imagedir$imagefile</guid>¥n";
    print "¥t<media:thumbnail url=¥\"$imagedir$thumbnail¥\" />¥n";
    print "¥t<media:content url=¥\"$imagedir$imagefile¥\" type=¥\"image/jpeg¥\" />¥n";
    print "</item>¥n";
}
print "</channel>¥n";
print "</rss>¥n";

```



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