# Problem A
# GCD
# Time limit: 1 second
# Memory limit: 256 MB

## 題目內容

輸入兩個正整數，計算並輸出這兩個數的最大公因數（GCD)。

Write a program to input two positive integers, calculate, and output their Greatest Common Divisor (GCD).

## 輸入說明

輸入兩個正整數。

Please enter two integer.

## 輸出說明

輸出一個正整數。

Please output an integer.

## 範例輸入 #1

13 39

## 範例輸出 #1

13

# Problem B
# Fibonacci Sequence
# Time limit: 1 second
# Memory limit: 256 MB

## 題目內容

輸入一個正整數 n，輸出前 n 個費氏數列的數字。

費氏數列每一項為前兩項之合，前兩項為 1。

F(1) = 1 ; F(2) = 1 ; F(n) = F(n - 1) + F(n - 2)

Write a program that takes a positive integer n as input and outputs the first n numbers in the Fibonacci sequence.

In Fibonacci Sequence, each number is the sum of the previous two number, starting with 1 and 1.

F(1) = 1 ; F(2) = 1 ; F(n) = F(n - 1) + F(n - 2)

## 輸入說明

輸入一個正整數 n。

Enter an integer.

## 輸出說明

輸出前 n 個費氏數列。

Output the first n Fibonacci number.

## 範例輸入 #1

4

## 範例輸出 #1

1 1 2 3

# Problem C
# Character
# Time limit: 1 second
# Memory limit: 256 MB

## 題目內容

試撰寫一程式，判斷讀到的字元為「大寫字母」、「小寫字母」、「數字」、「符號」。

Write a program that determines whether the character is 'uppercase letter', 'lowercase letter', 'number', or 'symbol', and output according to the following descriptions.

## 輸入說明

輸入為一字元 n

The input is a single character 'n'.

## 輸出說明

- 若 n 為大寫字母，印出 "uppercase letter"。
- 若 n 為小寫字母，印出 "lowercase letter"。
- 若 n 為數字，印出 "digit"。
- 若 n 為符號，印出 " symbol"。
- If 'n' is an uppercase letter, print "uppercase letter".
- If 'n' is a lowercase letter, print "lowercase letter".
- If 'n' is a digit, print "digit".
- If 'n' is a symbol, print "symbol".

## 範例輸入 #1

```
A
```

## 範例輸出 #1

```
uppercase letter
```

## 範例輸入 #2

```
*
```

## 範例輸出 #2

symbol

Hint: 請參考 ASCII 表

| dec | hex | oct | char | dec | hex | oct | char | dec | hex | oct | char | dec | hex | oct | char |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 000 | NULL | 32 | 20 | 040 | space | 64 | 40 | 100 | @ | 96 | 60 | 140 | ` |
| 1 | 1 | 001 | SOH | 33 | 21 | 041 | ! | 65 | 41 | 101 | A | 97 | 61 | 141 | a |
| 2 | 2 | 002 | STX | 34 | 22 | 042 | " | 66 | 42 | 102 | B | 98 | 62 | 142 | b |
| 3 | 3 | 003 | ETX | 35 | 23 | 043 | # | 67 | 43 | 103 | C | 99 | 63 | 143 | c |
| 4 | 4 | 004 | EOT | 36 | 24 | 044 | $ | 68 | 44 | 104 | D | 100 | 64 | 144 | d |
| 5 | 5 | 005 | ENQ | 37 | 25 | 045 | % | 69 | 45 | 105 | E | 101 | 65 | 145 | e |
| 6 | 6 | 006 | ACK | 38 | 26 | 046 | & | 70 | 46 | 106 | F | 102 | 66 | 146 | f |
| 7 | 7 | 007 | BEL | 39 | 27 | 047 | ' | 71 | 47 | 107 | G | 103 | 67 | 147 | g |
| 8 | 8 | 010 | BS | 40 | 28 | 050 | ( | 72 | 48 | 110 | H | 104 | 68 | 150 | h |
| 9 | 9 | 011 | TAB | 41 | 29 | 051 | ) | 73 | 49 | 111 | I | 105 | 69 | 151 | i |
| 10 | a | 012 | LF | 42 | 2a | 052 | * | 74 | 4a | 112 | J | 106 | 6a | 152 | j |
| 11 | b | 013 | VT | 43 | 2b | 053 | + | 75 | 4b | 113 | K | 107 | 6b | 153 | k |
| 12 | c | 014 | FF | 44 | 2c | 054 | , | 76 | 4c | 114 | L | 108 | 6c | 154 | l |
| 13 | d | 015 | CR | 45 | 2d | 055 | - | 77 | 4d | 115 | M | 109 | 6d | 155 | m |
| 14 | e | 016 | SO | 46 | 2e | 056 | . | 78 | 4e | 116 | N | 110 | 6e | 156 | n |
| 15 | f | 017 | SI | 47 | 2f | 057 | / | 79 | 4f | 117 | O | 111 | 6f | 157 | o |
| 16 | 10 | 020 | DLE | 48 | 30 | 060 | 0 | 80 | 50 | 120 | P | 112 | 70 | 160 | p |
| 17 | 11 | 021 | DC1 | 49 | 31 | 061 | 1 | 81 | 51 | 121 | Q | 113 | 71 | 161 | q |
| 18 | 12 | 022 | DC2 | 50 | 32 | 062 | 2 | 82 | 52 | 122 | R | 114 | 72 | 162 | r |
| 19 | 13 | 023 | DC3 | 51 | 33 | 063 | 3 | 83 | 53 | 123 | S | 115 | 73 | 163 | s |
| 20 | 14 | 024 | DC4 | 52 | 34 | 064 | 4 | 84 | 54 | 124 | T | 116 | 74 | 164 | t |
| 21 | 15 | 025 | NAK | 53 | 35 | 065 | 5 | 85 | 55 | 125 | U | 117 | 75 | 165 | u |
| 22 | 16 | 026 | SYN | 54 | 36 | 066 | 6 | 86 | 56 | 126 | V | 118 | 76 | 166 | v |
| 23 | 17 | 027 | ETB | 55 | 37 | 067 | 7 | 87 | 57 | 127 | W | 119 | 77 | 167 | w |
| 24 | 18 | 030 | CAN | 56 | 38 | 070 | 8 | 88 | 58 | 130 | X | 120 | 78 | 170 | x |
| 25 | 19 | 031 | EM | 57 | 39 | 071 | 9 | 89 | 59 | 131 | Y | 121 | 79 | 171 | y |
| 26 | 1a | 032 | SUB | 58 | 3a | 072 | : | 90 | 5a | 132 | Z | 122 | 7a | 172 | z |
| 27 | 1b | 033 | ESC | 59 | 3b | 073 | ; | 91 | 5b | 133 | [ | 123 | 7b | 173 | { |
| 28 | 1c | 034 | FS | 60 | 3c | 074 | < | 92 | 5c | 134 | \ | 124 | 7c | 174 | \| |
| 29 | 1d | 035 | GS | 61 | 3d | 075 | = | 93 | 5d | 135 | ] | 125 | 7d | 175 | } |
| 30 | 1e | 036 | RS | 62 | 3e | 076 | > | 94 | 5e | 136 | ^ | 126 | 7e | 176 | ~ |
| 31 | 1f | 037 | US | 63 | 3f | 077 | ? | 95 | 5f | 137 | _ | 127 | 7f | 177 | DEL |

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# Problem D
# Shopping
# Time limit: 1 second
# Memory limit: 256 MB

## 題目內容

假設在某商店中購物，輸入所應付款的金額及實際交給店員的金額，輸出則為應找回最少的鈔票數與錢幣數，如果交給店員的金額少於應付金額，則印出 "not enough" 字串（假設幣值只有 1000、500、100、50、10、5 與 1 元）。

Assuming you are shopping at a store, input the amount to be paid and the amount actually given to the cashier. The program should output the minimum number of banknotes and coins to be returned as change. If the amount given to the cashier is less than the amount to be paid, then print the string 'not enough'. (assuming the denominations are only 1000, 500, 100, 50, 10, 5, and 1 )

## 輸入說明

輸入為 n,k 兩個整數，n 代表應付金額，k 代表實際交給店員的金額。

舉例來說，範例輸入 1 代表應付金額為 643，實際付款金額為 1000

The input consists of two integers, n and k, where 'n' represents the amount due, and 'k' represents the amount paid to the cashier. For example, input '1' signifies an amount due of 643, with an actual payment of 1000.

## 輸出說明

輸出則依序從 1000/500/100/50/10/5/1 輸出所需數量，數字中間由空格隔開

舉例來說，範例輸出 1 代表所找回金額數量有 0 張 1000，0 張 500，3 張 100 元，1 個 50 元，1 個 10 元，1 個 5 元，2 個 1 元。

The output consists of the required quantities of denominations in the following order: $1000/$500/$100/$50/$10/$5/$1, separated by spaces. For example, output '1' signifies there are 0 notes of $1000, 0 notes of $500, 3 notes of $100, 1 note of $50, 1 note of $10, 1 note of $5, and 2 notes of $1.

## 範例輸入 #1

643 1000

## 範例輸出 #1

0 0 3 1 0 1 2

# Problem E
# Rock Paper Scissors
# Time limit: 1 second
# Memory limit: 256 MB

## Problem Statement

今天，A 和 B 在玩剪刀石頭布。寫一程式來決定誰贏。

Today, A, B are playing a rock paper scissors game. Make a program to determine the result of the game.

## Input

請替 A 和 B 分別輸入 R、P 或 S。

Please enter R or P or S for A, B respectively.

## Output

請輸出遊戲的結果，有三種，分別為: A win、B win、tie。

Please output the results of the game in a total of three scenarios: A win, B win and tie.

## Sample Input #1

```
R P
```

## Sample Output #1

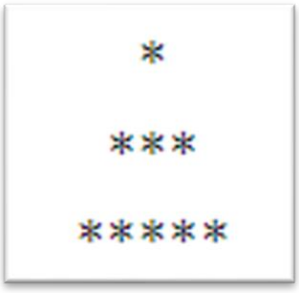
```
B win
```

# Problem F
# The Fallen Pyramid
# Time limit: 1 second
# Memory limit: 256 MB

## Problem Statement

用*來表示金字塔，每多一層會多兩個*。寫一個程式將金字塔順時鐘旋轉 90 度，再將其輸出。

The top of the pyramid is a * and each subsequent layer * adds 2. Write a program to print a pyramid that falls at 90 degrees clockwise. Below is a normal pyramid with three layers.




## Input

請輸入一個整數來表示金字塔的層數。需要界在 1 和 10 之間。

Please enter an integer to represent the number of layers of the pyramid.

The range is : 0 < The number of layers < 10

## Output

請用*來畫出旋轉後的金字塔。

Please use * to output the shape of the pyramid.

## Sample Input #1

```
3
```

## Sample Output #1

```
*
**
***
**
*
```