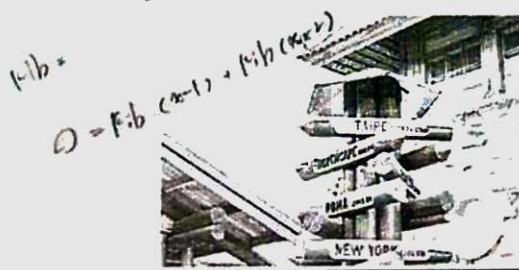


(30%)

- II. Define a class Date with proper specifier and three attributes: year, month, and day and two member functions setdate and printdate. (just put the class definition, no implementation needed) (10%)**

(20 %)

- IV.** In an arctic circle city, Rovaniemi, Finland, there is a Santa Claus village. In the village, there is a directory signs which shows the distances from the village to the major cities in the world. (a, b, c each 5%: d:10%)



Parts of the signs are:

Destination	Distance
Taipei	7804
Roma	2985
New York	6204

- a) Please declare a pointer array **destinations** to store the names of the cities and an integer array **distances** to store their distances. Please use at least two ways to initialize the **destinations** array.
  - b) Please write a loop to print out the names of the cities and the distances to these cities from the village.
  - c) Please define a function **maxdist** that finds the maximum distance from the village to the cities. Please print out the name of the city and the distance.
  - d) Please use the **pointer-based notation** (using pointers in the declaration of array argument and the access of array elements) to redo the function **maxdist** in c).
- V. Write a recursive function **power(base, exponent)** that, when invoked, returns base exponent. For example, **power(3, 4) = 3 \* 3 \* 3 \* 3**. Assume that exponent is an integer greater than or equal to 1. Hint: The recursion step would use the relationship

$$base^{exponent} = base \cdot base^{exponent - 1}$$

the base condition occurs when exponent is equal to 1, because  $base^1 = base$

base  $x = \text{base } i$

**NOTE:** The new exercise is 7.12, simulation of the tortoise and the hare. Due in 1/May/2018.

這位新娘以為這樣吸引我的情景，就突然打電報，她騎了過去，賣她的帳上，電燈亮亮上面寫著

“親愛的妻子，我知道你很難收到我的信，他們連理頭外有帳，所以我可以發送郵件給我的親人，我剛剛清理了人住手寫，你和孩子們還好吧？這個地方量非常簡單，一切都很好。但是，我一個人在這兒覺得不好。我真的很希望你也能來看我，我會才和愛的人談戀愛了下來，他們會愛惜你明天過來！我迫不及待的想見到你！愛你的爸爸。

看完電報，兒子也倒下了。