CSCI 374 ML Project

Due date: Final Exam

How to submit? E-mail your source code and sample result with your findings in one pdf file

1. (15 points) Define a function `rem_duplicate: ''a list -> ''a list` which takes in input a list and takes out all the duplicates. Test your code with sample input and report result.

   Examples:

   ```
   rem_duplicate [] = []
   rem_duplicate [1,2,1] = [1,2]
   rem_duplicate ["a","a","a"] = ["a"]
   rem_duplicate [[1],[1,2],[1,2,3],[1,2],[4,5]] =
                  [[1],[1,2],[1,2,3],[4,5]]
   ```

2. (15 points) Define a function which computes the product of all integers between m and n (with n >= m) inclusive. Use this function to define the function $C_{n,k}$ (the number of combinations of n elements taken k by k), which is defined by

   $$C_{n,k} = n!/(k!*(n-k)!)$$

   Test your code with sample input and report result.

You should not copy from others or let other students use your code. Violation to this policy will result in automatic fail.