A Guide to the HW6 Package for R

1 Introduction

Package HW6 is an answer for three very important problems.
1) Finding the most frequent number in given numeric vector.
2) Calculating all possible permutations for n unique elements.
3) Calculating a length of shortest path between two vertices in a graph.

The package is written very simple and with highest possible quality
and efficiency what makes him very hard to beat (at least in some cases).

2 Algorithms description

2.1 Function: *mode*

This function is very simple. It sorts given numeric vector increasingly
and then calculates longest sequence of equal values.

2.2 Function: *perms*

Function *perms* uses built-in function *next_permutation* and writes conse-
qutive results into integer matrix.

2.3 Function: *shortestspath*

This function is simply implementation of Dijkstras algorithm.