

## Hash table with open addressing

In this assignment you are requested to implement insert, search, and delete operations for an **open-addressing hash table with double hashing**. Create an empty hash table of size  $m = 13$ . Each integer of the input will be a key that you should insert into the hash table. Use the double hashing function  $h(k, i) = (h_1(k) + ih_2(k)) \bmod 13$  where  $h_1(k) = k \bmod 13$  and  $h_2(k) = 1 + (k \bmod 11)$ . The input terminates when the key  $-1$  is read (such a key must not be inserted in the hash table). At that point, print the content of the hash table to the screen (see sample input/output below for the printing format). Then, read integers from the input until the number  $-2$  is found (do not process that number). For each number inputted, print the index of the element in the hash table. If the number is not inside the hash table, print `NOT_FOUND`. Finally, read integers from the input until the number  $-3$  is found (do not process that number). For each number inputted, delete it from the hash table (note that the integer might not be in the table). Once the integer  $-3$  is found, print the hash table.