Programming Assignment - 11
Hashing

Hashing

1. Insert the keys E X A M Q U S T I O N in that order into an initially empty table of M = 5 lists, using separate chaining. Use the hash function 11 k % M to transform the kth letter of the alphabet into a table index. Show the hash table after each insertion.

2. Insert the keys E X A M Q U S T I O N in that order into an initially empty table of size M =16 using linear probing. Use the hash function 11 k % M to transform the kth letter of the alphabet into a table index. Show the hash table after each insertion.

Use A=1, B = 2, … as shown in the following table.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	2

Programming Assignment

1. Implement a spelling checker by using a hash table. Create a dictionary of correctly spelled words. You can read the words from the file *words.txt*.

   Then write a driver program that prompts you to type a word and checks for misspelled words. If the word is spelled correctly, it should out “no mistakes found”. For misspelled words it should list any words in the dictionary that are obtainable by applying any of the following rules:

   a. Add one character to the beginning
   b. Add one character to the end
   c. Remove one character to the beginning
   d. Remove one character from the end
   e. Exchange adjacent characters