

### Exercise: Bucket and Radix Sort (**SOLUTION**)

**Question A.** Illustrate the operation of **Radix Sort** on the following list of words:

EVEN, COAT, TOYS, CUFF, MAZE, HAZE, DEMO, TOOK, GATE, FADE, BELL, CORK, KING, BRIO, NEWS, RATE, DOOR, TOOL.

|      |      |      |      |      |
|------|------|------|------|------|
| EVEN | MAZE | EVEN | GATE | BELL |
| CUFF | HAZE | CUFF | RATE | CORK |
| MAZE | GATE | BELL | MAZE | CUFF |
| HAZE | RATE | DEMO | HAZE | DEMO |
| DEMO | CUFF | TOOK | BELL | EVEN |
| TOOK | TOOK | TOOL | DEMO | GATE |
| GATE | CORK | CORK | NEWS | HAZE |
| BELL | BELL | GATE | TOOK | MAZE |
| CORK | TOOL | RATE | TOOL | NEWS |
| NEWS | EVEN | NEWS | CORK | RATE |
| RATE | DEMO | MAZE | CUFF | TOOK |
| TOOL | NEWS | HAZE | EVEN | TOOL |

**Question B.** Illustrate the operation of **Bucket Sort** on the array  $a = \{.56, .34, .16, .75, .38, .40, .81, .55, .41, .42, .33, .25\}$

