Danny Tan

Dt1462

CS2134

Hw10

1. O(n)
2. The hash function will only give even numbers as index. So it will use up a lot of space for the hash table.
3. A)

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null | 4371 | Null | 6173 | null |

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null | 4371 | Null | Formerly occupied | null |

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null | 4371 | 3327 | 26 | null |

0 1 2 3 4 5 6 7 8 9 10

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Null | Null | Null | 1323 | 4371 | 3327 | 26 | 4340 | 4199 | null | 9679 |

B)

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null |  | Null |  |  |

4371 6173 9679

null 1323 4344

null 4199

null

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null |  | Null |  |  |

4371 1323 9679

null null 4344

4199

null

0 1 2 3 4

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Null |  | Null |  |  |

4371 1323 3324

null null 9679

4344

4199

null

0 1 2 3 4 5 6 7 8 9 10

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Null | Null |  |  |  |  |  |  |  | null |  |

3324 1323 4371 26 4340 4199 9679

null null null null null null 4344

null

0 1 2 3 4 5 6 7 8 9 10

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Null | Null |  |  |  |  |  |  |  | null |  |

3324 1323 4371 26 4340 4199 21

null null null null null null 9679

4344

null