Back

Hashing - Revision

Number of questions:
5 Questions

Test Date:
Jan 9, 2023

Your Score:
13/13

Question 1/5
Consider a hash table of size seven, with starting index zero, and a hash function (3x + 4)mod7. Assuming the hash table is initially empty, which of the following is the contents of the table when the sequence 1, 3, 8, 10 is inserted into the table using closed hashing? Note that '_' denotes an empty location in the table.

- 8, _, _, _, _, _, 10
- 1, 8, 10, _, _, _, 3 ✓
- 1, _, _, _, _, _, 3
- 1, 10, 8, _, _, _, 3

Question 2/5
What is the value of h(k) for the key 123456?
Given: p=14, s=2654435769, w=32

- 123
- 456
- 70
- 67 ✓

Question 3/5
A hash table can store a maximum of 10 records, currently there are records in location 1, 3, 4, 7, 8, 9, 10. The probability of a new record going into location 2, with hash functions resolving collisions by linear probing is

- 0.1
- 0.6 ✓
- 0.2
- 0.5

Question 4/5
What is the output of the following program?

```
import java.util.*;

public class HashSet
{
   public static void main(String[] args)
   {
      HashSet hashSet = new HashSet<>();
      hashSet.add(1);
      hashSet.add(2);
      hashSet.add(2);
      hashSet.add(1);

      System.out.println(hashSet);

   }
}
```

Choose the correct option:

- 1 1 2 2
- 1 2 1 2
- 1 2 ✓
- 2 2 1 1

Question 5/5

What is the hash function used in multiplication method?

- h(k) = floor(m(kA mod 1)) ✓
- h(k) = ceil(m(kA mod 1))
- h(k) = floor(kA mod m)
- h(k) = ceil(kA mod m)