**Hashing Functions in JavaScript:**

Hashing functions are essential components in computer science used to map data of arbitrary size to fixed-size values. In JavaScript, hashing functions are commonly used in hash tables to efficiently store and retrieve data.

**Collision Resolution Techniques:**

1. Chaining:

* Chaining is a method used to handle collisions in hash tables. When two or more keys hash to the same index, a linked list of entries is maintained at that index. This linked list allows multiple entries to coexist at the same index in the hash table.

2. Open Addressing:

* Open addressing is another collision resolution technique where collisions are resolved by finding an alternative location within the hash table itself. This technique involves probing strategies such as linear probing, quadratic probing, or double hashing to find an empty slot for the collided entry.

**Hash Table Operations:**

1. Insertion:

* Insertion in a hash table involves computing the hash code of the key to determine its index in the table. If the bucket at the computed index is empty, the key-value pair is inserted directly. If the bucket is occupied, collision resolution techniques are used to find an appropriate location.

2. Deletion:

* Deletion from a hash table requires first computing the hash code of the key to locate the corresponding index in the table. If the key is found at that index, it is removed from the table. If not, collision resolution techniques are employed to search for the key in the appropriate bucket.

3. Search:

* Searching for a key in a hash table involves computing its hash code to determine its index in the table. If the key is found at that index, its associated value is returned. Otherwise, collision resolution techniques are utilized to search for the key in the corresponding bucket.