**Objects and their Internal Representation in JavaScript**

**Understanding Objects in JavaScript**

In JavaScript, an object is a collection of key-value pairs where each value is accessible by its corresponding key. Objects provide a powerful way to represent data and organize code. They can encapsulate both data and behavior, making them a cornerstone of JavaScript programming.

**There are multiple ways to create objects in JavaScript:**

**Object Literals**: The simplest and most common way is through object literals. They are defined using curly braces ‘{} ‘and consist of comma-separated key-value pairs.

Example:

var person= {

name: ‘Manoj’,

age: 24,

email: ‘manoj@gmail.com’

};

**Constructor Functions:** act as blueprints for creating objects with pre-defined properties and methods. They are invoked using the ‘new’ keyword.

Example:

function Person (name, age, email ) {

this.name = name;

this.age = age;

this.email = email;

}

Var person = new Person (‘Manoj’, 24. ‘manoj@gmail.com’);

Internally, JavaScript objects are implemented using hash tables, also known as hash maps or dictionaries. When an object is created, the JavaScript engine allocates memory for it and stores its properties as key-values pairs in a hash table. Each property’s key is hashed to determine its storage location in the has table.