

About Objects

Module1 – JS - Handout 9

JavaScript object is a non-primitive data-type that allows us to store multiple collections of data.

JavaScript objects are a bit different when compared to other programming languages. We do not need to create classes in order to create objects.

Example

```
// object
```

```
const student = {  
  firstName: 'Jane Doe',  
  class: 10  
};
```

Here, student is an object that stores values such as strings and numbers.

Object Declaration

Syntax

```
const object_name = {  
  key1: value1,  
  key2: value2  
}
```

Here, an object object_name is defined. Each member of an object is a key: value pair separated by commas and enclosed in curly braces {}

Example

```
// object creation
```

```
const person = {  
  name: 'John',  
  age: 20  
};  
  
console.log(typeof person); // object
```

define an object in a single line-

```
const person = { name: 'John', age: 20 };  
// name and age are keys, and John and 20 are values respectively.
```

Object Properties

```
let person = {  
  name: 'John',  
  age: 20  
};  
// name: 'John' and age: 20 are properties
```

Accessing Object Properties

```
let person = {  
  name: 'John',  
  age: 20  
};  
// name: 'John' and age: 20 are properties
```

Using Dot notation –

objectName.key

```
const person = {  
  name: 'John',  
  age: 20,  
};
```

Using bracket Notation

syntax of the bracket notation

objectName["propertyName"]

Example

```
const person = {  
  name: 'John',  
  age: 20,  
};  
  
// accessing property  
console.log(person["name"]); // John
```

Nested Objects

```
// nested object  
  
// In the below example, an object student contains an object value in the marks property.  
  
const student = {  
  name: 'John',  
  age: 20,  
  marks: {  
    science: 70,  
    math: 75  
  }  
}  
  
// accessing property of student object  
console.log(student.marks); // {science: 70, math: 75}  
  
// accessing property of marks object  
console.log(student.marks.science); // 70
```

Object Methods

An object can also contain a function. For example,

```
const person = {  
  name: 'Sam',  
  age: 30,  
  // using function as a value  
  greet: function() { console.log('hello') }  
}
```

```
person.greet(); // hello
```

Here, a function is used as a value for the greet key. That is why we need to use `person.greet()` instead of `person.greet` to call the function inside the object.

A JavaScript method is a property containing a function declaration.