

```
const discount = 0.25
let price = 100
let newPrice = (1 - discount) * price
let customerName = "john doe"

console.log(customerName, "'s total payment is", newPrice, "usd")
```

```
let brand = "macbook"

if (brand == "asus") {
  console.log("best for gaming")
} else if (brand == "dell") {
  console.log("best for office")
} else if (brand == "mac") {
  console.log("best for coding and design")
} else {
  console.log("it is your choice")
}
```

```
let score = 9.5
if (score < 5) {
  console.log("fail")
} else if (score < 8) {
  console.log("pass")
} else if (score < 10) {
  console.log("good")
} else {
  console.log("full mark, excellent!!!")
}
```

```
const minHeight = 1.5
let yourHeight = 1.75

if (yourHeight >= minHeight) {
  console.log("you can join basketball team")
} else {
  console.log("you may need to join another sport")
}
```

```
// Array
```

```
let students = ["dara", "panha", "kanha", "tola", "seyha", "khema"]
```

```
// Access/visit the array item by its index, index normally start from 0
```

```
console.log(students[0]) // dara  
console.log(students[2]) // kanha  
console.log(students[5]) // khema
```

```
// To check the amount of elements in the array
```

```
console.log(students.length) // 6
```

```
// To iterate/loop through an array from first element (index=0) to the last element (index=array.length -1), use for loop
```

```
for (let i = 0; i < students.length; i++) {  
  console.log(i + 1, "-->", students[i])  
}
```

```
// Objects
```

```
let country = {  
  name: "cambodia",  
  language: "khmer",  
  population: "16 million",  
  area: 181035,  
  region: "South East Asia",  
  borderedCountries: ["thailand", "vietnam", "laos"]  
}
```

```
console.log("Short Description about", country.name)  
console.log("=====  
console.log("Country: ", country.name)  
console.log("Language: ", country.language)  
console.log("Population: ", country.population)  
console.log("Area: ", country.area, "km square")  
console.log("Region: ", country.region)
```

```
// create border countries
```

```
let borderedCountries = ""  
let numberOfBorderedCountries = country.borderedCountries.length  
for (let i = 0; i < numberOfBorderedCountries; i++) {  
  borderedCountries += country.borderedCountries[i]  
}  
console.log("Bordered Countries: ", borderedCountries)
```

```
// For Loop
```

```
for (let i = 0; i < 10; i++) {  
  console.log("Value of i =", i)  
}
```

```
let number = 5  
for (let i = 1; i < 11; i++) {  
  console.log(number, "x", i, "=", number*i)  
}
```

```
// Normal Function (without parameter)
```

```
function showAds() {  
  console.log("learning to code with us")  
}
```

```
// function with parameters
```

```
function setFullName(firstname, lastname) {  
  let fullname = firstname + " " + lastname  
  console.log("your fullname is", fullname)  
}
```

```
// Implement/Trigger/Use/Call the function
```

```
showAds()  
setFullName("john", "doe")
```

```
// Arrow Function (without parameter)
```

```
const showAds = () => {  
  console.log("learning to code with us")  
}
```

```
// function with parameters
```

```
const setFullName = (firstname, lastname) => {  
  let fullname = firstname + " " + lastname  
  console.log("your fullname is", fullname)  
}
```

```
// Implement/Trigger/Use/Call the function
```

```
showAds()  
setFullName("john", "doe")
```

```

// Selected the DOM, document.querySelector("css-selector")
// 1. by tag name
const element = document.querySelector("tagname")

// 2. by class name
const element = document.querySelector(".classname")

// 3. by id name
const element = document.querySelector("#idname")

// Why need to select the DOM?
// because we change something on in, from style, content, html,
event.... etc
// I. its value need to reserve the same way as you give in css,
but need to place around "...."

// to change style of an element in js, we need to follow camelCase
rule, remove hyphen, and change the first letter of second
vocabulary to Capital

// css: border-radius: 15px;
element.style.borderRadius = "15px"
// css: background-color: darkblue;
element.style.backgroundColor = "darkblue"
// css: border: 2px solid grey;
element.style.border = "2px solid grey"
// css: grid-template-columns: 1fr 1fr 1fr;
element.style.gridTemplateColumns = "1fr 1fr 1fr"

// II. change its text content or add innerHTML
element.textContent = "new content"
element.innerHTML += "
  <div class='card'>
    <img src='hello.png' >
    <h4>Hello</h4>
  </div>
"

// III. change classList
// note when using class list, the class that we put
"onlyClassNameWithoutDot"
element.classList.add("newclass")
element.classList.remove("aclass")
element.classList.toggle("hide")

// IV. traverse (move around the DOM tree by relationship), and
many more, not covered much in our course

```

```
// Event Listener
/*
Type of Event:
'click', 'submit', 'change', 'input', 'scroll', 'load'
*/

function getRandom() {
  let number = Math.floor(Math.random() * 1000)
  console.log("random number: ", number)
}

const randomBtn = document.querySelector("#randomBtn")

// Add event listener to an element, by triggering a function
// handler, use only: nameOfFunction without ()
randomBtn.addEventListener('click', getRandom)

// Add event listener to an element, by using anonymous function:
// replace nameOfFunction by () => {}
// add function body in the curly bracket: { //add code here }

randomBtn.addEventListener('click', () => {
  let number = Math.floor(Math.random() * 1000)
  console.log("random number: ", number)
})
```

```
// to get the value from any form inputs, inputElement.value
const range = document.querySelector("#range")
const textarea = document.querySelector("#textarea")
const input = document.querySelector("#input")
const select = document.querySelector("#select")

console.log(range.value, textarea.value, input.value, select.value)
// to reset the value to the form inputs, just assign new value to
// it
range.value = ''
textarea.value = ''
input.value = ''
select.value = ''
```



```

let books = [
  {
    title: "eat that frog",
    author: "brain tracy",
    publishedYear: "2010"
  },
  {
    title: "rich dad poor dad",
    author: "robert kiyosaki",
    publishedYear: "2000"
  },
  {
    title: "harry potter",
    author: "jk rowling",
    publishedYear: "2005"
  }
]

// Access to a property in array of object
console.log(books[1].title) // rich dad poor dad
console.log(books[1].author) // robert kiyosaki
console.log(books[1].publishedYear) // 2000

// books[?] represents an object in the array of object:
console.log(books[0])
console.log(books[1])
console.log(books[2])

// use for loop to display each object
for (let i = 0; i < books.length; i++) {
  console.log("Object book", i, ":", books[i])
}

// if we want to access to properties of books[i] object, so we need to use books[i].property
// to make it easy, let store books[i] in a variable
for (let i = 0; i < books.length; i++) {
  // each iteration will be referred to books[0], books[1], books[2]
  // create a variable to store the book object
  let currentBook = books[i]

  console.log("=====")
  console.log("Title: ", currentBook.title)
  console.log("Author: ", currentBook.author)
  console.log("Published Year: ", currentBook.publishedYear)
  console.log("=====")
}

// Array Method
// use array.forEach() to loop through the array
books.forEach((item) => {
  console.log("=====")
  console.log("Title: ", item.title)
  console.log("Author: ", item.author)
  console.log("Published Year: ", item.publishedYear)
  console.log("=====")
})

// use array.map() to create a new array which is the manipulation of the old array
let bookCardsHTML = books.map((book) => {
  return `
<div class="book">
  <h3>Title: ${book.title}</h3>
  <h4>Author: ${book.author}</h4>
  <p>Published Year: ${book.publishedDate}</p>
</div>
`
})

console.log(bookCardsHTML) // you will see each items of the new created array will be <div class="book">....</div>

// use array.find() to find an object of the array based on a given condition e.g you want to
find a book object of title="rich dad poor dad"
let foundBook = books.find((book) => book.title == "rich dad poor dad")
let findByAuthor = "jk rowling"
let anotherBook = books.find((book) => book.author == findByAuthor)

console.log(foundBook, anotherBook)

// use array.filter() to create a new array which is the filter of the current one based on a
condition, e.g you want only books that wrote by 'robert kiyosaki' or books that wrote before
2010 etc.
let filterBooks = books.filter((book) => book.publishedYear > 2000) // get all the books
written before 2000
let filterBooks2 = books.filter((book) => book.author == "robert kiyosaki") // get all the
books written by robert kiyosaki

```

the variable item here can be given any name, generally the singular of array name e.g books -> book, students -> student, countries -> country, boxes -> box etc., because it will represent each object of the arrays

```
<h2>Best Selling Books (<span id="amount">0</span>) </h2>
```

```
<div class="books-wrapper">
```

```
  <div class="book">
    <h3>Title: </h3>
    <h4>Author: </h4>
    <p>Published Year: </p>
  </div>
```

```
</div>
```

```
<form id="addBookForm">
```

```
  <input id="title" type="text" placeholder="title">
  <input id="author" type="text" placeholder="author">
  <input id="publishedYear" type="year" placeholder="published year">
  <input type="submit" value="Add">
</form>
```

```
// to get value from dataset attribute
HTML: <element data-givenName="..."></element>
```

```
JS: element.dataset.givenName
```

```
// HTML
```

```
<button id="first" data-order="1">First</button>
<button id="second" data-order="2">Second</button>
<button id="third" data-order="3">Third</button>
```

```
// JS
```

```
let firstBtn = document.querySelector("#first")
console.log(firstBtn.dataset.order) // 1
```

```
let books = [
  {
    title: "eat that frog",
    author: "brain tracy",
    publishedYear: "2010"
  },
  {
    title: "rich dad poor dad",
    author: "robert kiyosaki",
    publishedYear: "2000"
  },
  {
    title: "harry potter",
    author: "jk rowling",
    publishedYear: "2005"
  },
]
```

```
let counter = books.length
```

```
const amount = document.querySelector("#amount")
amount.textContent = counter
```

```
const booksWrapper = document.querySelector(".books-wrapper")
booksWrapper.innerHTML = ``
for (let i = 0; i < books.length; i++) {
```

```
  let currentBook = books[i]
```

```
  booksWrapper.innerHTML += `
    <div class="book">
      <h3>Title: ${currentBook.title}</h3>
      <h4>Author: ${currentBook.author}</h4>
      <p>Published Year: ${currentBook.publishedYear}</p>
    </div>
  `
}
```

```
const addBookForm = document.querySelector("#addBookForm")
const inputTitle = document.querySelector("#title")
const inputAuthor = document.querySelector("#author")
const inputYear = document.querySelector("#publishedYear")
```

```
addBookForm.addEventListener('submit', (e) => {
  e.preventDefault()
```

```
  booksWrapper.innerHTML += `
    <div class="book">
      <h3>Title: ${inputTitle.value}</h3>
      <h4>Author: ${inputAuthor.value}</h4>
      <p>Published Year: ${inputYear.value}</p>
    </div>
  `
}
```

```
  // Reset inputted value in form
  inputTitle.value = ``
  inputAuthor.value = ``
  inputYear.value = ``
```

```
  counter = counter + 1
  amount.textContent = counter
```

```
})
```