

# ARTIFICIAL INTELLIGENCE & DATA SCIENCE

## MARVEL SUPERHERO HUNT

**23ITR201 & FUNDAMENTALS OF WEB DESIGN**

### MINI PROJECT REPORT

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## ABSTRACT

This project revolves around a Marvel superhero search engine integrating two APIs: the Super Hero API and Marvel API. On the homepage, a comprehensive list of superheroes (characters) is fetched and displayed. A search bar facilitates easy filtering of characters based on user queries. Upon pressing enter after typing a character name, such as 'HULK', the superhero's details are showcased, alongside a list of associated comics. This functionality enhances user interaction and provides a seamless experience for discovering and exploring Marvel superheroes and their respective comic book appearances.

# INTRODUCTION

## Objective

The project objectives outlined in the document for the Marvel website are clear and focused on delivering a comprehensive and user-friendly superhero search engine. The primary goal is to develop a robust platform that seamlessly integrates the Super Hero API and Marvel API. This integration will enable the website to fetch and display an extensive list of Marvel superheroes on the home page. Additionally, a key objective is to implement a search bar functionality that empowers users to filter characters based on their search queries, thereby enhancing accessibility and usability. Moreover, the website aims to provide detailed information about each superhero, including their associated comics, upon selection. By prioritizing user interaction and experience, the project endeavors to ensure seamless navigation and exploration of Marvel superheroes and their comic book appearances. These objectives are not only measurable but also crucial in assessing the project's success, as they directly impact key performance indicators such as website traffic, user engagement metrics, search query success rates, and overall user satisfaction.\

# REQUIREMENTS SPECIFICATION

## Requirements

- ❖ HIGH QUALITY IMAGES
- ❖ VISUAL STUDIO CODE APP
- ❖ HTML
- ❖ CSS
- ❖ JAVASCRIPT
- ❖ THEME

## DETAILED DESIGN

`<html>`: Defines the root of an HTML document.

`<head>`: Contains meta-information about the HTML document.

`<title>`: Sets the title of the HTML document, displayed in the browser's title bar or tab.

`<body>`: Contains the content of the HTML document that is visible to the user.

`<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>`: Defines HTML headings of different sizes

`<p>`: Defines a paragraph.

`<a>`: Defines a hyperlink, used to link to another web page or resource.

`<img>`: Embeds an image in the HTML document.

`<ul>`, `<ol>`, `<li>`: Defines unordered and ordered lists, and list items.

`<div>`: Defines a division or section in an HTML document, often used for styling purposes.

`<span>`: Defines a generic container for inline elements, often used for styling purposes.

`<form>`, `<input>`, `<button>`, `<select>`, `<textarea>`: Defines form elements for user input and interaction.

`<br>`: Inserts a line break.

`<hr>`: Inserts a horizontal rule (a thematic break) in an HTML document

# PROJECT IMPLEMENTATION

## MAIN HTML CODE:

```
<!DOCTYPE html>
<html lang="en">

<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<!-- Bootstrap CSS -->
<link          rel="stylesheet"          href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/6.2.0/css/all.min.css"          integrity="sha512-
xh6O/CkQoPOWDdYTDqeRdPCVd1SpvCA9XXcUnZS2FmJNp1coAFzvtCN9BmamE+4aHK
8yyUHUSCcJHgXloTyT2A==" crossorigin="anonymous" referrerpolicy="no-referrer" />
<link          rel="stylesheet"          href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
integrity="sha384-
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
crossorigin="anonymous">

<title>Marvel Comics API Search - Character</title>

<link rel="stylesheet" href="style.css">

</head>

<body onload="character()">
<nav class="navbar navbar-expand-lg">
<div class="container-fluid">
<a      class="navbar-brand"      href="index.html"></a>
<button  class="navbar-toggler"  type="button"  data-bs-toggle="collapse"  data-bs-
target="#navbarSupportedContent"  aria-controls="navbarSupportedContent"  aria-
expanded="false" aria-label="Toggle navigation">
<span class="navbar-toggler-icon"></span>
</button>
<div class="collapse navbar-collapse" id="navbarSupportedContent">
<ul class="navbar-nav me-auto mb-2 mb-lg-0">
<li class="nav-item">
<a class="nav-link active" aria-current="page" href="#">Characters</a>
</li>
<li class="nav-item">
<a class="nav-link" href="#">Comics</a>
</li>
```

```
    <li class="nav-item">
      <a class="nav-link" href="#">Series</a>
    </li>
    <li class="nav-item">
      <a class="nav-link" href="Favourites.html">Favourites</a>
    </li>
  </ul>

</div>
</div>
</nav>
```

```
<hr style="color: #22262A; margin: 0; height: 2px;">
<div class="jumbotron">
  <div class="container">

    <h1 class="header-main-title">Marvel Comics Character Search</h1>
    <form id="connectionForm">

      <div class="form-group">
        <input type="text" name="name" id="name" class="form-control character-search-box"
          placeholder="(Ex. Hulk, Iron Man, Spider-Man, etc...) "
onkeyup="showCorrespondingHeros()">
      </div>
      <input type="submit" value="Search!" class="btn btn-danger mb-2 float-right search-
character-button" id="submit">

    </form>
    <div id="cards-group"></div>
  </div>
</div>

<div class="container" id="contentContainer">

  <div class="d-flex align-items-center" id="characterSpinnerSection"></div>
  <div class="d-flex align-items-center" id="comicsSpinnerSection"></div>

  <section id="characterSection"></section>

  <section id="comicSection"></section>
<br>
</div>
```

```

<!-- Footer section -->
<!-- <footer class="footer">
  <div class="container">
    <p class="text-muted">Place sticky footer here</p>
  </div>
</footer> -->

<script src="script3.js"></script>
<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://cdnjs.cloudflare.com/ajax/libs/collect.js/4.34.3/collect.min.js"></script>
<script src="https://code.jquery.com/jquery-3.6.1.js" integrity="sha256-
3zlB5s2uwoUzrXK3BT7AX3FyvojsraNFxCc2vC/7pNI=" crossorigin="anonymous"></script>
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js"
  integrity="sha384-
q8i/X+965DzO0rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo"
crossorigin="anonymous">
</script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
  integrity="sha384-
UO2eT0CpHqdsJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1"
crossorigin="anonymous">
</script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
  integrity="sha384-
JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
crossorigin="anonymous">
</script>
</body>
</html>

```

## MAIN CSS CODE:

```

@import
url('https://fonts.googleapis.com/css?family=Roboto+Condensed:300,400,700|Roboto:300,400,700&display=swap');
/*
  font-family: 'Roboto Condensed', sans-serif;
  font-family: 'Roboto', sans-serif;
*/

/* Globals */
/* Globals */
/* Globals */
body {
  font-family: 'Roboto Condensed', sans-serif;

```



```
    background-color: #22262A;
    scroll-behavior: smooth;
}
a:link,
a:visited {
    color: #ED462F;
    text-decoration: none;
    display: inline-block;
    transition: all 0.2s;
}

a:hover,
a:active {
    color: white;
    background-color: #ED462F;
    box-shadow: 0 1rem 2rem rgba(black, .4);
    transform: rotate(5deg) scale(1.2);
    padding: 2px;
    /* -webkit-transform: rotate(5deg) scale(1.3); */
}
.navbar{
    background-color: #151515;
    font-size: 1.3rem;
}

.footer {
    position: fixed;
    left: 0;
    bottom: 0;
    width: 100%;
    padding-left: 10vh;
    background-color: transparent;
    color: #ED462F;
    text-align: left;
}

/* Character Search Page */
/* Character Search Page */
/* Character Search Page */
.jumbotron {
    background-color: #151515;
}
.header-main-title {
    color: #fff;
}
.character-search-box, .search-character-button {
```

```

        border-radius: 0;
    }
    .search-character-button {
        background-color: #ED462F;
    }
    #characterMainTitle, #comicMainTitle {
        color: #FFFFFF;
    }
    .card {
        border:none;
        border-radius: 2px;
        margin: 20px;
    }
    .card-body{
        border:none;
        border-radius: 2px;
        line-break: anywhere;
    }
    i{
        cursor: pointer;
    }
    .fa-add:before, .fa-plus:before {
        content: "\2b";
        font-style: normal;
        font-size: 30px;
        font-weight: 400;
        justify-content: right;
    }

    /* Single Comic Page */
    /* Single Comic Page */
    /* Single Comic Page */
    /* Single Comic Page */
    /* .single-comice__container {
        background-color: #22262A;
    } */

```

### FAVORITES HTML CODE:

```

<!DOCTYPE html>
<html lang="en">

<head>

```

```
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<!-- Bootstrap CSS -->
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
integrity="sha384-
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
crossorigin="anonymous">
```

```
<title>Marvel Comics API Search - Comic</title>
```

```
<link rel="stylesheet" href="style.css">
```

```
</head>
```

```
<body class="single-comic__body" onload="fetchData()">
```

```
<nav class="navbar navbar-expand-lg ">
  <div class="container-fluid">
    <a class="navbar-brand" href="index.html"></a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="navbar-nav me-auto mb-2 mb-lg-0">
        <li class="nav-item">
          <a class="nav-link active" aria-current="page" href="/Marvel-search-
engine/index.html">Home</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Comics</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Series</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="Favourites.html">Favourites</a>
        </li>
      </ul>
    </div>
```

```

    </div>
</nav>

<hr style="color: #22262A; margin: 0; height: 2px;">

<div class="jumbotron">

    <div class="d-flex align-items-center container" id="comicsSpinnerSection"></div>
    <div class="container single-comic__container" id="singleComicContainerDiv">
        <br>
        <div id="cards-group"></div>

    </div> <!-- /container -->
</div> <!-- /jumbotron -->

<script src="favourites.js"></script>
<script src="script3.js"></script>
<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js"
    integrity="sha384-
q8i/X+965DzO0rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo"
crossorigin="anonymous">
    </script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
    integrity="sha384-
UO2eT0CpHqdsJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1"
crossorigin="anonymous">
    </script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
    integrity="sha384-
JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
crossorigin="anonymous">
    </script>
</body>

</html>

```

### MAIN JAVASCRIPT CODE:

```

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">

```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<!-- Bootstrap CSS -->
<link rel="stylesheet" href="https://cdn.jsdelivr.cloudflare.com/ajax/libs/font-
awesome/6.2.0/css/all.min.css"
  integrity="sha512-
xh6O/CkQoPOWdYTDqeRdPCVd1SpvCA9XXcUnZS2FmJNp1coAFzvtCN9BmamE+4aHK
8yyUHUSCcJHgXloTyT2A=="
  crossorigin="anonymous" referrerpolicy="no-referrer" />
<link rel="stylesheet"
href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
  integrity="sha384-
ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T"
  crossorigin="anonymous">
```

```
<title>Marvel Comics API Search - Character</title>
```

```
<link rel="stylesheet" href="style.css">
```

```
</head>
```

```
<body onload="character()">
<nav class="navbar navbar-expand-lg ">
  <div class="container-fluid">
    <a class="navbar-brand" href="index.html"></a>
    <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#navbarSupportedContent"
      aria-controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle
navigation">
      <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="navbarSupportedContent">
      <ul class="navbar-nav me-auto mb-2 mb-lg-0">
        <li class="nav-item">
          <a class="nav-link active" aria-current="page" href="#">Characters</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Comics</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="#">Series</a>
        </li>
        <li class="nav-item">
          <a class="nav-link" href="Favourites.html">Favourites</a>
```

```

        </li>
    </ul>

</div>
</div>
</nav>

<hr style="color: #22262A; margin: 0; height: 2px;">
<div class="jumbotron">
    <div class="container">

        <h1 class="header-main-title">Marvel Comics Character Search</h1>
        <form id="connectionForm">

            <div class="form-group">
                <input type="text" name="name" id="name" class="form-control character-search-box"
                    placeholder="(Ex. Hulk, Iron Man, Spider-Man, etc...) "
onkeyup="showCorrespondingHeros()">
            </div>
            <input type="submit" value="Search!" class="btn btn-danger mb-2 float-right search-
character-button"
                id="submit">

        </form>
        <div id="cards-group"></div>
    </div>
</div>

<div class="container" id="contentContainer">

    <div class="d-flex align-items-center" id="characterSpinnerSection"></div>
    <div class="d-flex align-items-center" id="comicsSpinnerSection"></div>

    <section id="characterSection"></section>

    <section id="comicSection"></section>

    <br>

</div>
<!-- Footer section -->

```

```

<!-- <footer class="footer">
  <div class="container">
    <p class="text-muted">Place sticky footer here</p>
  </div>
</footer> -->

<script src="script3.js"></script>
<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://cdnjs.cloudflare.com/ajax/libs/collect.js/4.34.3/collect.min.js"></script>
<script src="https://code.jquery.com/jquery-3.6.1.js"
  integrity="sha256-3zlB5s2uwoUzrXK3BT7AX3FyvojsraNFx Cc2vC/7pNI="
crossorigin="anonymous"></script>
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js"
  integrity="sha384-
q8i/X+96DzO0rT7abK41JStQIAqVgRVzpbzo5smXKp4YfRvH+8abtTE1Pi6jizo"
  crossorigin="anonymous">
</script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.7/umd/popper.min.js"
  integrity="sha384-
UO2eT0CpHqdSJQ6hJty5KVphtPhzWj9WO1clHTMGa3JDZwrnQq4sF86dIHNDz0W1"
  crossorigin="anonymous">
</script>
<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/js/bootstrap.min.js"
  integrity="sha384-
JjSmVgyd0p3pXB1rRibZUAYoIIy6OrQ6VrjIEaFf/nJGzIxFDsf4x0xIM+B07jRM"
  crossorigin="anonymous">
</script>
</body>

</html>

```

### FAVORITES JS CODE:

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Favorites</title>
</head>

```

```

<body>
  <div id="cards-group" class="row g-5">
    <!-- Favorite heroes will be dynamically added here -->
  </div>

  <script>
    // Get favorite heroes' IDs from local storage and store in an array
    var arr = JSON.parse(localStorage.getItem("favourites"));
    console.log(arr);

    // Function to remove hero from favorites, update local storage, and reload page
    function removeHero(id) {
      var index = arr.indexOf(id);
      console.log(index);
      arr.splice(index, 1);
      console.log(arr);
      localStorage.setItem("favourites", JSON.stringify(arr));
      alert("Your hero has been successfully removed from favorites");
      location.reload();
    }

    // Function to fetch and display details of favorite heroes
    let html = "";
    html += "<div class='row g-5'>";
    function fetchData() {
      for (let i = 0; i < arr.length; i++) {
        fetch(`https://www.superheroapi.com/api.php/586069776286026/${arr[i]}`)
          .then((response) => response.json())
          .then((data) => {
            html += `
              <div class="col-4">
                <div class="card" style="width: 18rem; margin-top: 50px;">
                  
                  <div class="card">
                    <span>
                      <h5 class="card-title" onclick="">${data.name}</h5>
                      <i class="fa-solid fa-plus icon" onclick="removeHero(${arr[i]})"
style="align-items: right; cursor:pointer; font-family: 'Font Awesome 6 Free';"></i>
                    </span>
                  </div>
                </div>
              </div>`;
          });
      }
    }
  </script>

```



```
setTimeout(() => {
  document.getElementById("cards-group").innerHTML = html;
}, 1000);

// Function to show details of a hero in a new page (not implemented in this HTML snippet)
function showDetails(idnumber) {
  localStorage.setItem("id", idnumber);
  window.location = "index2.html";
}

// Call fetchData function to populate favorite heroes' details
fetchData();
</script>
</body>
</html>
```

# CONCLUSION

Marvel Comics API Search - Characters Comics Series Favourites

## Marvel Comics Character Search

(Ex. Hulk, Iron Man, Spider-Man, etc...)

Search!


Type Name & Press "ENTER" to get the result....

127.0.0.1:5500 says  
your hero already added in favourites  
OK


## Marvel Comics Character Search

hulk


Search!



Hulk +



Red Hulk +



She-Hulk +

Marvel Comics API Search - Char...Marvel Comics API Search - Char...+

127.0.0.1:5500/index.html?name=hulk#

Marvel Characters Comics Series Favourites


Marvel Comics Character Search

hulk

Search!

done

Character



### Hulk

Caught in a gamma bomb explosion while trying to save the life of a teenager, Dr. Bruce Banner was transformed into the incredibly powerful creature called the Hulk. An all too often misunderstood hero, the angrier the Hulk gets, the stronger the Hulk gets.

Comics: 1722 | Series: 506 | Stories: 2610 | Events: 26

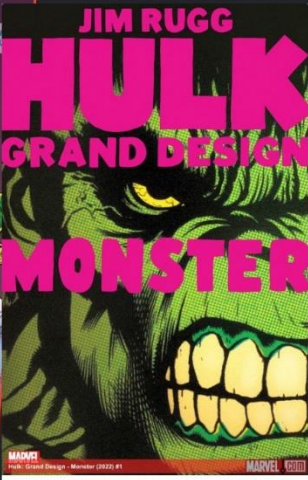


Data provided by Marvel. © 2022 MARVEL

127.0.0.1:5500/index.html?name=hulk#

Marvel Comics API Search - Char...Marvel Comics API Search - Char...+

127.0.0.1:5500/index.html?name=hulk#

Comics



Type here to search

Ps

ENG 21:30 23-09-2022

