A

Synopsis/Project Report

On

**Random Password Generator**

Submitted in partial fulfillment of the requirement for the IV semester

**Bachelor of Computer Science**

By

**Arjun Pandey**

Under the Guidance of

**Mr. Ravindra Koranga**

**Assistant Professor**

**Department of CSE**



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**GRAPHIC ERA HILL UNIVERSITY, BHIMTAL CAMPUS**

**SATTAL ROAD, P.O. BHOWALI,**

**DISTRICT- NAINITAL-263132**

**2022-2023**

**STUDENT’S DECLARATION**

I, **Arjun Pandey** here by declare the work, which is being presented in the project, entitled “Random Password Generator” in partial fulfillment of the requirement for the award of the degree **B.Tech** in the session **2022-2023**, is an authentic record of my own work carried out under the supervision of “**Mr. Ravindra Koranga”, Assistant Professor, Department of CSE, Graphic Era Hill University, Bhimtal.**

The matter embodied in this project has not been submitted by us for the award of any other degree.

Date:

Arjun Pandey

**CERTIFICATE**

**The project report entitled “Random Password Generator” being submitted by Arjun Pandey to Graphic Era Hill University Bhimtal Campus for the award of bonafide work carried out by them. They have worked under my guidance and supervision and fulfilled the requirement for the submission of report.**

**(Mr. Ravindra Koranga) (Dr. Ankur Bisht)**

**Project Guide (HOD, CSE Dept.)**

**ACKNOWLEDGEMENT**

I take immense pleasure in thanking Honorable **“Mr. Ravindra Koranga”** (**Assistant** **Professor,** **CSE, GEHU Bhimtal Campus**) to permit me and carry out this project work with his excellent and optimistic supervision. This has all been possible due to his novel inspiration, able guidance and useful suggestions that helped me to develop as a creative researcher and complete the research work, in time.

Words are inadequate in offering my thanks to GOD for providing me everything that we need. We again want to extend thanks to our President **“Prof. (Dr.) Kamal Ghanshala”** for providing us all infrastructure and facilities to work in need without which this work could not be possible.

Many thanks to Professor **“Dr. Manoj Chandra Lohani”** (Director Gehu Bhimtal),

other faculties for their insightful comments, constructive suggestions, valuable advice, and time in reviewing this thesis.

Finally, yet importantly, I would like to express my heartiest thanks to our beloved parents,

for their moral support, affection and blessings. I would also like to pay our sincere thanks to all our friends and well-wishers for their help and wishes for the successful completion of this research.

**Arjun Pandey**

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**INTRODUCTION**

With growing technology, everything has relied on data and securing these data is the main

concern. Passwords are meant to keep the data safe that we upload on the Internet.

An easy password can be hacked easily and all the personal information can be misused. In order

to prevent such things and keep the data safe, it is quite necessary to keep our passwords very

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2. PROJECT OVERVIEW

Speaking regarding the system, the user can create a random password according to various sizes.

It additionally presents with an aesthetic color-coded system which indicates the stamina of the

password, beginning from Very Weak to Superb password strength. After creating a random

password, the system presents it in the clipboard where the user can copy and paste easily.

This GUI based Password Generator supplies the most basic method for generating a solid password

for the individuals. In short, this job just concentrates on producing arbitrary passwords. In order to

run the task, you must have set up Python, on your PC. This is a basic GUI Based system, specially

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**Project Perquisites**

**Html**

HTML, short for HyperText Markup Language, is the standard markup language used for creating and structuring web pages and applications on the World Wide Web. It provides a set of tags and elements that define the structure and content of a web page, allowing browsers to interpret and render the page accordingly.

HTML uses a hierarchical structure where elements are nested inside one another, forming a tree-like structure called the Document Object Model (DOM). The DOM represents the web page's structure and enables dynamic manipulation of its content through scripting languages like JavaScript.

**Css**

CSS, which stands for Cascading Style Sheets, is a stylesheet language used to describe the presentation and visual appearance of a document written in HTML or XML. It provides a way to separate the content and structure of a web page from its visual design, allowing developers to control the layout, colors, fonts, and other visual aspects of a web page or application.

By using CSS, developers can achieve consistent and visually appealing designs across web pages, improve user experience, and create responsive layouts that adapt to different devices and screen sizes. CSS plays a crucial role in web development by enhancing the presentation layer and providing flexibility in the design and aesthetics of web content.

**Javascript**

JavaScript is a high-level, interpreted programming language that enables dynamic and interactive behavior within web browsers. It is primarily used for client-side scripting, allowing developers to create responsive and interactive web pages.

JavaScript was originally created to add interactivity to static HTML pages, but it has evolved into a versatile language capable of building complex web applications. It supports various programming paradigms, including procedural, object-oriented, and functional programming styles.

JavaScript is widely supported by all modern web browsers and is considered an essential language for web development. It empowers developers to create interactive user interfaces, handle data manipulation, perform asynchronous operations, and build complex web applications.

**Github(To host project online)**

GitHub is a web-based platform that provides a range of services for version control and collaboration on software development projects. It offers a centralized location for developers to store, manage, and share their code repositories, making it easier to collaborate with others and track changes over time.

GitHub offers a combination of version control, collaboration tools, project management features, and community engagement, making it an essential platform for software development teams. It has become the de facto standard for sharing and collaborating on code, fostering open-source development, and facilitating efficient team workflows.

**Source Code and Output**

**Html:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

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

</head>

<body>

    <div class="container">

        <h1>Generate a<br><span>Random Password</span></h1>

        <div class="display">

            <input type="text" id="password" placeholder="Password">

            <img src="images/copy.png" alt="copy image" onclick="copy\_ninja()">

        </div>

<button onclick="generatepassword()"><img src="images/generate.png" alt="generate button image">Generate Button</button>

</div>

</body>

<script src="script.js"></script>

</html>

**Css:**

\*{

    margin: 0;

    padding: 0;

    font-family: 'poppins', sans-serif;

    box-sizing: border-box;

}

body{

    background: #002339;

    color: #fff;

}

.container{

    margin: 12%;

    width: 90%;

    max-width: 700px;

}

.display{

    width: 90%;

    margin-top: 50px;

    margin-bottom: 30px;

    background: #fff;

    color: #333;

    display: flex;

    align-items: center;

    justify-content: space-between;

    padding: 26px, 20px;

    border-radius: 5px;

}

.container h1{

    font-weight: 500;

    font-size: 45px;

}

.container h1 span{

    color: #019f55;

    border-bottom: 4px solid #019f55;

    padding-bottom: 7px;

}

.display img{

    width: 60px;

    padding: 30px 10px;

    cursor: pointer;

}

.display input{

    border: 0;

    outline: 0;

    width: 60%;

    font-size: 29px;

}

.container button img{

    width: 28px;

    margin-right: 10px;

}

.container button{

    border: 0;

    outline: 0;

    background: #019f55;

    color: #fff;

    font-size: 22px;

    font-weight: 300;

    display: flex;

    align-items: center;

    justify-content: center;

    padding: 16px 26px;

    border-radius: 5px;

    cursor: pointer;

}

**Javascript:**

const password\_box = document.getElementById("password");

const lengthh = 12;

const upper\_case = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";

const lower\_case = "abcdefghijklmnopqrstuvwxyz";

const numb = "0123456789";

const symbol = "@#$%^&\*()\_+?><!~=";

const total = upper\_case + lower\_case + numb + symbol;

function generatepassword() {

    let password = "";

    password += upper\_case[Math.floor(Math.random() \* upper\_case.length)];

    password += lower\_case[Math.floor(Math.random() \* lower\_case.length)];

    password += numb[Math.floor(Math.random() \* numb.length)];

    password += symbol[Math.floor(Math.random() \* symbol.length)];

    while(lengthh > password.length) {

        password += total[Math.floor(Math.random() \* total.length)];

    }

    password\_box.value = password;

}

// function () {

//     password\_box.select();

//     document.execCommand("copy");

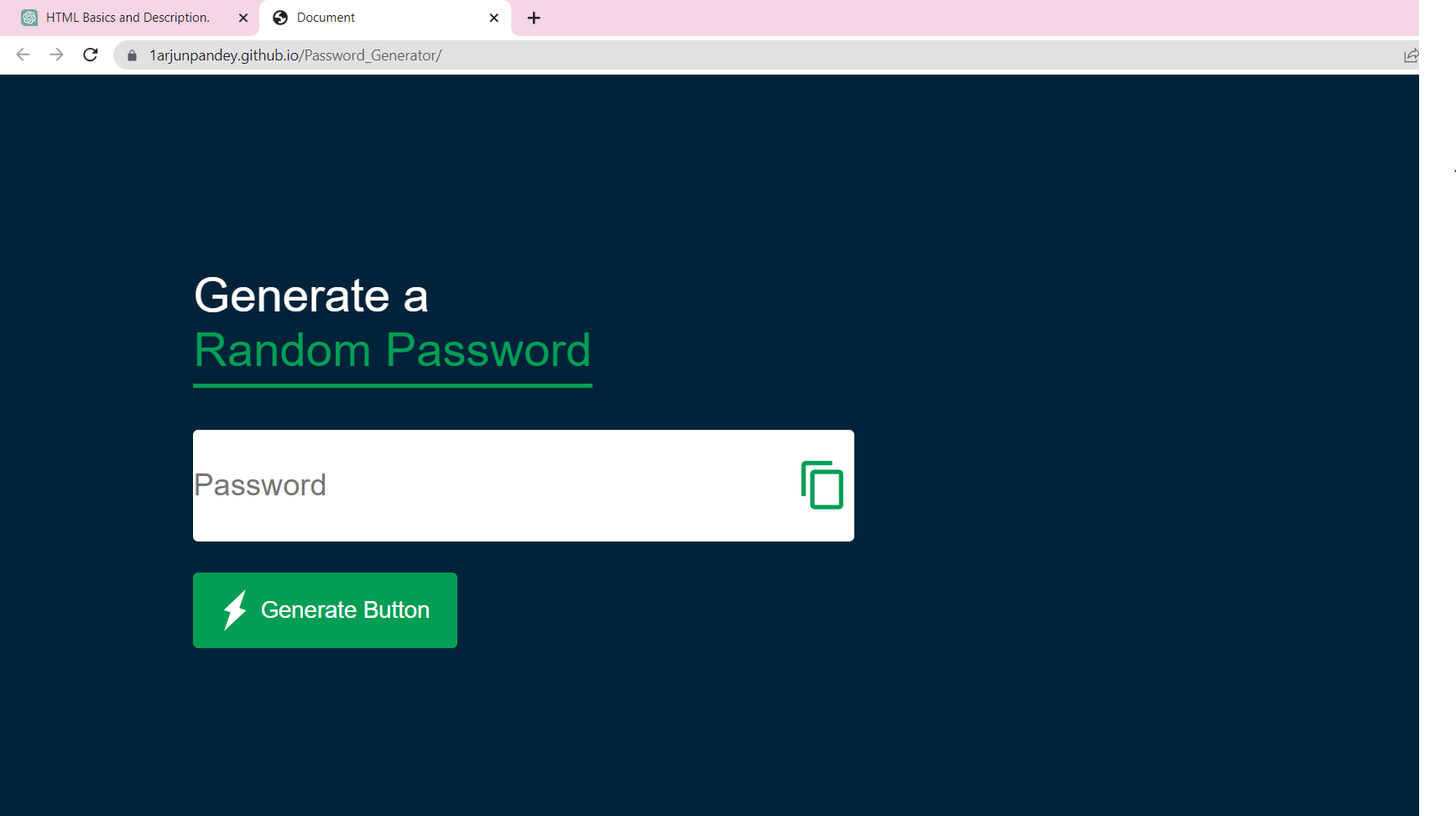
// }

function copy\_ninja() {

    password\_box.select();

    document.execCommand("copy");

}

**Screenshot (Output)**

**Conclusion**

The password generated using alpha-numerical random password mechanism that was illustrated above is practical and can be used with great results. When the password is selected manually, most of the time, the users select the password that are related to himself or herself and related to any of the event. This gives the space for the intruders to deploy various attacks in breaking the passwords. The random generated passwords avoid this particular situation. One of the drawbacks could be the difficulty in memorizing the randomly generated password. But when comparing the security achieved through the randomly generated password, it is much preferable than the manually chosen password. The encryption and decryption standard provided here also strengthens the security measures. Since, the encryption and decryption standards are simple, it is cost- effective. The above done work also creates awareness and interest to startexploring this field more.