

EXPOSYS DATA LABS



Project Title

**“Brrrgrrr – An online website and
Blog Application”**

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ABSTRACT

Brrrgrrr – A online website which sells burger

Customer service is greatly enhanced with a dedicated burger-loving internet platform. It adds a special function that lets customers customise their burgers to suit their tastes in addition to providing an extensive list of all the burger possibilities. This personalization includes deciding on the kind of burger bun, the burger's dimensions, and the filling's particular ingredients. Additionally, clients are free to add any other components they choose. The website makes it easy to see how much the personalised burger will cost overall and lets you change the ingredients in real time.

To sum up, this platform provides a very beneficial and easy-to-use way for customers to purchase precisely the kind of burger they want.

Blog Application

To enable users to create, manage, and carry out CRUD (Create, Read, Update, Delete) actions on posts, an online application has been designed. Individuals need to register as users on the website in order to access this platform. Users must enter necessary details throughout the registration procedure, like a username, email address, and password. After registering, they can use their assigned login credentials to log in. Users are able to create posts based on their interests after logging in. The website makes it easier to create a Word document that contains the blog post's contents. This document is created using a pre-defined template that was previously set.

With the extra features, the platform essentially acts as a dynamic area where registered users can create content.

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INTRODUCTION

Front-end Project

The project's main goal is to create a fun online platform for customising burgers that will make it enjoyable for customers to create a burger exactly how they want it. This cutting-edge ordering platform caters specifically to burger lovers and offers a wide range of pre-designed alternatives along with a special function that lets users customise their burgers. This personalization allows you to choose the type of burger bread, the size, and the components you want, with the option to add more options. The website has an eye-catching design with layers of the burger and shows the entire cost in real-time. Users can quickly change the ingredients with Event Listeners, and before placing an order, they can examine and confirm their selections on a virtual chalkboard. Customers are empowered by the transparent pricing that is based on ingredient costs at the end of this user-friendly process.

Back-end Project

The all-inclusive platform makes it simple to create and maintain customised postings based on user preferences. By completing a quick and easy registration process, users can gain access to a number of features on the website by registering. After registering, people can log in and start creating posts that reflect their interests. This platform is special because it provides a user to save their Posts in the form of a Word/Excel document file, gathering all the information about a blog post according to a pre-established template. This unique tool converts text into well-structured and organised Word documents with ease, improving the user experience. Acting as a vibrant centre for users who have registered, the platform not only encourages active engagement in content creation but also guarantees a seamless transition from ideation to the creation of polished and professional documents.

EXISTING METHOD

Front-end Project

To place a manual order under the current method, customers must physically visit the burger business. Customization based on individual preferences and tastes is limited to choosing from the pre-existing menu list throughout the ordering procedure. Because the selections are static and do not enable a dynamic and engaging experience that may increase the customer's overall happiness, this method provides the consumer with minimal visual engagement.

Back-end Project

Because of the current setup, people frequently turn to traditional blogging platforms, which might not provide a unified and customized approach to blog management.

This poses a number of difficulties:

- A fragmented and inefficient user experience results from the need for users to move between many areas or interfaces in order to do actions such as creating, reading, editing, and deleting blog articles.
- **Restricted Centralization:** Some of the platforms available today might not have a single dashboard that serves as an all-in-one solution for efficiently handling every facet of a blog. This may cause the procedure to be laborious and time-consuming.
- Navigating via different capabilities may not be as easy for novice bloggers or those seeking a more simplified experience. This is known as navigation complexity.

PROPOSED SYSTEM

Front-end Project

With the help of the dynamic and user-friendly online application provided by the suggested system, users can customize their burgers to suit their tastes. This system makes use of contemporary web technologies in an attempt to overcome the shortcomings of the current static and nonstandard approaches. Through the use of eye-catching graphics and an extensive selection of burger ingredients, this system improves users' visual experiences in general.

Back-end Project

The suggested system offers an online platform that enables users to independently generate blog entries based on their interests without requiring assistance from other people, thereby addressing the shortcomings of the current system. These are the additional features that are offered:

- **Easy-to-use Navigation:** Users are able to create, read, update, and delete blogs from a single, centralized dashboard that features visually appealing, small boxes that reflect important functionality.
- **Efficient Blog Creation:** To produce new blog entries, users are guided through a simple and effective process by the system. It makes sure there are no needless complications and that users can submit titles and information fast.
- **The reading area has been introduced,** allowing users to view all of their created blogs in a table format. The auto-incremented serial numbers in the table

ARCHITECTURE

Front-end Project

The "Brrrgrrr" web application follows a client-server architecture, to create a dynamic and interactive user experience. Here's an overview of the architecture:

- Client-Side (Front-End):
 - HTML/CSS/JavaScript: The front-end is built using HTML for structure, CSS for styling, and JavaScript for dynamic behaviour. This trio ensures a visually appealing and responsive user interface.
 - DOM Manipulation: JavaScript is used to manipulate the Document Object Model (DOM) in real-time, allowing dynamic updates to the user interface based on user interactions such as adding or removing ingredients.
- Interaction:
 - User Actions: Users interact with the application by adding or removing ingredients, initiating the checkout process, and completing their orders.
 - Events: JavaScript event listeners capture user actions (e.g., button clicks), triggering functions that update the DOM and total cost in real-time.
- ES6 Compatibility:
 - Modern JavaScript Features: The code incorporates ES6 features like arrow functions, `const` and `let` for variable declarations, and the `querySelector` method for DOM selection.
- Higher Order Functions:
 - Event Listeners: The use of higher-order functions is evident in event listeners. For instance, `foreach` is used to iterate over the elements with the class `.add-button` and attach click event listeners.

Back-end Project

The architecture of the Blog Application project involves various components working together to provide a seamless and efficient experience for users in managing their blogs. Here is a high-level overview of the architecture:

- Frontend:
 - HTML, CSS, JavaScript: The frontend is developed using standard web technologies, including HTML for markup, CSS for styling, and JavaScript for interactive features.
 - User Interface (UI): The UI includes the centralized Navigation Bar with words representing key functionalities, creating an intuitive and visually appealing experience.
- Backend:
 - Python: The backend logic is implemented using Python script, a server-side scripting language, to handle dynamic content generation, user authentication, and interactions with the database.
 - Server-Side Processing: Python processes user requests, communicates with the database, and generates dynamic content to be sent to the frontend.
- Database:
 - MongoDB: The project uses MongoDB as the Non-relational database management system to store and retrieve blog-related data.
- Server:
 - Web Server (Flask): Responsible for serving web pages and handling requests from clients.
- Navigation Button Functionality:
 - Create, Read, Edit, Delete (CRUD) Operations: The backend handles CRUD operations for blog posts, allowing users to create, read, edit, and delete their blogs.
 - Navigation Logic: The frontend includes logic for redirecting users to the appropriate pages based on their interactions with the dashboard.

METHODOLOGY

Front-end Project

The development of the "Brrrgrrr" web application follows an agile and iterative software development methodology, emphasizing flexibility, collaboration, and incremental improvements. Here's an overview of the methodology applied:

- Agile Methodology:
 - Iterative Development: The project adopts an iterative approach, with regular increments in functionality. Each iteration focuses on specific features or improvements, allowing for continuous feedback and adjustment.
- Collaborative Development:
 - Cross-Functional Teams: Collaboration is encouraged among cross-functional teams, including designers, front-end developers, and potentially back-end developers. This promotes a holistic approach to development.
- Incremental Development:
 - Feature Additions: Features are added incrementally, allowing for early releases and rapid deployment. This approach enables users to access new features sooner and provides developers with continuous feedback.

Back-end Project

The development methodology for the “Blog Application” project involves an iterative and incremental approach, emphasizing collaboration between cross-functional teams. A suitable methodology for this project is the “Agile Software Development Methodology”.

Agile Methodology Overview:

- Scrum Framework:

Roles:

- Product Owner: Represents stakeholders, defines features, and prioritizes the product backlog.
- Scrum Master: Facilitates the Scrum process, removes impediments, and ensures the team follows Agile principles.
- Development Team: Cross-functional group responsible for delivering potentially shippable increments of the product.

Artifacts:

- Product Backlog: Prioritized list of features and enhancements.
- Sprint Backlog: Subset of the product backlog selected for a sprint.
- Increment: The sum of all completed backlog items at the end of a sprint.

Events:

- Sprint Planning: Defines the work for the sprint.
- Daily Standup: Brief daily meeting for team synchronization.
- Sprint Review: Review of the increment and adaptation of the product backlog.
- Sprint Retrospective: Reflects on the past sprint and plans for improvements.

- Iterative Development:
 - Develop the application in small, incremental cycles (sprints).
 - Regularly reassess and adjust priorities based on user feedback and changing requirements.
- Adaptability to Change:
 - Agile accommodates changes in requirements, even late in the development process.
 - Continuous feedback loops allow for adjustments based on user needs.

Application to Blog Hub:

- Sprints:
 - Each sprint could focus on specific features, such as user authentication, blog creation, or dashboard enhancements.
- User Stories:
 - User stories could include features like "As a user, I want to create a blog post" or "As a user, I want to view a list of my blogs."
- Regular Feedback:
 - Regular sprint reviews and user feedback sessions ensure that the project aligns with user expectations.
- Incremental Development:
 - Regular releases provide users with new features and improvements incrementally.

IMPLEMENTATION

Source Code

Front-end Project

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Brrrgrrr - Custom Burger Builder</title>
  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/css/bootstrap.min.css"
rel="stylesheet">
  <!-- Font Awesome CDN -->
  <link href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta3/css/all.min.css"
rel="stylesheet">
  <!-- Custom CSS -->
  <style>
    /* Animation */
    @keyframes fadeInUp {
      from {
        opacity: 0;
        transform: translateY(20px);
      }
      to {
        opacity: 1;
        transform: translateY(0);
      }
    }
    .animate__animated {
      animation-duration: 1s;
      animation-fill-mode: both;
    }
    .animate__fadeInUp {
      animation-name: fadeInUp;
    }

    body {
      background-image: url("3.png");
      background-repeat: no-repeat;
      background-size: cover;
      font-family: 'Helvetica', Verdana, sans-serif;
      color: #333;
    }

    h1,h4, h5, h6 {
```

```
    color: beige;
    text-align: center;
}

h1,h2,h3{
    color: brown;
    text-align: center;
}

#burgerBuilder {
    background-color: beige;
    padding: 30px;
    border-radius: 10px;
    box-shadow: 0 0 20px rgba(0, 0, 0, 0.1);
    margin: 50px auto;
    max-width: 600px;
}

#ingredientsList {
    margin-top: 30px;
}

.ingredient-group {
    display: flex;
    flex-wrap: wrap;
    justify-content: space-between;
}

.ingredient-item {
    flex-basis: calc(50% - 10px);
    margin-bottom: 20px;
}

.ingredient-label {
    display: block;
    margin-bottom: 5px;
    font-size: 18px;
    font-weight: bold;
    color: #198754;
}

.form-check-input:checked {
    background-color: #198754;
    border-color: #198754;
}

.form-check-label {
    color: #333;
    font-size: 20px;
}
```

```

display: flex;
align-items: center;
}

.ingredient-icon {
font-size: 30px;
margin-right: 10px;
color: rgb(37, 32, 43);
}

#createBurger {
background-color: #198754;
border-color: #198754;
font-weight: bold;
}

#selectedBurger {
margin-top: 30px;
}

.alert-success {
background-color: #d4edda;
border-color: #c3e6cb;
color: #155724;
text-align: center;
padding: 20px;
border-radius: 8px;
font-size: 18px;
margin-top: 20px;
}
</style>
</head>
<body>
<div class="container">
<div id="burgerBuilder">
<div id="welcomeBox">
<h1>Welcome to Brrgrrr</h1>
<p>Welcome! Get ready to create your delicious burger.</p>
</div>
<h2>Choose your Ingredients</h2>
<div id="ingredientsList" class="ingredient-group">
<!-- Ingredients with icons will be dynamically added here using JavaScript -->
</div>
<button id="createBurger" class="btn btn-primary mt-3">Create My Burger</button>
<button id="cancelOrder" class="btn btn-danger mt-3 ms-2">Cancel Order</button>

<div id="selectedBurger" class="mt-4 d-none">
<div class="alert alert-success animate__animated animate__fadeInUp" role="alert">

```

```

    <h3>Your Chosen Burger:</h3>
    <p id="burgerIngredients"></p>
    <p id="totalCost"></p>
  </div>
</div>
</div>
</div>

<!-- Bootstrap JavaScript and dependencies -->
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/dist/js/bootstrap.bundle.min.js"></script>
<script>
const ingredientPrices = {
  'Bun': 1.50,
  'Patty': 3.00,
  'Cheese': 1.00,
  'Lettuce': 0.50,
  'Tomato': 0.75,
  'Onion': 0.50,
  'Pickles': 0.75,
  'Sauce': 0.50
};

// DOM Manipulation
const ingredientsList = document.getElementById('ingredientsList');
const createBurgerButton = document.getElementById('createBurger');
const cancelOrderButton = document.getElementById('cancelOrder');
const burgerIngredientsDisplay = document.getElementById('burgerIngredients');
const totalCostDisplay = document.getElementById('totalCost');
const selectedBurgerDiv = document.getElementById('selectedBurger');

// Function to display ingredients with icons
function displayIngredients() {
  for (const ingredient in ingredientPrices) {
    const icon = getIngredientIcon(ingredient);

    const ingredientDiv = document.createElement('div');
    ingredientDiv.classList.add('form-check', 'form-switch', 'ingredient-item');

    const inputSwitch = document.createElement('input');
    inputSwitch.classList.add('form-check-input');
    inputSwitch.type = 'checkbox';
    inputSwitch.id = ingredient.replace('_', ' ');

    const labelSwitch = document.createElement('label');
    labelSwitch.classList.add('form-check-label', 'ingredient-label');
    labelSwitch.htmlFor = ingredient.replace('_', ' ');
    labelSwitch.innerHTML = `${icon} ${ingredient}`;
  }
}

```

```

ingredientDiv.appendChild(inputSwitch);
ingredientDiv.appendChild(labelSwitch);

ingredientsList.appendChild(ingredientDiv);

inputSwitch.addEventListener('change', () => {
  updateBurger();
});
}
}

// Function to get Font Awesome icon for each ingredient
function getIngredientIcon(ingredient) {
  switch (ingredient) {
    case 'Bun':
      return '<i class="fas fa-bread-slice ingredient-icon"></i>';
    case 'Patty':
      return '<i class="fas fa-hamburger ingredient-icon"></i>';
    case 'Cheese':
      return '<i class="fas fa-cheese ingredient-icon"></i>';
    case 'Lettuce':
      return '<i class="fas fa-leaf ingredient-icon"></i>';
    case 'Tomato':
      return '<i class="fas fa-circle ingredient-icon"></i>';
    case 'Onion':
      return '<i class="fas fa-circle ingredient-icon"></i>';
    case 'Pickles':
      return '<i class="fas fa-pepper-hot ingredient-icon"></i>';
    case 'Sauce':
      return '<i class="fas fa-pepper-hot ingredient-icon"></i>';
    default:
      return "";
  }
}

// Update the burger ingredients and total cost
function updateBurger() {
  const selectedIngredients = [];
  let totalCost = 0;

  ingredientsList.querySelectorAll('input[type="checkbox"]').forEach(checkbox => {
    const ingredient = checkbox.id.replace(' ', '_');
    if (checkbox.checked) {
      selectedIngredients.push(checkbox.id);
      totalCost += ingredientPrices[ingredient];
    }
  });
}

```



```

burgerIngredientsDisplay.textContent = `Ingredients : ${selectedIngredients.join(', ')} `;
totalCostDisplay.textContent = `Total Cost : $$${totalCost.toFixed(2)} `;
}

// Event listener for Create Burger button
createBurgerButton.addEventListener('click', () => {
  updateBurger();
  selectedBurgerDiv.classList.remove('d-none');
  document.body.style.overflow = 'hidden';
});

// Event listener for Cancel Order button
cancelOrderButton.addEventListener('click', () => {
  const checkboxes = ingredientsList.querySelectorAll('input[type="checkbox"]');
  checkboxes.forEach(checkbox => {
    checkbox.checked = false;
  });
  selectedBurgerDiv.classList.add('d-none');
  burgerIngredientsDisplay.textContent = "";
  totalCostDisplay.textContent = "";
  document.body.style.overflow = "";
});

displayIngredients();
</script>

</body>
</html>

```

Back-end Project

```

from flask import Flask, render_template, redirect, url_for, request, session, jsonify
from pymongo import MongoClient
from bson import ObjectId
from flask import send_file
from openpyxl import Workbook
from docx import Document

app = Flask(__name__)
app.secret_key = 'your_secret_key_here' # Replace with a secure secret key

# Connect to MongoDB database
client = MongoClient('mongodb://localhost:27017/')
db = client['blog']

# Define models using OOPs concepts
class User:
    def __init__(self, username, email, password):

```

```

        self.username = username
        self.email = email
        self.password = password

class Post:
    def __init__(self, title, content, author):
        self.title = title
        self.content = content
        self.author = author

@app.route('/logout')
def logout():
    session.pop('username', None)
    return redirect(url_for('index'))

@app.before_request
def before_request():
    allowed_routes = ['index', 'signup', 'dashboard', 'logout'] # Add 'dashboard' and 'logout' to
allowed routes
    if 'username' not in session and request.endpoint not in allowed_routes:
        return redirect(url_for('index'))

@app.route('/', methods=['GET', 'POST'])
def index():
    if 'username' in session: # Redirect to dashboard if user is logged in
        return redirect(url_for('dashboard'))

    if request.method == 'POST':
        username = request.form['username']
        password = request.form['password']

        # Check if user exists and password is correct
        if db.users.find_one({'username': username, 'password': password}):
            # If authentication is successful, set the user in the session
            session['username'] = username
            return redirect(url_for('dashboard'))
        else:
            error = 'Invalid username or password'
            return render_template('index.html', error=error)

    return render_template('index.html')

@app.route('/signup', methods=['GET', 'POST'])
def signup():
    if 'username' in session: # Redirect to dashboard if user is logged in
        return redirect(url_for('dashboard'))

```

```

if request.method == 'POST':
    username = request.form['username']
    email = request.form['email']
    password = request.form['password']

    # Check if user already exists
    if db.users.find_one({'username': username}):
        error = 'Username already exists'
        return render_template('signup.html', error=error)

    # Create new user and save to database
    user = User(username, email, password)
    db.users.insert_one(user.__dict__)
    return redirect(url_for('index'))

return render_template('signup.html')

@app.route('/dashboard')
def dashboard():
    if 'username' in session:
        posts = db.posts.find({'author': session['username']})
        return render_template('dashboard.html', posts=posts, uname=session['username'])
    return redirect(url_for('index'))

# Update the new_post route in your Flask application
@app.route('/post/new', methods=['GET', 'POST'])
def new_post():
    if request.method == 'POST':
        if 'username' in session:
            title = request.form['title']
            content = request.form['content']
            author = session['username']

            # Create new post and save to database
            post = Post(title, content, author)
            db.posts.insert_one(post.__dict__)
            return redirect(url_for('dashboard'))
        else:
            return redirect(url_for('index'))

    return render_template('new_post.html')

@app.route('/post/<post_id>/save/excel')
def save_post_excel(post_id):
    # Retrieve post by ID
    post = db.posts.find_one({'_id': ObjectId(post_id)})

```

```

if post:
    # Create a new Excel workbook
    wb = Workbook()
    ws = wb.active

    # Add post details to the Excel file
    ws.append(['Title', 'Content', 'Author'])
    ws.append([post['title'], post['content'], post['author']])

    # Save the Excel file
    excel_file_path = f'{post["author"]}_{post["title"]}.xlsx'
    wb.save(excel_file_path)

    # Return the Excel file for download
    return send_file(excel_file_path, as_attachment=True)
else:
    return "Post not found"

```

```

@app.route('/post/<post_id>/save/word')
def save_post_word(post_id):
    # Retrieve post by ID
    post = db.posts.find_one({'_id': ObjectId(post_id)})

```

```

if post:
    # Create a new Word document
    doc = Document()

    # Add title to the document
    doc.add_heading('Title', level=1)
    doc.add_paragraph(post['title'])

    # Add content title and content to the document
    doc.add_heading('Content', level=2)
    doc.add_paragraph(post['content'])

    # Add author and author name to the document
    doc.add_heading('Author', level=2)
    doc.add_paragraph(post['author'])

    # Save the document
    file_path = f'{post["author"]}_{post["title"]}.docx'
    doc.save(file_path)
    return redirect(url_for('dashboard'))
else:
    return "Post not found"

```

```

@app.route('/post/<post_id>/delete')
def delete_post(post_id):
    # Delete post by ID

```

```

db.posts.delete_one({'_id': ObjectId(post_id)})
return redirect(url_for('dashboard'))

@app.route('/get_post/<postid>', methods=['GET'])
def get_post(postid):
    post = db.posts.find_one({'_id': ObjectId(postid)})
    if post:
        return jsonify({'title': post['title'], 'content': post['content']})
    else:
        return jsonify({'title': 'Post not found', 'content': 'Post not found'})

@app.route('/update_post/<post_id>', methods=['POST'])
def update_post(post_id):
    updated_title = request.form.get('title')
    updated_content = request.form.get('content')

    # Update the post in the database
    db.posts.update_one({'_id': ObjectId(post_id)}, {'$set': {'title': updated_title, 'content':
updated_content}})

    return 'Post updated successfully' # You might send a more specific response based on your
needs

@app.route('/search', methods=['GET'])
def search():
    search_term = request.args.get('search_term')

    # Retrieve posts matching the search term
    posts = db.posts.find({'$or': [
        {'title': {'$regex': search_term, '$options': 'i'}}, # Case-insensitive title search
        {'content': {'$regex': search_term, '$options': 'i'}} # Case-insensitive content search
    ]})

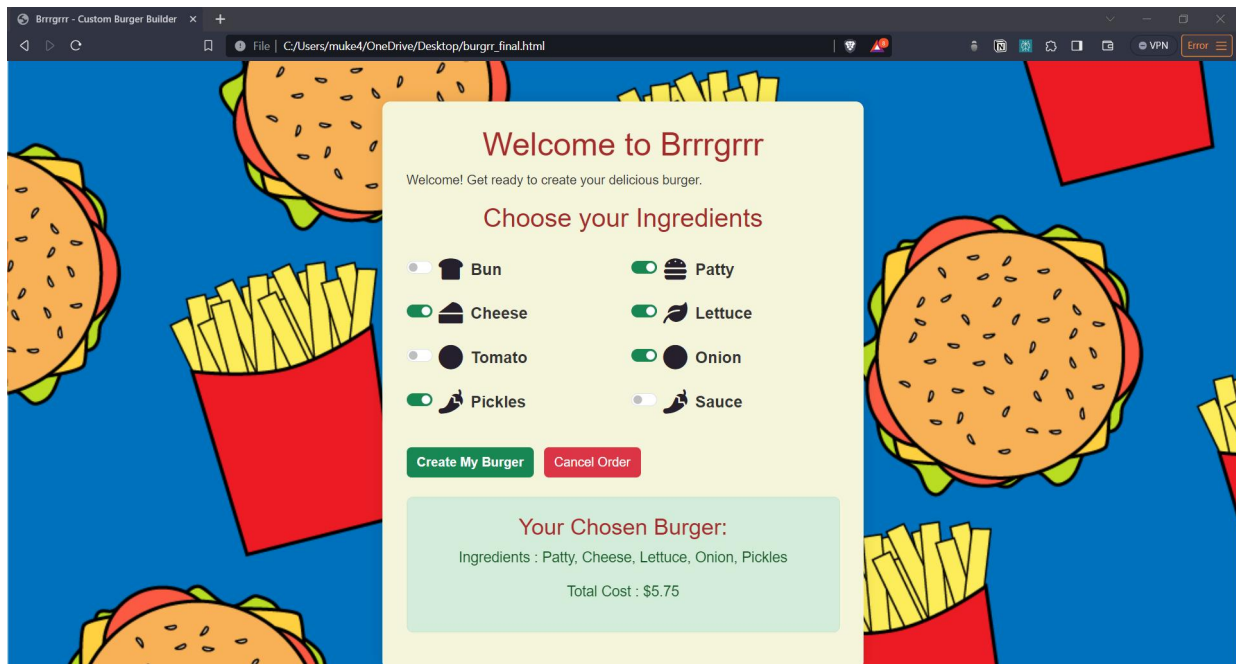
    return render_template('dashboard.html', posts=posts, uname=session.get('username'))

if __name__ == "__main__":
    app.run(debug=True)

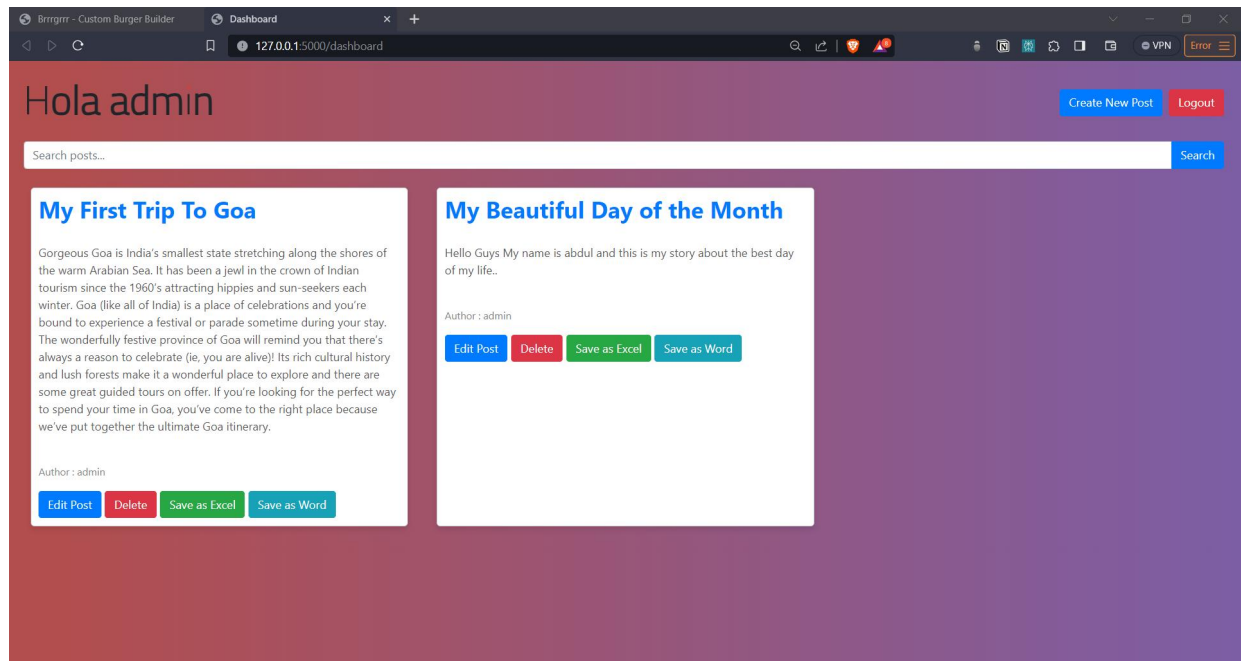
```

Screenshots

Front-end Project



Back-end Project



CONCLUSION

Front-end Project

In conclusion, the development of “Brrrgrrr”, an online platform dedicated to burger customization, presents a highly valuable and user-friendly experience for burger enthusiasts. By offering a comprehensive list of options and the ability to customize every aspect of their burgers, customers can tailor their orders precisely to their tastes. This dynamic and engaging system addresses the limitations of traditional manual ordering processes, providing a visually appealing interface and real-time adjustments to ingredient selection. Brrrgrrr empowers users to make informed decisions and ensures a delightful experience from start to finish.

Back-end Project

In Conclusion, the envisioned online application presents a streamlined and user-friendly platform, allowing individuals to effortlessly create, manage, and execute CRUD operations on blog posts. Overcoming the challenges associated with fragmented user experiences and limited centralization in traditional blogging platforms, the system introduces a centralized dashboard and guided processes for blog creation. The incorporation of an automatic generation feature for structured Word documents further elevates the user experience, effortlessly transforming blog content into polished and professional documents. Ultimately, the platform empowers users to autonomously craft personalized blog posts while offering an efficient and organized approach to blog management.