Simple BMI Calculator

I am pleased to share that I have successfully developed a web application for calculating Body Mass Index (BMI). Below, I have outlined the architecture and the specific AWS resources utilized in this project. Application flow is shown below:

A diagram of a software application

Description automatically generated

Application flow is explained in detail below.

## Frontend

**Amazon S3 (Simple Storage Service):** I used Amazon S3 to host the static website files, such as HTML, CSS, and JavaScript.

**Amazon CloudFront:** I created a CloudFront distribution for the S3 bucket so whenever users hit my CloudFront domain, it will redirect them to the website on S3.

## Backend

**Amazon API Gateway:** I used API Gateway to create REST API. This REST API is integrated with lambda function. This lambda function returns the BMI value. This return value is captured by front end and displayed on the screen.

**AWS Lambda:** Additionally for the backend logic, I used AWS Lambda functions. In this case, when users input their height and weight on the website, the API Gateway invokes the Lambda function, which performs the BMI calculation and returns the results to the frontend application hosted on S3 website.

## How It Works

1. **User Interaction:** Users visit the CloudFront URL, which serves the static website content from the S3 bucket.
2. **Data Input:** Users input their height and weight into the form on the website.
3. **API Request:** The frontend sends this data to the API Gateway.
4. **Processing:** The API Gateway invokes a Lambda function, which calculates the BMI using the input data.
5. **Response:** The Lambda function returns the calculated BMI to the frontend, which then displays the result to the user.