

SHE SHAKTI: A FEMALE-FRIENDLY APP

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ABSTRACT

According to studies, women have a highernutritional requirement than men. Male and female hormones are to blame for the disparity in nutritional requirements. Trying to manage the responsibilities of family and work can make maintaining a healthy diet and lifestyle challenging for any woman. Not only can the right kind of food improve a woman's mood, give her more energy, and help her maintain a healthy weight, but it can also benefit her throughout her life. This necessitates the development of a women- centric application that can provide financial, and day-to-day counsel and care with a single click of a button.

The given suggested solution aids in the development of an application that provides a safe community for women only, where they may engage with other women facing similar issues. It not only gives important health advice, but it also helps a woman keep track of her nutritional and physical requirements. It not only makes her life easier, but it also raises awareness about women's empowerment.

Keywords: Women Health, Nutrition, Community for women, Women empowerment

1. INTRODUCTION

Women have a critical role in their families' food security, health, and nutrition, and this should be taken into account when creating and formulating nutrition and health policy. Trying to manage the responsibilities of family and work can make maintaining a healthy diet and lifestyle challenging for any woman. Many people utilise apps to achieve various objectives, such as building an exercise programme or bettering their food habits. We suggest the creation of an app called SheShakti: Women Centric Nutrition App, based on how fitness applications influence people's choices and lifestyles..

This application will have a significant impact on changing health behaviour and creating a safe environment for women. The goal of this proposed paradigm is to help women with an experimental and experienced attitude find tranquilly in their spiritual, mental, and physical health.

Through social action, our programme aspires to promote health equity. Building community is thought to strengthen the capability and relationships among women's organisations, and those outside the community, resulting in increased growth.

Community understanding of the causes and techniques for preventing health problems, as well as the

willingness and empowerment to change.

The process will result in the development of, and increased access to, resources needed to successfully implement policies and related activities aimed at reducing health-damaging behaviours and conditions in the social and physical environment, and improving or increasing health-promoting behaviours and environments. By building community capacity and supporting community empowerment, community health initiatives are more likely to result in improved health outcomes.

2. LITERATURE REVIEW AND OBJECTIVES

[1] The author describes how to use the API gateway to add or get data from DynamoDB. We won't have to handle a single application component because the API will communicate directly with Amazon DynamoDB. It explains how to construct IAM permission policies to limit database access and secure API gateway resources. Additionally, essential IAM actions can be done utilising API GET and POST methods once a request has been authenticated. Finally, APIs will be deployed after the Integration Responses and Method Requests have been put up in JSON format.

3] The official Firebase tutorial explains how to add authentication in your iOS, Android, or Web app.

[4] The term "gender-based violence against women" is used by the United Nations to express the gendered origins and consequences of such violence. Amnesty International commissioned an online poll with Ipsos MORI in November 2017 to investigate women's experiences of abuse and harassment on social media platforms in eight countries, including the United States and the United Kingdom. Nearly a quarter of the women polled in each of the eight countries indicated they had been subjected to online harassment or abuse at least once, with 21% of women polled in the UK and 1/3 of women polled in the US agreeing. In both countries, 59 percent of women who had been sexually harassed or abused reported the attackers were strangers.

3. Materials And Methods

Hardware:

Any mobile device, such as an Android or iOS device

Technologies:

1. AWS

- a. DynamoDB
- b. IAM
- c. API Gateway
- d. CloudTrail
- e. Lambda
- f. CloudWatch

2. Native React

- a. React Navigation
- b. b.Redux

3. Firebase

- a. Authentication\sb.Firestore\sc.Storage

4.IMPLEMENTATION

4.1 DynamoDB

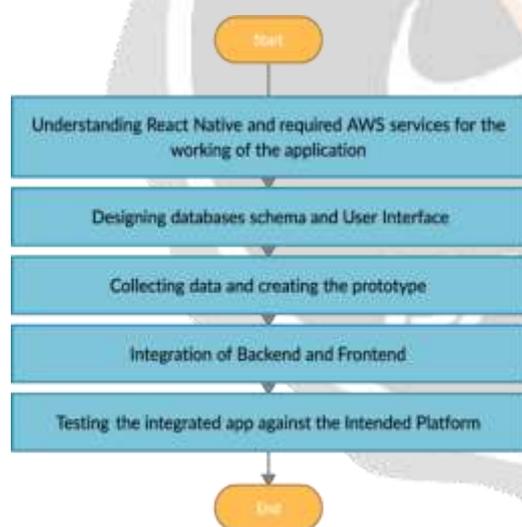
DynamoDB is a fully managed proprietary NoSQL database service supplied by Amazon.com as part of the Amazon Web Services portfolio. It supports key–value and document data types. DynamoDB has a similar data model to Dynamo and is named after it, but it has a different implementation.

DynamoDB used synchronous replication over many data centers[4] for high durability and availability, and Dynamo had a multi-leader design that required the client to resolve version disputes. On January 18, 2012, Amazon CTO Werner Vogels launched DynamoDB, which is described as an advancement of Amazon SimpleDB.

DynamoDB is unique among Amazon services in that it allows developers to pay for throughput rather than storage. The database will scale automatically if Auto Scaling is enabled.

Administrators can request throughput modifications, and DynamoDB will distribute data and traffic across multiple servers utilising solid-state discs, ensuring consistent performance. Elastic MapReduce connection with Hadoop is available.

Amazon released a local development version of DynamoDB in September 2013, allowing developers to test DynamoDB-backed applications locally.



4.2 Identity And Access Management(IAM)

Identity and access management (IAM) is a security discipline that enables the proper entities (people or objects) to access the appropriate resources (applications or data) when they need them, on the devices they prefer. IAM refers to the tools and methods that enable IT managers to create a unique digital

identity for each entity, authenticate them when they log in, provide them access to certain resources, and track and manage those identities over time.

Employees are no longer the only ones who benefit from IAM. Secure access is required by all users and consumers, including contractors and business partners, as well as distant and mobile users and customers. As a result of digital transformation, identity is also offered to Internet of Things (IoT) devices, robots, and other machines. The IAM landscape is further complicated by multicloud hybrid IT infrastructures and software as a service (SaaS) solutions. APIs and microservices are examples of robots and code. The IAM landscape is further complicated by multicloud hybrid IT infrastructures and software as a service (SaaS) solutions.

Because it sits between users and critical company assets, identity and access management is a critical component of any enterprise security programme. It helps guard against compromised user credentials and easily broken passwords, which are common network access methods. It helps defend against compromised user credentials and easily cracked passwords, which are common network access points for criminal hackers attempting to plant malware or steal data.

IAM can help ensure company productivity and the smooth operation of digital technology if done appropriately. Employees may operate efficiently from any location, while central administration guarantees that they only have access to the resources they require to complete their tasks.

4.3 API GATEWAY

An API gateway is a software pattern that sits in front of an application programming interface (API) or a collection of microservices to help with data and service requests and delivery. Its main function is to provide a single point of entry and a consistent method for interactions between an organization's apps, data, and services, as well as internal and external consumers. From authentication to rate restriction to analytics, the API gateway can support and manage API access in a variety of ways.

The API gateway is a critical component of a business API strategy because of its extensive capabilities.

APIs allow different programmes to communicate with one another and share data both inside and outside of a company. The API gateway serves as a central hub and uniform interface for these tasks. It receives "API calls" from both internal and external sources, packages numerous requests, routes them to the proper API or APIs, and receives and delivers results to the user or device that initiated the request.

API gateways are also important in a microservices-based design, where data requests trigger a slew of apps and services that leverage a variety of APIs. The role of the API gateway is the same in this case: Provide a single point of entry for a defined set of microservices, with policies governing their availability and behaviour.

API proxy vs. API gateway An API proxy, which is essentially a subset of an API gateway that provides minimum processing for API queries, is an alternative to the API gateway. The API proxy is in charge of communication. The API proxy manages communication between certain software platforms, such as a proxy endpoint and a destination API, including protocol

translation. It also has the ability to manage traffic flow between transmitting and receiving sites. However, API gateways typically possess better performance analysis and monitoring capabilities.

4.4 CLOUD TRAIL

AWS CloudTrail is an Amazon Web Services application programming interface (API) for call recording and log monitoring (AWS). AWS CloudTrail enables AWS users to record API calls and store resulting log files in Amazon S3 buckets. The API activity data provided by the service includes the identity of an API caller, the time of an API call, the source of an API caller's IP address, the request arguments, and the response elements returned by the AWS service.

CloudTrail may be set up to send out a notification for each log file delivered, allowing users to take action right away. According to AWS, this procedure should only take about 15 minutes. It can also be set up to consolidate log files from numerous accounts. For enterprises that utilise AWS and need to track API calls for one or more AWS accounts, the service can help with regulatory compliance reporting. CloudTrail can also be set up to work with security information and event management (SIEM) and resource management solutions.

5. RESULTS

5.1 CONFIGURATION OF THE FIREBASE

After creating a project in Firebase, the firebase configuration is displayed, and it must be included in the app directory in order to call the firebase functions collections directly from there.

```
// For Firebase JS SDK v7.20.0 and later
const firebaseConfig = {
  apiKey: "AIzaSyBLsH0QfeJ7HiytCE...",
  authDomain: "shecare.firebaseio.com",
  projectId: "shecare",
  storageBucket: "shecare.appspot.com",
  messagingSenderId: "572773039254",
  appId: "1:572773039254:web:c1c6...",
  measurementId: "G-95E23JLK48"
};
```

5.2 AUTHENTICATION ON THE FIREBASE

When a new user registers for the app with their email address, a new user entry is created in the Firebase authentication console using the `firebase.auth()` function.

`createUserWithEmailAndPassword` is a command that creates a user with an email address and a (email, password).

5.3 VERIFICATION BY EMAIL

When a user registers, she must verify her email address by clicking on the link supplied to her via email. The `firebase.auth().sendEmailVerification()` function allows us to send this email using Firebase.

5.4 PASSWORD FORGOTTEN

If a user forgets his account password, he will receive a link to reset his password by clicking on 'Forgot Password.' The function used to achieve this in code is as follows:

```
firebase.auth().sendPasswordResetEmail(email);
```

5.5 DATABASE FIREBASE

We've saved the 'User Information' in Cloud Firestore, which is a cloud-hosted NoSQL database that can be accessed in the app using the following function:

```
firebase.auth().
currentUser.uid \sdb.collection('users')
```

Adding Posts: All of a user's posts are saved in Cloud Firestore.

Retrieving Posts: The postId saved in the database is used to get these posts.

6. CONCLUSION

1. We successfully designed and prototyped the identical user interface for our application.
2. Using python scripts for web scraping, we successfully constructed the API for the articles and videos components.
3. We have successfully created a female-only authentication mechanism.
4. We successfully created a community connect forum for women by storing photographs in Firebase Storage and presenting them on the app.

These enhancements will be implemented in the future:

- Map Component: Creating map components for neighbouring grocery stores and medical facilities.
- Message Component: Users may be able to send direct messages to one another.
- Additional Authentication Component: To prevent counterfeiting, the person's image is visualised using OpenCV.

7. REFERENCES

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