## Azure RESTful API Deployment Plan

### 1. Prerequisites

- Azure for Students account set up
- Node.js application tested locally
- GitHub repository
- MongoDB Atlas cluster ready, with connection string secured

### 2. Azure Setup

- Create a **Resource Group** in Azure Portal
- Deploy a new **Web App**:
    - Runtime Stack: Node.js LTS (16.x recommended)
    - Choose Free (F1) App Service Plan

### 3. Configuration Steps

- In Azure Portal, navigate to **Configuration**:
    - Add necessary environment variables (e.g., `MONGODB_URI`, `NODE_ENV=production`)
    - Enable Web Sockets under **General settings**

### 4. Configure GitHub Deployment

- Under Azure **Deployment Center**, connect to GitHub repository
- Ensure continuous deployment from your main branch

### 6. Verify and Test Deployment

- Visit your deployed URL (`https://<your-app-name>.azurewebsites.net`)
- Test REST API endpoints with Postman or browser
- Validate Socket.IO real-time functionality

## React Native (Expo Go) App Deployment Overview

### 1. Deployment Options Overview

You have two primary methods to deploy your React Native application:

- **Expo Go (Quick and Free)**:
    - Ideal for quick testing, development, or sharing prototypes.
    - Users must install the Expo Go app on their devices.
    - Completely free, no additional costs involved.
- **Expo EAS (Professional Deployment)**:
    - Best for professional-grade applications or distributing apps through official app stores.
    - Allows creating standalone app builds that users install directly without needing Expo Go.

    - May incur costs related to app store developer fees and possibly Expo's build services if exceeding their free tier.

**2. Expo Go Deployment Process**

- **Step 1 (Setup)**:
    - Developer publishes the app using Expo's platform, generating a URL or QR code.
- **Step 2 (Sharing)**:
    - Users download the Expo Go app (available on Google Play and App Store).
    - Users access your app by scanning the provided QR code or opening the shared URL.
- **Cost**: Completely free.

**3. Expo EAS Deployment Process**

- **Step 1 (Setup and Configuration)**:
    - Developer configures the app with Expo's EAS service.
- **Step 2 (Building the App)**:
    - Expo EAS generates app binaries (Android APK/AAB and iOS IPA files).
- **Step 3 (Distribution)**:
    - Android apps can be shared directly (APK) or uploaded to the Google Play Store.
    - iOS apps can be distributed through Apple's TestFlight for beta testing or directly submitted to the Apple App Store.
- **Cost Considerations**:
    - Google Play Developer Account: One-time $25 fee.
    - Apple Developer Program: $99 annually.
    - Expo provides a generous free tier for EAS builds, but extensive use or advanced features may require paid plans.