**User Notification API Documentation**

**Overview**

The User Notification API is built to manage user notification preferences, deliver notifications, and track statistics. It supports CRUD operations for user preferences, notification sending, and logging. The API also incorporates validation, error handling, and rate limiting for robust functionality.

Base URL

- Local Development: `http://localhost:3000`

- Production: https://user-notification-d0ydk6egp-niteshsingh6206gmailcoms-projects.vercel.app/

Endpoints

**1. User Preferences**

1.1 Create User Preferences

- Endpoint: `POST /api/preferences`

- Description: Creates a new user preference.

- Request Body:

```json

{

"userId": "anitaKumar456",

"email": "anita.kumar@example.com",

"preferences": {

"marketing": true,

"newsletter": false,

"updates": true,

"frequency": "weekly",

"channels": {

"email": true,

"sms": true,

"push": false

}

},

"timezone": "Asia/Kolkata"

}

```

- Response:

- Status: `201 Created`

- Body:

```json

{

"userId": "anitaKumar456",

"email": "anita.kumar@example.com",

"preferences": {

"marketing": true,

"newsletter": false,

"updates": true,

"frequency": "weekly",

"channels": {

"email": true,

"sms": true,

"push": false

}

},

"timezone": "Asia/Kolkata",

"createdAt": "2024-11-20T18:30:00.000Z",

"lastUpdated": "2024-11-20T18:30:00.000Z"

}

1.2 Get User Preferences

- Endpoint: `GET /api/preferences/:userId`

- Description: Fetches the preferences of a specific user.

- Example:

```http

GET /api/preferences/anitaKumar456

```

- Response:

- Status: `200 OK`

- Body:

```json

{

"userId": "anitaKumar456",

"email": "anita.kumar@example.com",

"preferences": {

"marketing": true,

"newsletter": false,

"updates": true,

"frequency": "weekly",

"channels": {

"email": true,

"sms": true,

"push": false

}

},

"timezone": "Asia/Kolkata",

"createdAt": "2024-11-20T18:30:00.000Z",

"lastUpdated": "2024-11-20T18:30:00.000Z"

}

1.3 Update User Preferences

- Endpoint: `PATCH /api/preferences/:userId`

- Description: Updates the preferences of a specific user.

- Example:

```http

PATCH /api/preferences/anitaKumar456

```

- Request Body:

```json

{

"preferences": {

"marketing": false,

"newsletter": true

}

}

```

- Response:

- Status: `200 OK`

- Body:

```json

{

"userId": "anitaKumar456",

"email": "anita.kumar@example.com",

"preferences": {

"marketing": false,

"newsletter": true,

"updates": true,

"frequency": "weekly",

"channels": {

"email": true,

"sms": true,

"push": false

}

},

"timezone": "Asia/Kolkata",

"createdAt": "2024-11-20T18:30:00.000Z",

"lastUpdated": "2024-11-20T18:45:00.000Z"

}

1.4 Delete User Preferences

- Endpoint: `DELETE /api/preferences/:userId`

- Description: Deletes a user's preferences.

- Example:

```http

DELETE /api/preferences/anitaKumar456

```

- Response:

- Status: `200 OK`

- Body:

```json

{

"message": "User preferences deleted successfully."

}

**2. Notification Management**

2.1 Send Notification

- Endpoint: `POST /api/notifications/send`

- Description: Sends a notification to a user.

- Request Body:

```json

{

"userId": "anitaKumar456",

"type": "updates",

"channel": "sms",

"content": {

"message": "Your account has been updated successfully."

}

}

- Response:

- Status: `200 OK`

- Body:

```json

{

"userId": "anitaKumar456",

"type": "updates",

"channel": "sms",

"status": "sent",

"sentAt": "2024-11-20T18:50:00.000Z",

"metadata": {

"message": "Your account has been updated successfully."

}

}

2.2 Get Notification Logs

- Endpoint: `GET /api/notifications/:userId/logs`

- Description: Fetches the notification logs of a specific user.

- Example:

```http

GET /api/notifications/anitaKumar456/logs

```

- Response:

- Status: `200 OK`

- Body:

```json

[

{

"userId": "anitaKumar456",

"type": "updates",

"channel": "sms",

"status": "sent",

"sentAt": "2024-11-20T18:50:00.000Z"

}

]

2.3 Get Notification Statistics

- Endpoint: `GET /api/notifications/stats`

- Description: Retrieves global notification statistics.

- Example:

```http

GET /api/notifications/stats

```

- Response:

- Status: `200 OK`

- Body:

```json

{

"totalNotifications": 150,

"sentNotifications": 140,

"failedNotifications": 10

}

**Notes**

1. Replace `anitaKumar456` with unique IDs for other test cases.

2. All timestamps follow UTC standards.

3. Ensure the server is running, and environment variables (e.g., `MONGO\_URL`) are set correctly.

This documentation provides a comprehensive guide for all API endpoints with Indian names and the timezone `Asia/Kolkata`.