

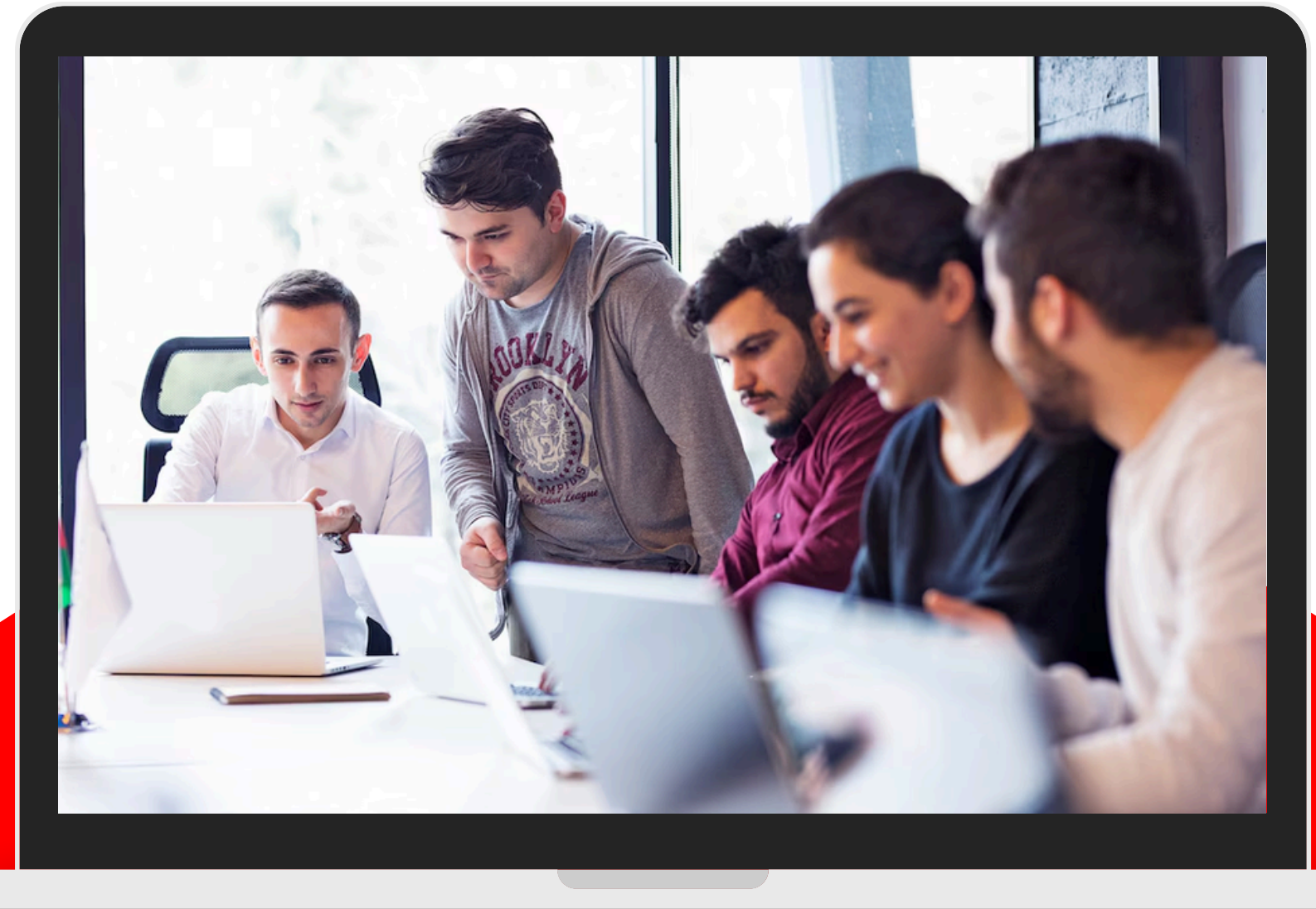
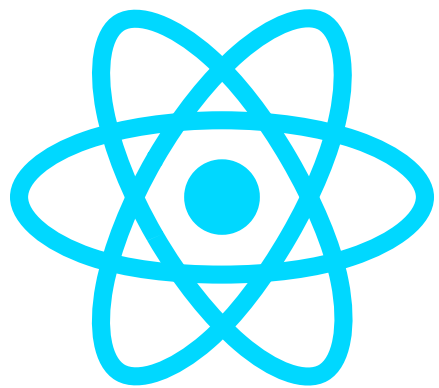


**XENOSIS IT SOLUTIONS**

Engineering Excellence, Every Solution, Every Time

# ASSIGNMENTS

## REACT DEVELOPER INTERN



# 2nd Month

## Assignments

(For React Development Interns)

2nd Month is designed as an last stage where advanced tasks are assigned to test your knowledge and skills. **On the right side of the slide, you will find 5 assignments listed. However, it is mandatory for each participant to complete at least 4 of them.**

**Date:**  
**13 November to 15th December**

**Submission Date:**  
**10, 11, 12 December**

**Assignment 1: Full-Stack Blog Platform with React and Node.js**

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**Assignment 2: Real-Time Collaborative Task Manager**

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**Assignment 3: E-commerce Product Page with React and Stripe Integration**

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**Assignment 4: Social Media Dashboard with Data Visualization**

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**Assignment 5: Video Streaming Platform with React and Firebase**

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**Please note that no one will use AI tools to complete their assignments. If you use chatGPT or other AI tools then you will be disqualified**



# INSTRUCTIONS

This stage is designed to introduce you to the in advanced concepts of ReactJS and to help you become familiar with the workflow of a React developer. By completing these assignments, you will gain hands-on experience and build a solid foundation for more advanced tasks in the future.

## What You'll Learn:

- **Component-Based Architecture:** Build UIs with reusable components for better code reusability and maintenance.
- **State Management:** Manage component state to handle dynamic data and user interactions.
- **Declarative Syntax:** Use React's syntax to simplify UI descriptions, making development easier.
- **Tools and Ecosystem:** Get familiar with Create React App and explore React's libraries and extensions.

## Your Journey:

- Throughout these assignments, you'll tackle practical tasks that simulate real-world scenarios faced by React developers. Each assignment is crafted to reinforce your understanding of React concepts and prepare you for more complex challenges in future stages of your internship.



# ASSIGNMENT 1: FULL-STACK BLOG PLATFORM WITH REACT AND NODE.JS

## Requirements:

### Create a Blog Platform:

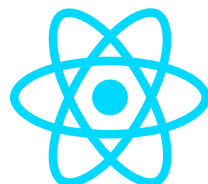
- Develop the front-end using React and the back-end using Node.js and Express.
- Implement user authentication (sign-up, login, and logout) with JWT.

### Post Creation and Management:

- Users should be able to create, edit, and delete blog posts.
- Include fields for title, content, and tags.

### Comments Section:

- Allow users to comment on posts.
- Implement CRUD operations for comments.



## Data Storage:

Use MongoDB to store user information, blog posts, and comments.

## Form Validation:

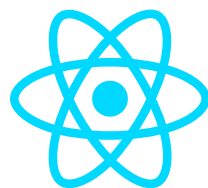
- Validate all form inputs for creating and editing posts and comments.

## Display Data:

- Display blog posts in a list with pagination.
- Display individual post details with associated comments.

## Styling:

- Use CSS/SCSS or a CSS-in-JS library for styling the application.



# **ASSIGNMENT 2: REAL-TIME COLLABORATIVE TASK MANAGER**

## **Requirements:**

### **Create a Task Manager:**

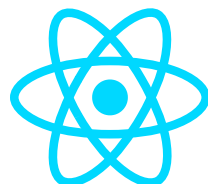
- Develop the application using React for the front-end and WebSockets for real-time updates.
- Implement user authentication and authorization.

### **Task Management:**

- Allow users to create, update, and delete tasks.
- Implement task assignment to different users.

### **Real-Time Collaboration:**

- Ensure real-time updates for task status changes and new task assignments.
- Notify users of task updates in real-time.



## Data Storage:

Use a back-end service like Firebase or a custom Node.js server with a database like MongoDB.

## Form Validation:

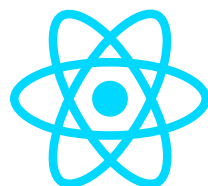
- Validate all task creation and update forms.

## Display Data:

- Display tasks in a list with sorting and filtering options.
- Display real-time notifications and updates.

## Styling:

- Use CSS/SCSS or a CSS-in-JS library for styling the application.





# **ASSIGNMENT 3: E-COMMERCE PRODUCT PAGE WITH REACT AND STRIPE**

## **INTEGRATION**

### **Requirements:**

#### **Create an E-commerce Product Page:**

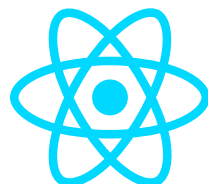
- Develop the product page using React.
- Implement user authentication.

#### **Product Listing:**

- Display a list of products with details such as name, price, and description.
- Implement a shopping cart to add and remove products.

#### **Payment Integration:**

- Integrate Stripe for payment processing.
- Implement the checkout process, including payment and order confirmation.





## Form Validation:

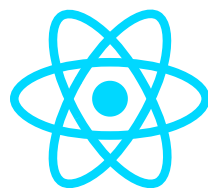
- Validate all forms for adding products to the cart and processing payments.

## Display Data:

- Display product details and cart items.
- Display order confirmation details.

## Styling:

- Use CSS/SCSS or a CSS-in-JS library for styling the application.



# ASSIGNMENT 4: SOCIAL MEDIA DASHBOARD WITH DATA VISUALIZATION

## Requirements:

### Create a Social Media Dashboard:

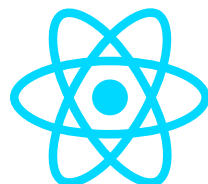
- Develop the dashboard using React.
- Implement user authentication.

### Data Integration

- Integrate with social media APIs (e.g., Twitter, Instagram) to fetch user data.
- Implement features to track and visualize data such as followers, posts, and engagement metrics.

### Data Visualization:

- Use a library like Chart.js or D3.js to create visualizations for the collected data.



- Implement various types of charts (e.g., bar, line, pie) to represent different metrics.

## **Form Validation:**

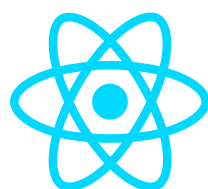
- Validate all forms for API key input and data fetching configurations.

## **Display Data:**

- Display charts and graphs for social media metrics.
- Display user-specific data and analytics.

## **Styling:**

- Use CSS/SCSS or a CSS-in-JS library for styling the application.



# ASSIGNMENT 5: VIDEO STREAMING PLATFORM WITH REACT AND FIREBASE

## Requirements:

### Create a Video Streaming Platform:

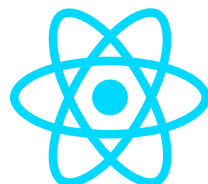
- Develop the platform using React.
- Implement user authentication with Firebase Authentication.

### Video Upload and Streaming:

- Allow users to upload videos to Firebase Storage.
- Implement video streaming using Firebase and a video player library.

### Comments and Recommendations:

- Allow users to comment on videos.
- Implement a recommendation system based on user preferences and viewing history.



## **Form Validation:**

- Validate all forms for video upload, user comments, and user preferences.

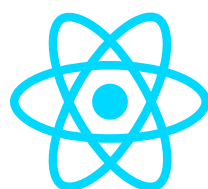
## **Display Data:**

- Display video thumbnails, titles, and descriptions in a list or grid view.
- Display video player and comments section on the video detail page.

## **Styling:**

- Use CSS/SCSS or a CSS-in-JS library for styling the application.

**These assignments are designed to challenge your interns with complex tasks, encouraging them to apply their React skills in sophisticated projects. Each participant must complete at least 2 out of the 5 assignments listed within 10 days.**



# CONTACT US

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