

Assignment for FSD Internship position at ORU Phones

Title

An E-Commerce like website with integrated User-behavior tracking

Description

The tasks is to implement user behaviour tracking and dashboard on an E-commerce like website. The solution should be scalable for multiple concurrent users, any number of pages on the site, reusable and efficient.

Requirements

1. User Interface

You are free to design and build the UI in whatever way you want, as long as it aligns with the minimum requirements mentioned below:

- Create a Homepage , Best Deals and Product Info Page.
- **Home:** It should contain multiple rows of clickable elements such as Buttons , Links , Cards , etc.
- **Best Deals:** This page should contain a filter section on left and a Product Card Grid on right.
- the filters on the above page does not need to be working, but should be interactable
- **Product Page:** This page should have product info, image, and a few buttons such as Buy , Contact seller , Save , etc.
- Include a Header and Footer on each page with some dummy links and buttons
- For Product data, You are free to use any random data you want, such as:

```
{  
    make: "Apple",  
    model: "Apple iPhone 15",  
    price: 45000,  
    images: ["https://picsum.photos/500",  
             "https://picsum.photos/600"],  
    seller: "John Doe",  
    location: "Jones Grove, 2085 Nichole Point Suite 964",  
    phoneNumber: 9876543210,  
    "...": "..."  
}
```

- Checkout the reference UI attached in the end

2. User Behavior Tracking

The goal of this process is to implement a system to track user interactions, user details and interests.

1. Session based Auth

2. User details

- store device info, browser info, any other relevant info such as IP address, location, etc
- storing isLoggedIn status

3. User Interaction

- store the page visits along with other info such as:
 - total time spent
 - scroll distance
 - interactions (button clicks, links, etc)

3. Admin Dashboard

Create a separate `/admin` endpoint on the web to access all the user behavior data at one place. This admin dashboard should have following features:

1. aggregated report of all the data collected over a period (admin should be able to select a date range)
2. the report can contain data points such as:
 - total unique user visits
 - top 10 visited pages
 - average time spent on a page per user/session
 - top 10 popular devices
 - top 10 clicked buttons
 - most popular device categories (apple/samsung,etc)
 - loggedIn vs loggedOut user count, page visits, etc
 - details for specific user and specific session (optional)
 - average sessions per user (if user is logged in)
3. The above data points can be generated easily with the data collected in previous steps, but feel free to generate these: (optional)
 - other data points
 - correlation between data points
 - heatmap for each page
 - correlation between user details and user interaction, etc

Things to keep in mind

1. The solution should be scalable and efficient, and it should try not to interfere with main functionality i.e. a simple E-commerce platform

Tech Stack

1. NextJS + Typescript
 - Use NextJS only for the UI
 - Don't use NextJS for server
2. NodeJS + Typescript
 - for server
3. Database: any database of your choice
4. Others:
 - You can use systems in other languages such as Python/R/Java, etc as per your requirement, but the main server should be in NodeJS.
 - Other caching and storage systems like Redis, Memcached, etc. can be used
 - Any supporting libraries/frameworks needed can be used as long as it doesn't directly implement the solution
5. Typescript is must

Deployments

1. Deployment is required
2. Use any deployment service such as vercel/render, or any cloud platform such as Azure/AWS/GCP etc to deploy the solution

Deliverables

1. Github repo links for all the codebase of the solution. In case the repo is private, add the contact email provided below as a collaborator
2. URLs for deployed versions of the solution
3. A writeup/ReadMe file explaining the solution in details
4. An Architecture diagram for the solution

What can we judge

1. Solution's Architecture, Performance, Scalability and Best coding and security practices
2. UI is not judged as long as the solution works
3. Required features mentioned above excluding optional features

Submission Guidelines

- fill the google form: <https://forms.gle/ECoyQM4Yxes6KpSUA>

For any queries/issues related to this assignment, reach out to anurag@oruphones.com or call us at [7068179922](tel:7068179922)

References:

1. Homepage: <https://oruphones.com>



What's on your mind?



Top brands



Best deals Near You (Mumbai)

Device	Condition	Price	Location
Apple iPhone SE (2020)	Good	₹10,000	Mumbai, India
Samsung Galaxy S24 Ultra	Good	₹80,000	Mumbai, India
Apple iPhone 15	Good	₹63,000	Mumbai, India
Apple iPhone 15	Good	₹45,500	Mumbai, India
Apple iPhone XS	Good	₹12,999	Mumbai, India
Apple iPhone 11 Pro Max	Good	₹26,999	Mumbai, India
Apple iPhone 11 Pro	Good	₹18,999	Mumbai, India
Google Pixel 5	Good	₹44,000	Mumbai, India
Xiaomi Redmi Note 13	Good	₹13,500	Mumbai, India
Apple iPhone 12 Pro	Good	₹17,500	Mumbai, India
Apple iPhone 12 Mini	Good	₹23,557	Mumbai, India
Apple iPhone 12	Good	₹23,557	Mumbai, India

2. Feed:

- <https://oruphones.com/buy-old-used-phones/>
- <https://oruphones.com/buy-old-used-phones/Apple>

Device	Condition	Price	Location
Apple iPhone XS	Good	₹8,000	Bina Nagar, Valsad
Xiaomi Redmi Note 10	Good	₹3,000	Mondal, Delhi
Oneplus Nord CE 5G	Good	₹7,000	Ambari Gate, Amravati
Samsung Galaxy A22	Good	₹5,000	New Palasoya, Indore
Xiaomi Poco X2	Good	₹3,500	Banupur, Kolkata
Samsung Galaxy Z Fold3 5G	Good	₹20,000	Pusa Roord Area, Delhi

3. Product Page: <https://oruphones.com/buy-old-used-phones/OnePlus/OnePlus-8T/68090a7a21edc014e267acd5>

4. Common Components:

1. Navbar

2. Footer

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Top Deals Near You

Andhra-Pradesh	Arunachal-Pradesh	Assam
Bihar	Chhattisgarh	Goa
Gujarat	Haryana	Himachal-Pradesh
Jharkhand	Karnataka	Kerala
Madhya-Pradesh	Maharashtra	Manipur
Meghalaya	Mizoram	Nagaland
Odisha	Punjab	Rajasthan
Sikkim	Tamil-Nadu	Telangana
Tripura	Uttarakhand	Uttar-Pradesh
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