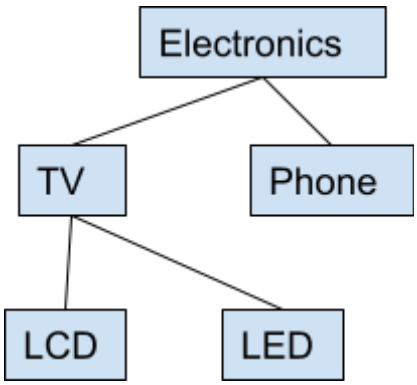
API excersice

Requirements

A rest API flask application to manage product inventory and order management for a private organization. We have category-wise products available. Categories are an n-level hierarchy. Ex



Products should be attached with at least one category. There can be multiple categories attached with the same product like a printer can be in home appliances and office appliances. There are users who can place orders, cancel, and mark as paid the order. All the status changes in the history of orders should be maintained. One order can have multiple items. While creating of the user, a document for id proof is required.

We need to prepare the following,

Database Schema

- Prepare a database schema for the above requirements and prepare a database schema.
- Categories and products can be master data that should be added in the DB along with initial model migrations (ORM migrations can be used).

Validate this with your mentor after completing it and before starting the API implementation.

APIS

- Create User (with a document, only pdf allowed)
- Update User
- List users
- Place order
- Change order status (cancel/paid)
- Get user orders with order details, order items, and order history

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- Get category list like below


```
{
  "data": [
    {
      "cat_id": 1,
      "name": "clothes",
      "total_products": 5,
      "child_categories": [
        {
          "cat_id": 2,
          "name": "Mens' wear",
          "total_products": 2,
          "child_categories": [
            {
              "cat_id": 4,
              "name": "Shirts",
              "total_products": 1,
              "child_categories": []
            },
            {
              "cat_id": 5,
              "name": "T-Shirts",
              "total_products": 1,
              "child_categories": []
            }
          ]
        },
        {
          "cat_id": 3,
          "name": "Womens' wear",
          "total_products": 3,
          "child_categories": [
            {
              "cat_id": 6,
              "name": "Saree",
              "total_products": 3,
              "child_categories": []
            }
          ]
        }
      ]
    }, ……
  ]
}
```


- Get status wise counts of orders for a given category like {"data":{"placed":5,"paid":9,"cancelled":2}}