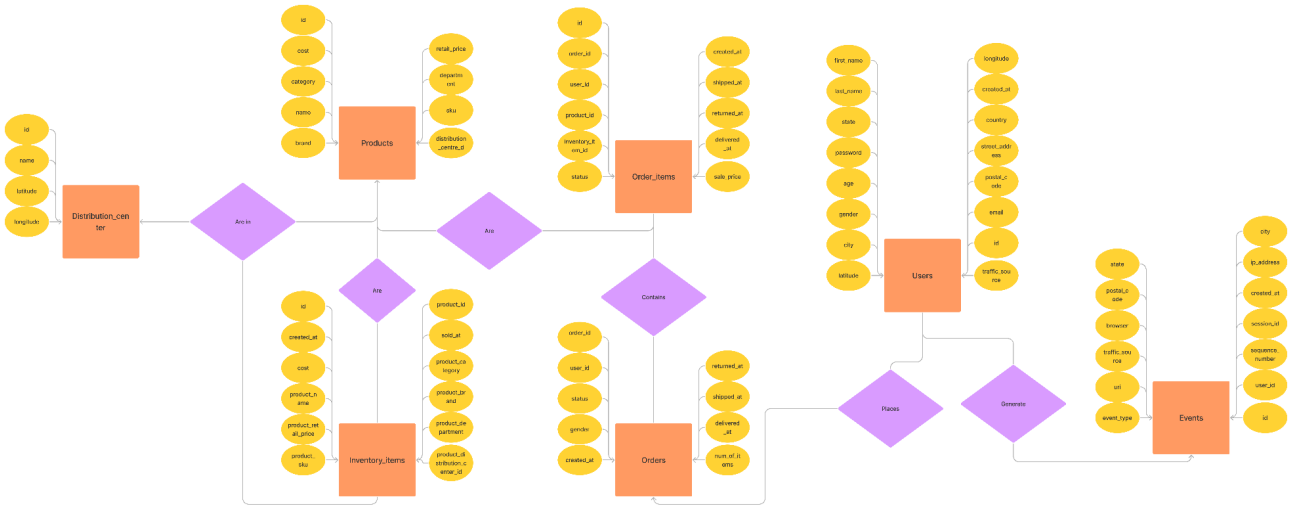
COL362 Milestone-1(Group 10)

Darshan Rakhewar - 2020CS10340
Vibhor Sengar - 2020EE30313
Nirbhay Kumar - 2020CS10365

The corresponding tagged release on github is milestone1:
Png files are uploaded.
This pdf is also uploaded on github, it contains :
- ER Diagram
- Functional dependencies
- FD preserving normalization
- Relational Schema (original and decomposed)
- Github repository for the project

ER Diagram



Functional Dependencies

users (id, first_name, last_name, email, password, age, gender, state, street_address, postal_code, city, country, latitude, longitude, traffic_source, created_at) -

id -> {first_name, last_name, email, password, age, gender, state, street_address, postal_code, city, country, latitude, longitude, traffic_source, created_at}
email -> {id, first_name, last_name, password, age, gender, state, street_address, postal_code, city, country, latitude, longitude, traffic_source, created_at}

postal_code -> {state, city, country}
{latitude, longitude} -> {state, street_address, postal_code, city, country}

distributions_centres (id, name, latitude, longitude) -

id -> {name, latitude, longitude}

events (id, user_id, sequence_number, session_id, created_at, ip_address, city, state, postal_code, browser, traffic_source, uri, event_type) -

id -> {user_id, sequence_number, session_id, created_at, ip_address, city, state, postal_code, browser, traffic_source, uri, event_type}
postal_code -> {city, state}

order_items (id, order_id, user_id, product_id, inventory_item_id, status, created_at, shipped_at, delivered_at, returned_at, sale_price) -

id -> {order_id, user_id, product_id, inventory_item_id, status, created_at, shipped_at, delivered_at, returned_at, sale_price}
order_id -> user_id
inventory_item_id -> product_id

orders (order_id, user_id, status, gender, created_at, returned_at, shipped_at, delivered_at, num_of_item) -

order_id -> {user_id, status, gender, created_at, returned_at, shipped_at, delivered_at, num_of_item}
user_id -> gender

products (id, cost, category, name, brand, retail_price, department, sku, distribution_centre_id) -

id -> {cost, category, name, brand, retail_price, department, sku, distribution_centre_id}

inventory_items (id, product_id, created_at, solt_at, cost, product_category, product_name, product_brand, product_retail_price, product_department, product_sku, product_distribution_centre_id) -

id -> {product_id, created_at, solt_at, cost, product_category, product_name, product_brand, product_retail_price, product_department, product_sku, product_distribution_centre_id}
product_id -> {product_category, product_name, product_brand, product_retail_price, product_department, product_sku, product_distribution_centre_id}

FD preserving normalization (after decomposition)

coordinates (latitude, longitude, street_address, postal_code) -

{latitude, longitude} -> {street_address, postal_code}

address (postal_code, city, state, country) -

postal_code -> {city, state, country}

users (id, first_name, last_name, email, password, age, gender, latitude, longitude, traffic_source, created_at) -

id -> {first_name, last_name, email, password, age, gender, latitude, longitude, traffic_source, created_at}
email -> {id, first_name, last_name, password, age, gender, latitude, longitude, traffic_source, created_at}

distributions_centres (id, name, latitude, longitude) -

id -> {name, latitude, longitude}

events (id, user_id, sequence_number, session_id, created_at, ip_address, postal_code, browser, traffic_source, uri, event_type) -

id -> {user_id, sequence_number, session_id, created_at, ip_address, postal_code, browser, traffic_source, uri, event_type}

order_items (id, order_id, inventory_item_id, status, created_at, shipped_at, delivered_at, returned_at, sale_price) -

id -> {order_id, inventory_item_id, status, created_at, shipped_at, delivered_at, returned_at, sale_price}

orders (order_id, user_id, status, created_at, returned_at, shipped_at, delivered_at, num_of_item) -

order_id -> {user_id, status, created_at, returned_at, shipped_at, delivered_at, num_of_item}

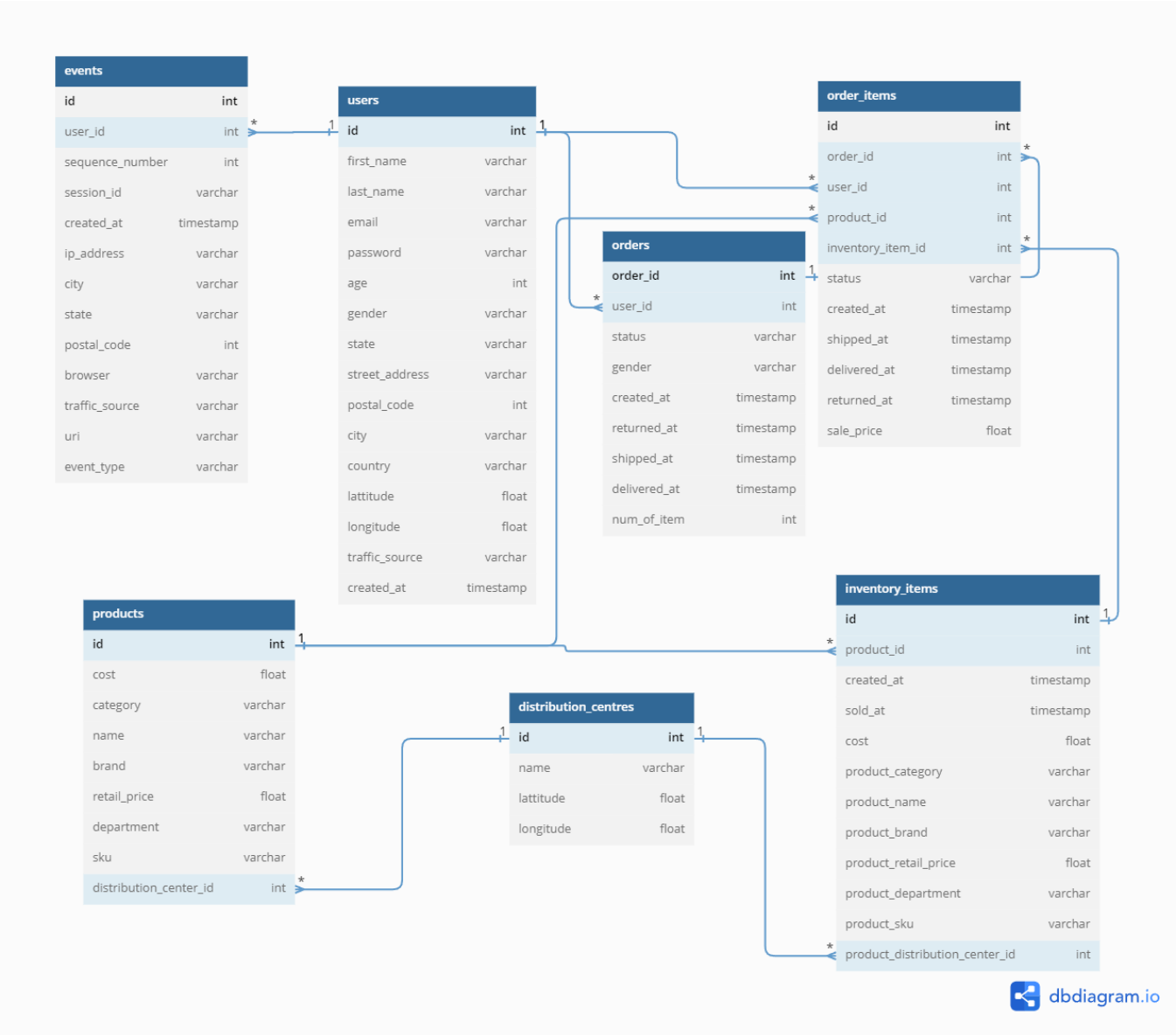
products (id, cost, category, name, brand, retail_price, department, sku, distribution_centre_id) -

id -> {cost, category, name, brand, retail_price, department, sku, distribution_centre_id}

inventory_items (id, product_id, created_at, sold_at, cost) -

id -> {product_id, created_at, solt_at, cost, product_category, product_name, product_brand, product_retail_price, product_department, product_sku, product_distribution_centre_id}

Relational Schema



Relation Schema (Decomposed)