**Course Work**

«Medical equipment»

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**Overview**

**Biomedix** is a global healthcare company founded in **2012**, specializing in the development, manufacturing, and distribution of cutting-edge medical products. With over a decade of experience, Biomedix has established itself as a reliable provider of innovative healthcare solutions, catering to both individual and institutional customers.

**Global Reach and Distribution**

Biomedix caters to a global customer base spanning countries like the USA, Japan, Germany, and Canada. With partnerships with renowned shipping providers such as VitalShip Logistics and HealthExpress Couriers, Biomedix ensures efficient delivery, including specialized logistics solutions for temperature-sensitive products. The company collaborates with trusted shipping partners to ensure efficient delivery services tailored to meet the needs of its diverse customer base. Delivery methods include **standard shipping**, **express delivery**, and **in-store pickup**, with specialized logistics solutions for temperature-sensitive products.

**Categories and Subcategories of Medical Equipment**

Biomedix offers an extensive range of cutting-edge medical equipment, systematically categorized to cater to the diverse needs of hospitals, clinics, and individual customers. Below is an overview of the primary product categories, their subcategories, and associated global brands:

**1. Diagnostic Equipment**

Diagnostic equipment plays a vital role in healthcare, providing accurate and reliable results for medical evaluations. Key subcategories include:

* **MRI Scanners**
* **CT Scanners**
* **Ultrasound Machines**
* **X-ray Machines**

Associated brands:

* Philips
* Siemens
* GE Healthcare
* Canon Medical

**2. Surgical Equipment**

Designed to support precision and innovation in operating rooms, surgical equipment is a cornerstone of modern medicine. Key subcategories include:

* **Surgical Lasers**
* **Endoscopic Devices**
* **Cardiovascular Stents**

Associated brands:

* Olympus
* Boston Scientific
* Medtronic
* Zimmer Biomet

**3. Monitoring and Life Support Equipment**

These devices ensure continuous care and monitoring for patients in critical conditions. Key subcategories include:

* **Patient Monitors**
* **Ventilators**
* **Dialysis Machines**

Associated brands:

* Dräger
* B.Braun
* Baxter
* Mindray

**4. Therapeutic Equipment**

Therapeutic equipment is used for both life-saving interventions and long-term care. Key subcategories include:

* **Respirators**
* **Infusion Pumps**
* **Defibrillators**

Associated brands:

* Abbott
* 3M
* Stryker
* Johnson & Johnson

**5. Hospital and Examination Furniture**

Essential for creating functional healthcare environments, this category encompasses:

* **Medical Examination Tables**
* **Hospital Beds**
* **Patient Chairs**

Associated brands:

* Hillrom
* Siemens
* GE Healthcare

**Innovative Partnerships**

Biomedix collaborates with some of the most trusted names in the medical and pharmaceutical industry, such as:

* Roche
* Johnson & Johnson
* Baxter
* Siemens
* Abbott
* Philips

By combining innovative technology, a broad product portfolio, and strategic global partnerships, Biomedix remains at the forefront of delivering high-quality medical solutions worldwide.

**Steps to do**

|  |  |
| --- | --- |
| 1. **OLTP** | |
| **Step** | **Result** |
| 1.1 Develop OLTP solution | **Folder** – *./point1*  **Logical schema** – *oltp.png*  **Tables** – *oltp.sql*  **Note**  – *first create DB with name oltp\_db* |
| 1.2 Prepare data to load to your OLTP database | **Folder** – *./point1/csv*  **Files** – */\*.csv* |
| 1.3 Prepare script to load data from CSV to your OLTP database | **Folder**  – *./point1*  **File** – *load\_csv\_to\_oltp.sql*  **Note** – *change pathes in code* |
| 1. **OLAP** | |
| **Step** | **Result** |
| 2.1 Develop OLAP solution | **Folder**  – *./point2*  **Logical schema** – *olap.png*  **Tables** – *olap.sql*  **Note**  – *first create DB with name olap\_db* |
| 2.2 Develop ETL process to move data from OLTP database to OLAP database | **Folder** – *./point2*  **Script** – *etl.sql*  **Note** – *wait 15 to 80 seconds for the script* |
| 2.3 Create visual report based on your OLAP solution | **Folder** – *./point2/report*  **File** – *./visual\_report.pbix, ./visual\_report.pdf*  **Note** – *if necessary connect to PostgreSQL DB*  ***Cridentials*** *– “dbname=olap\_db,user=postgres password=1234, host=localhost”* |
| 1. **Queries** | |
| **Step** | **Result** |
| 3.1 Write queries based on OLTP | **Files** – *oltp\_queries, olap\_queries*  **Folder** – *./point3* |
| 3.2 Write queries based on OLAP |