**HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**PROJECT REPORT**

DATABASE DESIGN AND IMPLEMENTATION

Smart Devices Store Management System (SDSMS)

**GROUP 7**

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# Team members and Work Allocation

## Team members

|  |  |  |  |
| --- | --- | --- | --- |
| **STT** | **Name** | **Student ID** | **Role** |
| 1 | Đỗ Tuấn Minh | 20200390 | Member |
| 2 | Nguyễn Khánh Trung | 20205133 | Lead |
| 3 | Nguyễn Thị Phương Thảo | 20205194 | Member |

## Work Allocation

|  |  |  |
| --- | --- | --- |
| **STT** | **Work** | **Members** |
| 1 | Insert Data |  |
| 2 | Write report |  |
| 3 | Slide |  |
| 4 | Trigger and Function |  |
| 5 | Overall Design |  |
| 6 | Entity Relationship Diagram |  |
| 7 | Schema and Mapping |  |
| 8 | Write Query |  |
| 9 | Analyze the use of view, index |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |
| 13 |  |  |

# Problem Description

We are building a database to store information related to a Smart Devices Store. The store sells different kinds of products: smart phones, smart watches, tablets, smart TVs, headsets… Products are supplied by many suppliers but through only a single warehouse.

The SDSMS is designed to help store owners manage inventory, sales, customer data, and other important aspects of their business. The system can track the stock levels of individual products, generate reports on sales and inventory, and provide real-time data on customer behavior and preferences. This data can be used to make informed decisions about product selection, pricing, and marketing strategies.

There will be 4 types of users expected for our system: Admin, Customer, Product Manager and Sale Manager

## Admin

## Customer

Customers usually take 2 types of actions in a smart device store

In a smart device store, customers typically engage in one of two actions: either they search for the specific product they require, or they make a purchase of the product.

## Product Manager

## Sales Manager

# DB Design

## ERD Diagram

## Database Design

Graphical user interface, application, Word

Description automatically generated

# Demo Main Functions

# Lesson Learned From The Project

* The database design should follow to the suggested phasing. When we originally designed the database, we erred by hastily designing tables without making any careful planning. As a result, we have to change the majority of the table, which adds needless complexity to the workflow.
* When we need to run one type of query several times, the use of FUNCTION and PROCEDURE will be useful.
* In some cases, using an INDEX will considerably lower the cost of a query.

# Summary

This is the first trial of our team about the total database design and implementation. There will definitely be some mistakes or unsuitable features that need adjusting. Thus, we would really appreciate any of your comments to help us perfect our work. Thank you.