Lab 5: Retrieving Data from the Database

a)Category\_20250703.cs

namespace RetailInventoryApp\_Lab4\_20250703.Models\_20250703

{

    public class Category

    {

        public int Id { get; set; }

        public string Name { get; set; }

    }

}

b)Product\_20250703.cs

namespace RetailInventoryApp\_Lab4\_20250703.Models\_20250703

{

    public class Product

    {

        public int Id { get; set; }

        public string Name { get; set; }

        public decimal Price { get; set; }

        public Category Category { get; set; }

    }

}

c)AppDbContext\_20250703.cs

using Microsoft.EntityFrameworkCore;

using RetailInventoryApp\_Lab4\_20250703.Models\_20250703;

namespace RetailInventoryApp\_Lab4\_20250703.Data\_20250703

{

    public class AppDbContext\_20250703 : DbContext

    {

        public DbSet<Category> Categories { get; set; }

        public DbSet<Product> Products { get; set; }

        protected override void OnConfiguring(DbContextOptionsBuilder optionsBuilder)

        {

            optionsBuilder.UseSqlite("Data Source=retailstore\_lab4\_20250703.db");

        }

    }

}

d)Program.cs

using RetailInventoryApp\_Lab4\_20250703.Data\_20250703;

using RetailInventoryApp\_Lab4\_20250703.Models\_20250703;

using Microsoft.EntityFrameworkCore; // Needed for Include

var context = new AppDbContext\_20250703();

// Check if data already exists (prevent duplicates)

if (!context.Categories.Any() && !context.Products.Any())

{

    var electronics = new Category { Name = "Electronics" };

    var groceries = new Category { Name = "Groceries" };

    await context.Categories.AddRangeAsync(electronics, groceries);

    var product1 = new Product { Name = "Laptop", Price = 75000, Category = electronics };

    var product2 = new Product { Name = "Rice Bag", Price = 1200, Category = groceries };

    await context.Products.AddRangeAsync(product1, product2);

    await context.SaveChangesAsync();

    Console.WriteLine("Data retrived successfully.");

}

else

{

    Console.WriteLine("Data retrival unsuccessful.”)

}

// 🔍 Print all categories

Console.WriteLine("\n📦 Categories:");

foreach (var category in context.Categories.ToList())

{

    Console.WriteLine($"- {category.Id}: {category.Name}");

}

Output:

