Software Developer Trainee (LogBook) Summer 2025
Assignment

Consider these tables called Vessel Management System

		Ships Table	
Id	**Owner_Id**	**Ship_name**	**Imo_number**
1	2	Symphony of the Seas	9744001
2	4	Eco Arctic	9746683
3	5	Explorer Spirit	9313486
4	3	Carnival Luminosa	9398905

Category Table			
Id	**Ship_id**	**Ship_type**	**Ship_tonnage**
1	1	Cruise	208081
2	2	Crude Oil Tanker	19554
3	3	LPG Tanker	57657
4	4	Cruise	323872

Owner Table	
Owner_Id	**Owner_name**
1	Holland America Cruises
2	Royal Caribbean Cruises
3	Carnival Cruises
4	Mitsubishi Heavy Industries
5	Mitsui O.S.K. Lines

Requirements

- ✓ Have a database implementing many-to-many relationship between owners and ships.
  - o One owner can have many ships
  - o One ship can be owned by many owners
  - o Ships have details about themselves such as Name, ImoNumber, Type, Tonnage.

- ✓ Build a RESTful CRUD API for Vessel Management System described below:

No.	Description
1	Get all ships from ship table
2	Add new ship
3	Ship is updated
4	Ship is deleted
5	Get all the details that can be obtained about the ship
6	Delete an owner who owns several ships

- ✓ Create Integration Tests for REST APIs proving that the whole system works.

Software Developer Trainee (LogBook) Summer 2025
Assignment

Technologies:

- Use PostgreSQL/MS SQL database
- Java or C# implementation

If you chose Java, integrate the following technologies:

- JPA and Hibernate
- Spring framework for dependency-injection
- Gradle

If you chose C#, integrate the following technologies:

- MVVM architecture
- Entity Framework
- Dependency injection container e.g. Autofac

Some considerations:

- Application need to be functional, one unfinished product is better than a non-functional product.
- It would be good to use as many design patterns as possible and eventually show us why you made certain architectural decisions.
- Time limit: **7 days.**

It would be a plus:

- Create API documentation using Javadoc/Swagger
- Provide us one git repo and **not a zip**.
- Create some unit tests.
- Create SQL scripts to generate db.