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# Higher Diploma in Information Technology

## Object Oriented Programming (Java)

Year 1 Semester 2 – 2024 June Intake

### Group Project Specification

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#### Intended Learning Outcomes:

At the end of the class the students should be able to:

- To identify user requirements and develop Object Oriented Concepts
- To develop Java application and prepare a project proposal.

**ShipShape** is a maritime maintenance and supply company that provides ship repair services, sells marine spare parts, and offers ship repainting services. Currently, their entire business process is managed using a combination of Excel sheets, emails, and manual record-keeping. As a growing tech company, your team has been hired to automate ShipShape's manual processes. The following main business requirements have been discussed by the client. Implement a Java Swing Application to automate these business requirements:

1. **Manage Customer Orders (Add, Update, Remove):** This includes not only orders for repairs and repainting but also orders for spare parts. Some orders may require parts to be ordered from suppliers, which leads to the next point.
2. **Manage Suppliers (Add, Update, Remove):** ShipShape works with various suppliers worldwide to source marine spare parts. Managing suppliers includes tracking which parts are sourced from which suppliers and maintaining up-to-date contact information for each supplier.
3. **Manage Inventory:** This includes tracking the stock of various spare parts in the warehouse and on each ship. It also involves predicting when stock will run low and automatically creating orders to suppliers.
4. **Manage Employees in the organization:** This includes tracking employee information, job roles, and schedules. Some employees may work in the office, while others work in the field or on ships.
5. **Allocate Employees to Customer Jobs:** This involves scheduling employees for various jobs, taking into account their skills, job roles, and availability. Some jobs may require multiple employees with different skills.
6. **Monthly Reports related to sales:** This includes generating reports on sales of spare parts and services. The reports should provide insights into sales trends, top-selling items, and areas for improvement.
7. **Send notification to the Customers when the customer's ship is ready to be collected:** This involves automatically sending a notification (e.g., via email or SMS) to customers when their ship is ready.
8. **Send notification to Employees when a new order Job has been allocated via email:** This involves automatically sending a notification to employees when they are assigned a new job.

**Note: Fill the Task allocation Table in the registration form by the task numbers given above.**

**Main Submissions**

1. Group registration form along with the work allocation to the course web
2. Final project after the final examinations

**Document Submissions by individual group members (check course web for deadlines)**

1. Use case diagrams.
2. Class diagrams
3. ER diagrams.

**Marking Guide Template**

Check the course web