Ships & Sails

Module Exercise IIII
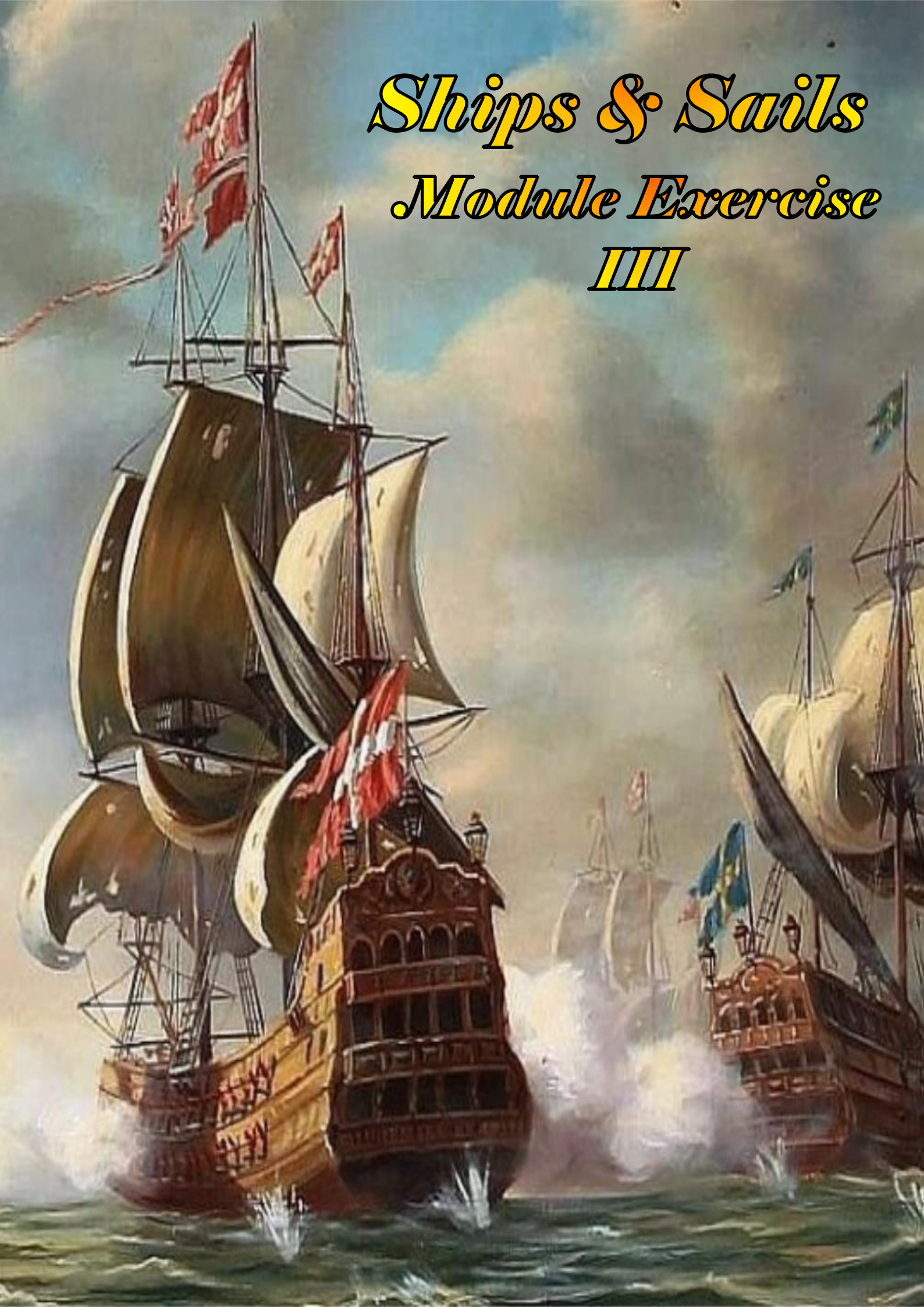
Content

The naval history of Denmark is filled with heroes. Just like the Dutch, the English and the Spanish (sorry France and Germany).

NIELS JUEL (1626 – 1697):

.

And who doesn't remember..

Under den [Skånske Krig] stod Niels Juel i spidsen for den danske flåde, der erobrede [Gotland] i [1676]. Niels Juels største bedrift var sejren over en overlegen svensk flåde i [Søslaget i Køge Bugt] den [1. juli 1677]. Slaget foregik ganske vist ved Stevns, da skibene aldrig kom ind i bugten. Betegnelsen Slaget i Køge Bugt blev første gang brugt i 1800-tallet.

Han ombyggede [Valdemars Slot] på [Tåsinge] samt byggede et [palæ] (det nuværende [Thotts Palæ], [Frankrigs] ambassade), på [Kongens Nytorv] i [København]. Niels Juels [statue] står i [Holmens Kanal] uden for [National-banken]. Niels Juel er begravet i [Holmens Kirke].

Wikipedia (danish)

Tordenskjold (1690 – 1720)

Peter Jansen Wessel *(født 28. oktober 1690 i Trondhjem, død 12. november 1720 i Gleidingen, Laatzen) var en søhelt i den dansk-norske flåde. Han er adlet Tordenskiold. Han var bror til søofficeren Caspar von Wessel.*

Han var som 16-årig skibsdreng på rejse på trekantsruten: Guinea (nuværende Ghana), Vestindien og Danmark. Han blev optaget på Søkadetakademiet i 1709 og fik i 1712 kommando over den nybyggede Fregat Løvendals Galej på 20 små kanoner. Med den erobrede han snart efter et svensk kaperfartøj.

Han blev adlet i 1716 under navnet **Tordenskiold,** *og samme år vandt han en opsigtsvækkende sejr ved Dynekilen, hvor en svensk forsynings flåde blev ødelagt. Det var stærkt medvirkende til, at Karl XII måtte opgive sit forsøg på at erobre Norge. Han blev øverstkommanderende for Kattegat-eskadren, og i 1719 erobrede han Marstrand og ødelagde kort efter resten af den svenske flåde i Göteborg. Herefter blev han udnævnt til viceadmiral, men det var afslutningen på krigen og Tordenskiolds bedrifter.*

Wikipedia (danish)

And who will be the next ?

You, Commander ……..

Exercise

Design and implement a sailing ship battle game, where you at the console control a number of ships from the age of sails and heroes. The design must be :

- using the full UP package &
- the implementation using Java, Spring &
- inter computer communication.

This exercise together with the game rules contains a lot of facts. Far more than the needed and it is a part of the exercise to choose the relevant parts.

NOTE * IMPORTANT
Due to the size of this exercise,

it is very important to
do a good design.

Own responsibility

In this exercise each of the groups 4 persons has her/his own responsibility. I.e. each participant must develop their own code, which must cooperate with the other sets of code via Java interface specifications.
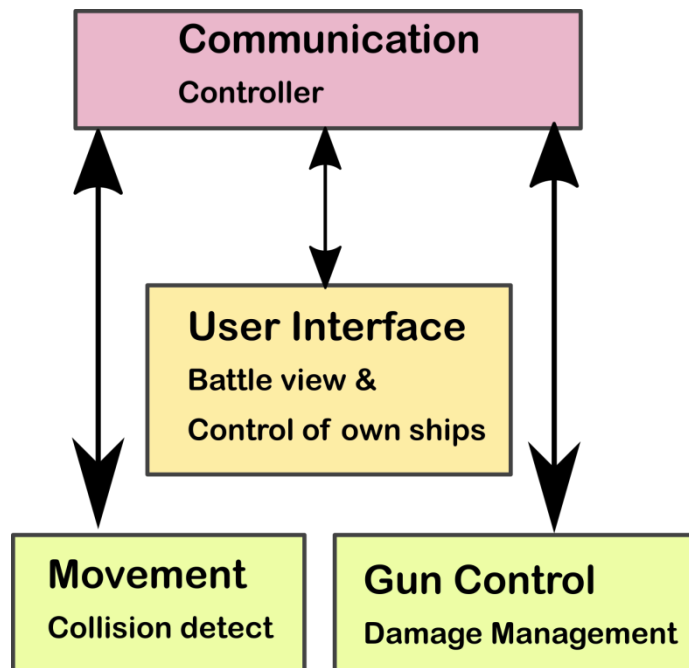
And everyone must maintain a log via Fronter over her/his activities.

It is ok to cooperate in the development, i.e. talk about problems, get advices, find solutions, but the person with the responsibility must know the code to the finest detail.
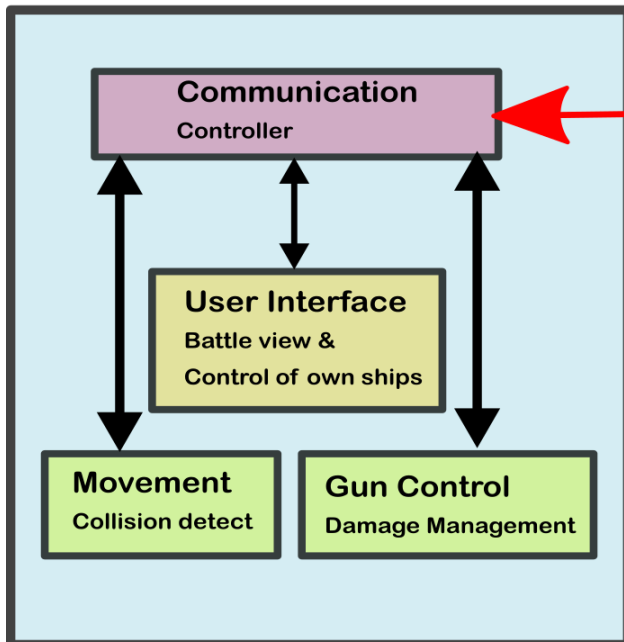
Interfaces

Along with this exercise are 3 interfaces. It is very important to implement them, as it should be possible to interchange modules from one group to another.
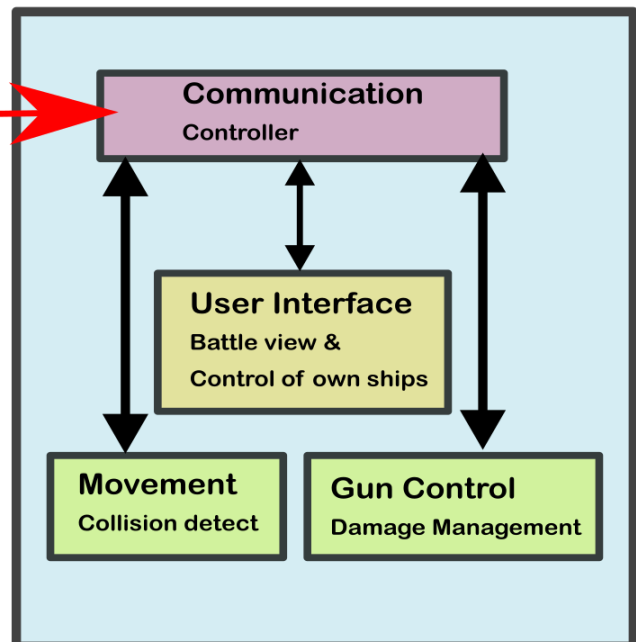
Opponent - network

Your groups game must be able to communicate with other games implemented by the other groups via TCP/IP communication.

Server   Client

Rules

For movement, battle are written in the document :

　ShipsAndSails_Rules.pdf

Future Changes

Be prepared to changes. As this is the first time, that we try it, we will listen to feedback especially with suggestions.

The Game Parts / Glossary

The game is played in rounds. In every round the Communication will send and receive information from the tree other responsibilities and the opponent via the net.

Database :

Each implementation has it own database with information of all ships and the scenarios, i.e. the setup with ships from both sides.

Ocean :

Area where movement is controlled by hexagons (called hexes). Here they are placed left right tipped. See Figur 2 p. 7.

Ship :

3 different sizes of ships are represented – one, two and tree rows of guns. Each ship is in one hex, from where it can point in the moving direction, i.e. one of the 6 sides and shoot in either of its side directions. See figure below and the rules for details.

Ships abilities (movement and attack) :

The ships can basically do two different actions, move and attack. Both can be limited by the value of certain attributes. Details in the rules.
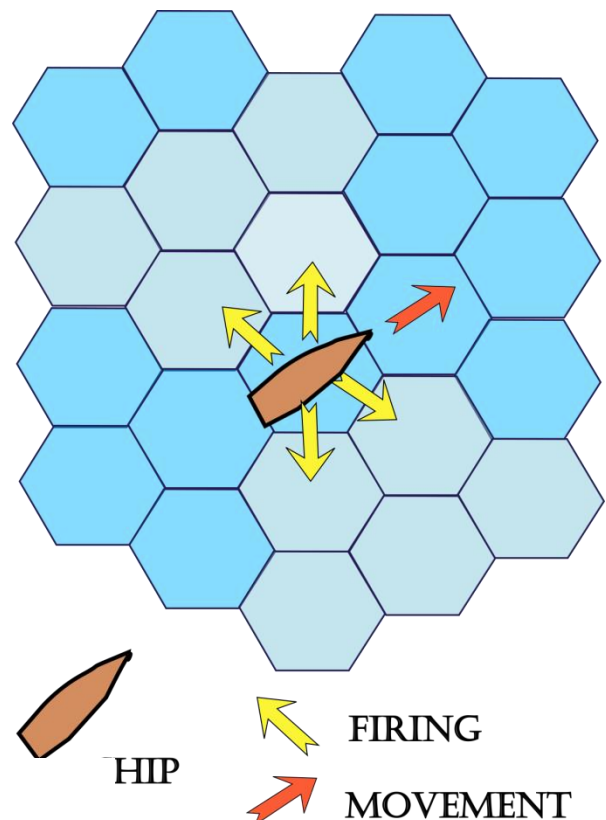
Figur 2 Movement and firing directions

Ships Attribute :

Nationality, Number, Name,

Number of sailors, Number of rows of Guns, Hull quality,

Sail quality, Position, Direction,

Speed.

Wind :

Every hex in the ocean has the same wind speed and direction. Values will change randomly through the game. The values are generated by the Server.

How to combine Java code with hexes :

https://www.redblobgames.com/grids/hexagons/

Hand in

All code is public.

Hand in is : 12:00 Friday, April 26th on Fronter

We do feedback : Tuesday, April 30th.