CLAIMS

[Claim 1] A ship assignment device comprising

a first acquisition unit that acquires a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition unit that acquires a data set of weather information indicating weather related to the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition unit that acquires a data set of a fuel consumption rate indicating a fuel consumption rate of each of plural ships from a second database that stores data sets each indicating a fuel consumption rate in association with an identifier of a ship from among the plural ships,

a calculating unit that calculates a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output unit that outputs identifiers of ships selected from the plural ships on the basis of a result of the calculation performed by the calculating unit to a device.

[Claim 2] The ship assignment device according to claim 1, wherein

the output unit outputs identifiers of ships sorted in ascending order according to a total fuel consumption calculated by the calculating unit.

[Claim 3] The ship assignment device according to claim 1 or claim 2, wherein

the data set of voyage schedule information indicates plural partial sailing routes that are divided from the sailing route of the voyage,

the second acquisition unit acquires data sets each indicating weather related to a partial sailing route from among the plural partial sailing routes, and

the calculating unit calculates a fuel consumption required for each of the plural partial sailing routes, and sums up plural fuel consumptions of the plural partial sailing routes to determine a total

fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information.

[Claim 4] The ship assignment device according to any one of claims 1 to 3, wherein

the data set of fuel consumption rate indicates a relation between sailing speeds and fuel consumption rates, and

the calculating unit selects a fuel consumption rate corresponding to a sailing speed determined by the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information as the fuel consumption rate used for calculating the total fuel consumption.

[Claim 5] A ship assignment method comprising

a first acquisition step for a device to acquire a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition step for the device to acquire a data set of weather information indicating weather related to the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition step for the device to acquire a data set of a fuel consumption rate indicating a fuel consumption rate of each of plural ships from a second database that stores data sets each indicating a fuel consumption rate in association with an identifier of a ship from among the plural ships,

a calculating step for the device to calculate a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output step for the device to output identifiers of ships selected from the plural ships on the basis of a result of the calculation in the calculating step to a device.

[Claim 6] A program for causing a computer to function as

a first acquisition unit that acquires a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition unit that acquires a data set of weather information indicating weather related to the operation time schedule

of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition unit that acquires a data set of a fuel consumption rate indicating a fuel consumption rate of each of plural ships from a second database that stores data sets each indicating a fuel consumption rate in association with an identifier of a ship from among the plural ships,

a calculating unit that calculates a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output unit that outputs identifiers of ships selected from the plural ships on the basis of a result of the calculation performed by the calculating unit to a device.

[Claim 7] A computer-readable recording medium recording the program according to claim 6.

CLAIMS

[Claim 1] A ship assignment facilitating device comprising

a first acquisition unit that acquires a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition unit that acquires a data set of weather information indicating weather related to the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition unit that acquires a data set of a fuel consumption rate indicating a fuel consumption rate from a second database that stores data sets each corresponding to a combination of a weather condition and a sailing speed and indicating a fuel consumption rate of a ship under the weather condition at the sailing speed in association with an identifier of a ship from among the plural ships,

a calculating unit that calculates a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output unit that outputs identifiers of ships selected from the plural ships on the basis of a result of the calculation performed by the calculating unit to a device.

[Claim 2] The ship assignment facilitating device according to claim 1, wherein

the output unit outputs identifiers of ships sorted in ascending order according to a total fuel consumption calculated by the calculating unit.

[Claim 3] The ship assignment facilitating device according to claim 1 or claim 2, wherein

the data set of voyage schedule information indicates plural partial sailing routes that are divided from the sailing route of the voyage,

the second acquisition unit acquires data sets each indicating weather related to a partial sailing route from among the plural partial sailing routes, and

the calculating unit calculates a fuel consumption required for each of the plural partial sailing routes, and sums up plural fuel consumptions of the plural partial sailing routes to determine a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information.

[Claim 4] A ship assignment facilitating method comprising

a first acquisition step for a device to acquire a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition step for the device to acquire a data set of weather information indicating weather related to the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition step for the device to acquire a data set of a fuel consumption rate indicating a fuel consumption rate from a second database that stores data sets each corresponding to a combination of a weather condition and a sailing speed and indicating a fuel consumption rate of a ship under the weather condition at the sailing speed in association with an identifier of a ship from among the plural ships,

a calculating step for the device to calculate a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output step for the device to output identifiers of ships selected from the plural ships on the basis of a result of the calculation in the calculating step to a device.

[Claim 5] A program for causing a computer to function as

a first acquisition unit that acquires a data set of voyage schedule information indicating an operation time schedule of a voyage and a sailing route of the voyage,

a second acquisition unit that acquires a data set of weather information indicating weather related to the operation time schedule of the voyage and the sailing route of the voyage indicated by the data set of voyage schedule information from a first database,

a third acquisition unit that acquires a data set of a fuel consumption rate indicating a fuel consumption rate from a second

database that stores data sets each corresponding to a combination of a weather condition and a sailing speed and indicating a fuel consumption rate of a ship under the weather condition at the sailing speed in association with an identifier of a ship from among the plural ships,

a calculating unit that calculates a total fuel consumption required for a ship to sail on the sailing route of the voyage indicated by the data set of voyage schedule information following an operation time schedule of the voyage indicated by the data set of voyage schedule information on the basis of the data set of weather information and the data set of fuel consumption rate of the ship with regard to each of the plural ships, and

an output unit that outputs identifiers of ships selected from the plural ships on the basis of a result of the calculation performed by the calculating unit to a device.

[Claim 6] A computer-readable recording medium recording the program according to claim 5.