**Invalid Port Exception**

Devi is a regular Customer of Thushith shipping Company. She once wanted to transfer few goods from India to her brother at Singapore. She placed a shipment order through the Company’s official Shipping Management System giving all the needed details. The Syatem gets the shipment id and shipment name as the input and displays a list of available ports. From the list of available ports Devi is allowed to select the arrival and depature ports for her shipment. Write a program to implement this requirement and when both arrival and depature ports are the same, it should throw on custom exception named **InvalidPortException**. Use Exception handling mechanism to handle the exception.

**Exception specification:**

Throw exception for the following scenario

When both arrival and depature ports are the same throw exception

Create a class named **Shipment** with the following private member variables/ attributes

* **Interger id**
* **String name**
* **Port arrivalPort**
* **Port depaturePort**

1. Include a 4-argument argument constructor in this class. The arguments passed to the constructor are in the following order---**id,name,arrivalPort,depaturePort.**
2. Include appropriate getters and setters.

Create a class named **Port** with the following member variables/ attributes

* **Interger id**
* **String country**
* **String name**

1. Include a 3-argument argument constructor in this class. The arguments passed to the constructor are in this order---**id,country,name.**
2. Include appropriate getters and setters.

Create a class named **ShipmentBo**  with the following private member variables/ attributes

Include a method.

|  |  |  |
| --- | --- | --- |
| S.No | Method Name | Method Description |
| 1 | Boolean validateShipment(String s1, String S2,Port[]p) | To check whether the port is valid or invalid. |
| 2 | Void displayShipmentDetails (Shipment shipmentObj,port[]ports,String p1,string p2) | To display the shipment details. |

Create a class named **InvalidPortException**

It will display “**InvalidPort”.**

Create a class **Main** and write a main method to test the above class.

**Note:**

Port details are pre populated. Choose the port details from pre the populated data.

If the choosen port details are in lower case, handle the case and displat the output in upper case.

**Problem Specification:**

1 . Create a custom exception named as **InvalidPortException**.

2. Use System.ot.format(“%-15s%-15s%-15s%-15s/n”,”Shipment id”, “Shipment name”, “Arrival palce”, “Depature place”) to display the shipment details.

**[Note:Strictly adhere to the object oriented specifications given as a part of the problem statement. Use the same class names, method names and attribute names.]**

**Input and Output Format:**

Refer sample input and output for formatting specifications.

**[All text in bold corresponds to input and rest the corresponds to output.]**

**Sample input and output 1:**

Enter the shipment Id

**1**

Enter the shipment name:

**Food item**

Available ports are

Id Country Port name

1 India Chennai

2 America California

3 England London

4 Australia Melbourne

Enter the arrival port name

**Chennai**

Enter the departure port name

**Melbourne**

Shipment details :

Shipment Id Shipment name Arrival place Departure place

1 Food item Chennai/India Melbourne/Australia

**Sample input and output 2:**

Enter the shipment Id

**1**

Enter the shipment name:

**Electronic Items**

Available ports are

Id Country Port name

1 India Chennai

2 America California

3 England London

4 Australia Melbourne

Enter the arrival port name

**California**

Enter the departure port name

**California**

InvalidPortException: The port name is invalid