



INFORMATICS  
INSTITUTE OF  
TECHNOLOGY

UNIVERSITY OF  
WESTMINSTER 

Informatics Institute of Technology

**5COSC019C.1**

**Object Oriented Programming**

**INDIVIDUAL COURSEWORK**

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# Class Diagram

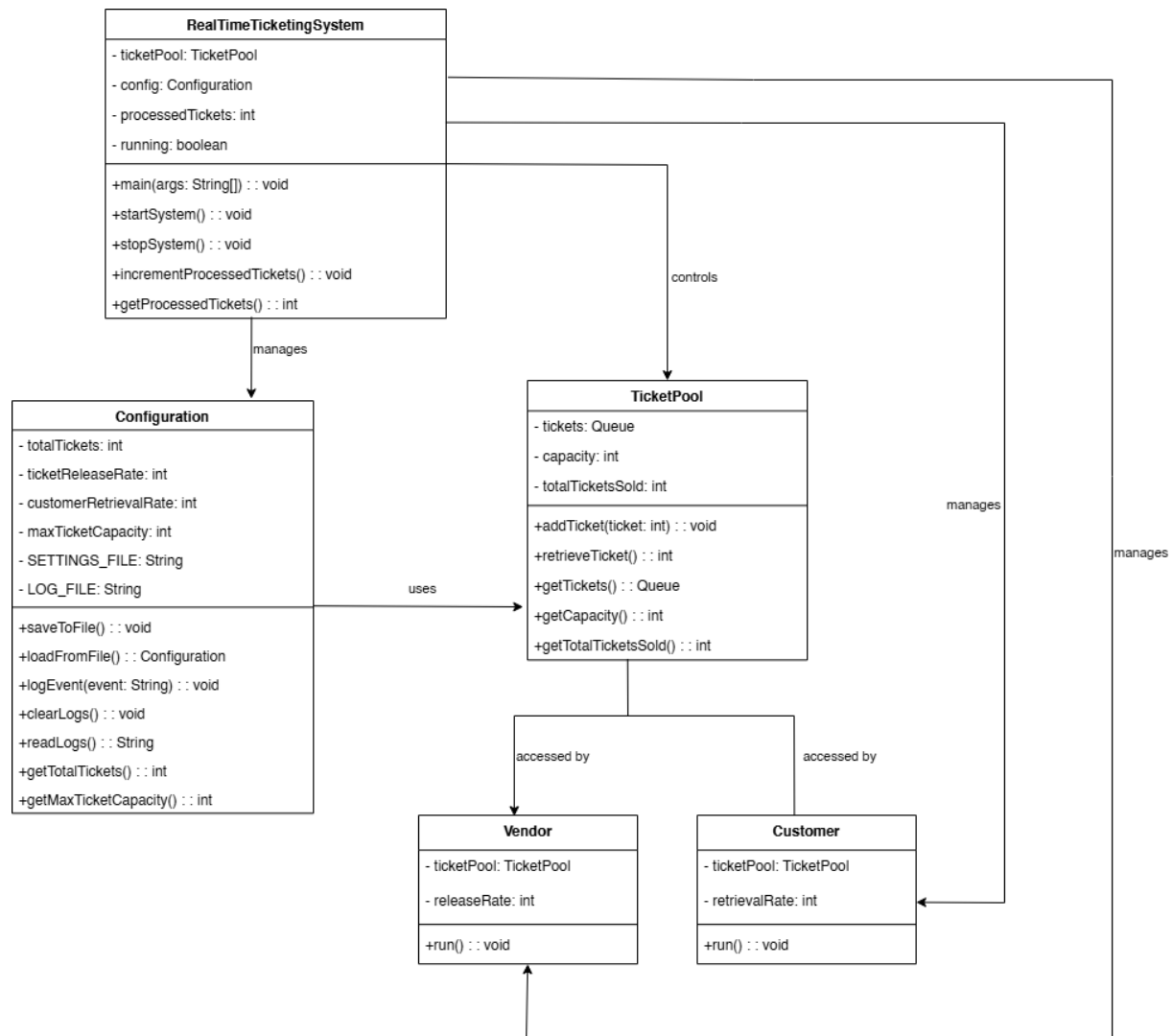


Figure 1 Class Diagram

## Sequence Diagram

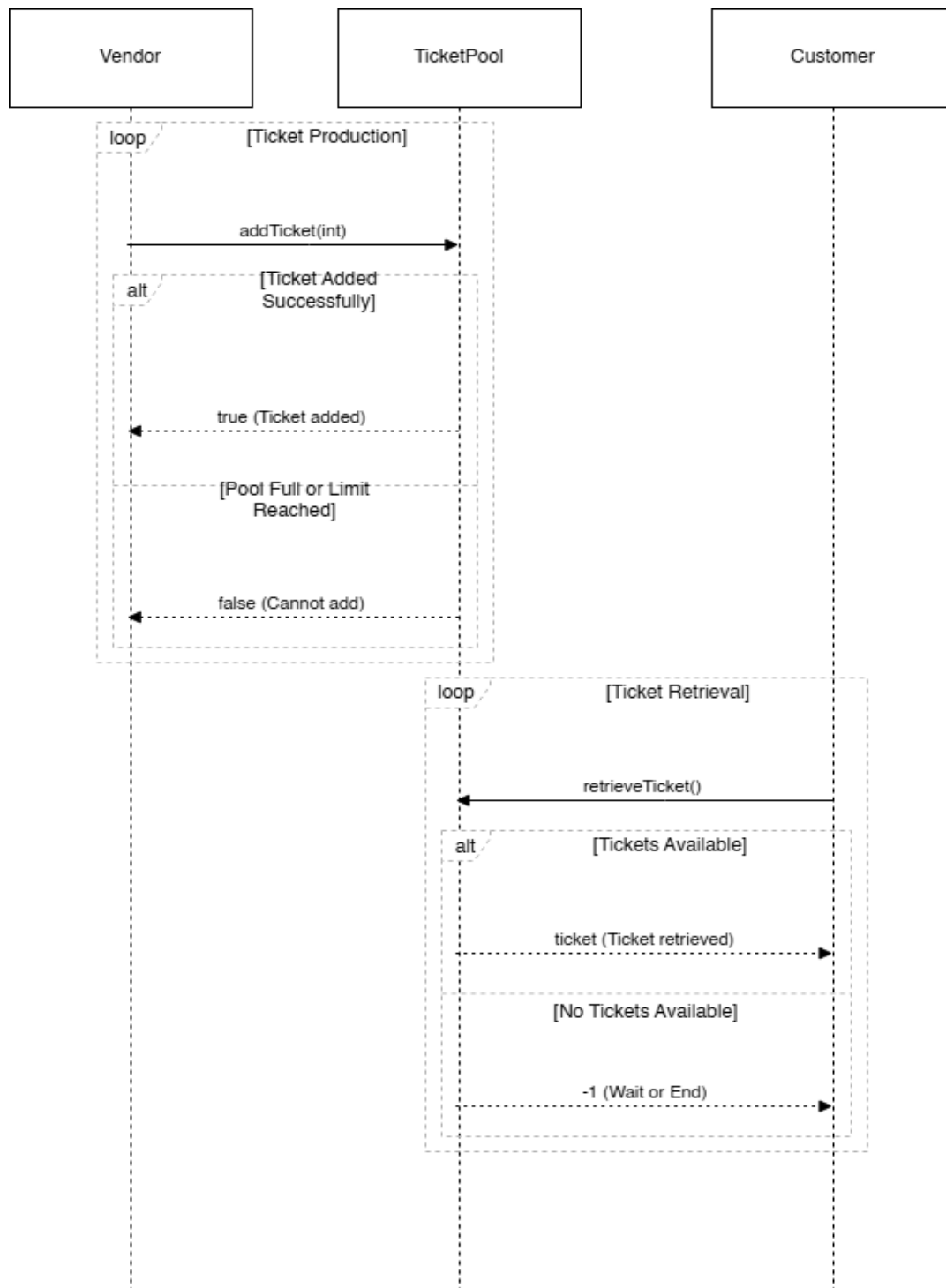


Figure 2 Sequence Diagram

## Test Cases

CLI

Case ID	Description	Input/Scenario	Expected Output	Actual Output	Status
TC01	Load configuration from JSON file	Configuration.json exists with valid data	Configuration should load successfully.	Configuration is loaded successfully.	Pass
TC02	Asking user to keep existing amounts or add new amounts	Press 1 in Main menu	System should ask user to enter new amounts or keep existing amounts	System is asking user to enter new amounts or keep existing amounts	Pass
TC03	Keep existing amounts and continue the simulation	Types "yes"	System should run the simulation according to current amounts	System is running the simulation according to current amounts	Pass
TC04	Enter new amounts	Type "no"	System should ask user to enter the new amounts and run the simulation according to that amounts	System is asking user to enter the new amounts and running the simulation according to that amounts	Pass
TC04	Handle invalid user inputs during configuration setup	Provide invalid inputs for total tickets, capacity, etc.	Should prompt the user to re-enter valid values until valid inputs are provided.	Prompts the user to re-enter valid values until valid inputs are provided.	Pass
TC05	Verify stopping simulation before ticket limit is reached	Stop simulation by pressing Enter before tickets are sold.	Simulation should stop successfully. Logs indicate simulation stopped manually.	Simulation stops successfully. Logs indicate simulation stopped manually.	Pass
TC06	Stop the simulation automatically	Program stop when total tickets are finished	Simulation should stop after the tickets finish	Simulation is stopped after the tickets finish	Pass
TC07	Save configuration to JSON and text files	Configuration with valid parameters	Configuration.json should create/update successfully. Logs reflect save	Configuration.json is creating/updating successfully. Logs reflect save	Pass

			operations.	operations.	
TC08	Create txt files	Files that have information about configuration amounts and logs	Should create/update the txt files	Creating/updating the txt files	Pass
TC09	Create a log file	Run the program to initialize logger.	Logger should write logs to system.log	Logger writes logs to system.log and displays	Pass
TC10	Exit	Press 2 in main menu	System should stop in terminal	System is stopping in terminal	Pass

#### Frontend and Backend

Case ID	Description	Input/Scenario	Expected Output	Actual Output	Status
TC01	Backend Frontend connected message	A message shows in green color if it connects	Should show the message	Message is showing	Pass
TC02	Updating the Configuration Form in valid inputs	User input valid values	System should show the successful message if user presses Update configuration button after entering valid amount	System shows the successful message if user press Update configuration button after entering valid amount	Pass
TC03	Database update	Enter the inputs in configuration form	Inputs should store at MySQL database	Inputs storing at MySQL database	Pass
TC03	Invalid amounts in configuration form	User input invalid values	System should accept only integers	System accepts only integers	Pass
TC04	Start Button	Press Start button	System should show a message that says system was started and user can see the simulation in the front end	System shows a message that says system was started and user can see the simulation in the front end	Pass
TC05	Stop button	Press Stop button	System should show a message that says system was stopped and user can see the	System shows a message that says system was stopped and user can see the	Pass

			simulation stopped in the front end and should see a summary in backend	simulation stopped in the front end and see a summary in backend	
TC06	Reset Button	Press Reset Button			
TC07	Real-time Updates	Logs display in front end	Users should receive synchronized updates, UI reflects changes immediately, no message delays	Users receive synchronized updates, UI reflects changes immediately, no message delays	Pass
TC08	Summary in backend	Show summary in backend	When system stops backend should show summary details	When system stops backend shows summary details	Pass

#### LinkedIn Courses

[https://www.linkedin.com/learning/certificates/6efb77d2c1970e4f1f7fc9d6467e597478f941b4c9301d6f6be356eef304e6bf?trk=share\\_certificate](https://www.linkedin.com/learning/certificates/6efb77d2c1970e4f1f7fc9d6467e597478f941b4c9301d6f6be356eef304e6bf?trk=share_certificate)

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Github - <https://github.com/costa-tech/OOP-CW-new-1.git>