California State University Fullerton

CPSC 462



Object Oriented Software Design

Implementation Model

for the



Tuffy Flights

System

|  |  |  |
| --- | --- | --- |
| **Nathan Marcos** | **Jared Castaneda** | **Jawad Swed** |
| Design Modeling, Implementation | Project Management, Implementation | Business Modeling, Design Modeling |
| [nathanmarcos@csu.fullerton.edu](mailto:nathanmarcos@csu.fullerton.edu) | [jaredcast@csu.fullerton.edu](mailto:jaredcast@csu.fullerton.edu) | [jawadswed@csu.fullerton.edu](mailto:jawadswed@csu.fullerton.edu) |

Revision History:

| Version | Date | Summary of Changes | Author |
| --- | --- | --- | --- |
| 1.0 | 11/8/2020 | * Initial Release * Filled in GRASP pattern table * Finished the build instructions and tables | Jared Castaneda |
| 2.0 | 12/7/2020 | * Added new patterns | Jared Castaneda |

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# Software Design to Source Code Cross-Reference

## Static View Design to Source Code Implementation Cross-Reference

<What source and header files implement the class. Sort this list by class name. It is also suggested you annotate the Class Diagram with the header file information>

| Class Name | Source code file name | Line number(s) |
| --- | --- | --- |
| Customer | Customer.hpp | 9 |
| FlightApp | Flight.hpp | (change me later) |

## GRASP Pattern Design to Source Code Implementation Cross-Reference

<Looking for you to show me (point me to) an example in the code where each of the 5 GRASP patterns is implemented.>

| Pattern | Source code file name(s) | Line number(s) |
| --- | --- | --- |
| Low Coupling / High Cohesion Pattern | Customer.hpp | 27-30 |
|  |  |
|  |  |
| Creator Pattern | Session.cpp | 89 |
| Customer.cpp | 63 |
|  |  |
| Information Expert Pattern | Session.cpp | 83 |
| Customer.cpp | 88 |
|  |  |
| Controller Pattern | Customer.hpp | 27 |
| Customer.cpp | 59 |
| Customer.hpp | 28 |
| Customer.cpp | 102 |
| SimpleUI.cpp | 47 |
| Polymorphism Pattern | Meal.hpp | 50 – 135 |
|  |  |
|  |  |
| Protected Variations Pattern | Payment.hpp | 15 - 157 |
|  |  |
|  |  |

## Logical View Interfaces to Source Code Implementation Cross-Reference

| Interface Class Name | Source code file name | Line number(s) |
| --- | --- | --- |
| Domain | UserInterfaceHandler.cpp | 22 |
| TechnicalServices | SimpleUI.cpp | 47 |
| UI | Main.cpp | 18 |

# System Build Instructions

## Windows Build Instructions

1. Open the Gitbash or Windows terminal inside the source folder. The source folder is where the three folders for the UI layer, Domain layer, and Technical Service layer are located. Make sure g++ is installed onto your computer. You can check by typing “g++ --version” into your terminal.
2. Copy and paste this line into the terminal : “g++ -o main.exe main.cpp -I. UI/\*.cpp Domain/Customer/\*.cpp Domain/Session/\*.cpp TechnicalServices/Logging/\*.cpp TechnicalServices/Persistence/\*.cpp -std=c++17”. Press enter.
3. Type “./main” and press enter to run the code if using Gitbash, or type “main” if using the Windows terminal.

## Linux Build Instructions

1. Open the Bash console window inside the source folder. The source folder is where the three folders for the UI layer, Domain layer, and Technical Service layer are located. Make sure g++ is installed onto your computer. You can check by typing “g++ --version” into your terminal.
2. Copy and paste this line into the terminal : “g++ main.cpp -o main -I. UI/\*.cpp Domain/Customer/\*.cpp Domain/Session/\*.cpp TechnicalServices/Logging/\*.cpp TechnicalServices/Persistence/\*.cpp -std=c++17”
3. Type ./main and press enter to run the code.

## Macintosh Build Instructions

Macintosh Build was not able to be completed in time for this iteration.

# Source Code

Source code is zipped under “Source\_Code.zip”. Extract contents to a folder named Source\_Code.