Jon Edwards

“Ferry Game”

**Purpose:**

I ride the Seattle - Bainbridge Ferry each day to and from work and I remain impressed by the regularity with which the ferries operate. For some time, I have wanted to combine my love of business, economy, and resource simulation-strategy games with my appreciation for the ferry system.

**Feature Set:**

* players will be able to create user accounts
* players will be able to have one active game at a time
* players will be able to buy and sell ferries
* ferries will depreciate based on their usable life and maintenance; players can affect the level of maintenance (with appropriate costs)
* players will be able to create routes between a select list of destinations (with a cost)
* players will be able to set the fares charged as well as the staff’s working shifts for the routes
* ferries are assigned to routes
* fuel prices and passenger demand will be determined by parameterized calculation that will serve as the basis of the simulation
* game-play will be turn-based, where a turn is one week
* customer service ratings will be set per route and will be determined by at least the level of staffing
* a summary will be displayed at the end of each turn

**Application Views:**

see pages 3 - 11

**Domain Modeling:**

Users

id

player name

email address

password (hashed)

active

created\_date

Games

id

player\_id

routes (list of IDs)

created\_date

current\_week

routes (list of IDs)

cash\_available

ferries (list of IDs)

Ferries

id

passenger\_capacity

fuel\_burn\_rate

speed

turnover\_time

Player\_Ferries (inherited from Ferries)

route\_id

name

maintenance

staffing\_percentage

staffing\_cost (method)

age

current\_value (method)

Shifts

id

name

start hour

end hour

Routes

id

average\_passengers

fare

passenger\_growth\_rate

staffing\_cost (method)

Player\_Routes (inherited from Routes)

id

player\_id

fare

ferries (list of IDs)

crossing\_time (method)

fuel\_burned (method)

staffing\_percentage

Fuel (not persisted)

fuel\_price (method)

Financial\_Results

id

week

game\_id

profit