[Covers?]

Project Report

Group 21

COMP3222 Software Design Principles, 2018

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**1. Introduction**

This document describes the object-oriented design of the Jungle Game from group XYZ. The project is part of the course “COMP3222 Software Design Principles” at PolyU. The following sections describes the details of our design for the game, discuss alternative choices, and propose possible extensions for future development.

[rule intro, seemingly enough]

The Jungle Game, as a board game with one final winners coming from two players, runs on the command line console. Each player controls a set of animals to move or capture opponent’s animals following specific rules, eventually trying to win the game by capturing all opponent’s animals or reaching the den.

**2. The Design of The Game**

[lead in, general requirement]

Due to the complication of rules and object interactions of the game, the implementation platform is obliged to support efficient object-oriented programming. As a game whose rules are conventionally determined, the Jungle Game has various versions of movement limitations, map design, etc., which require our design to be extendable and flexible. Finally, a group’s effort put on such project desires the product, software, to be of high quality. A software’s quality judged by programmer stake holders is its readability, reliability, robustness, and atomicity, etc. To meet the requirement above, we attempt to design and actualize the project structure using Java. We will further elaborate the design details in the coming sections.

**2.1. Structural Aspects**

[class level design. (how detailed should we go here?)]

A complete game consists of two types of items: “physical” concepts, including player, board and chess pieces, and non-concrete concepts such as input order, output information and board attributes, which are written in separate object classes. Object player each consists of an input handler and an output handler, two classes working as information tunnels between players and the board. A board is made up of several cells (individual place where only one animal can stay at a time) defined by the mapping rules. Such cells record their properties, e.g. land, river, and all that the rules infer. During the game, cells also maintains the animals that they currently hold. The interface “Animal” is implemented by multiple classes so as to use polymorphic moving methods in accord to various rules. The command information is encapsulated as the implementing classes of interface “Command”, whose objects are created when receiving players’ new orders to be transferred to the input handler.

[what to be added?]

**2.2. Behavioral Aspects**

[Describe how various objects collaborate to complete a move using a sequence diagram.]

[explain the game in the view of data flow?]

**2.3. Discussion**

[Select two important aspects of your design, discuss alternative choices, and justify your current decisions.]

[what fancy features? Extensibility? Save/load game? GUI? (backspace)]

**3. Future Work**

[Describe an additional feature that you want to add to the game in the future and propose

cost-effective ways to adapt the current design.]

[how to improve]

[seems a bit short.]