**Class Diagram**

Instantiation:

Inheritance:

x1

x4

X11

x9

Score

Large

Category

Medium

Category

Small

Category

Category

Language

Game

Language Game Handler

**Class Descriptions**

Language Game Handler

This class uses properties and methods to carry out all processes which require data from multiple other classes. Therefore, it contains instances of four games and nine languages, reflective of the number of game types and languages available in the program. On top of this, the Language Game Handler constructor contains all 3000+ words and phrases to be used within the game.

Game

This class contains everything pertaining to the specific game being played. It also uses information from the Language and Category classes to perform translations.

Score

This class handles the scoring, including bonus values, multipliers, penalties and calculations.

Language

The language class has eleven instantiated categories, one for every category available in the program. This class is used mainly for category coordination.

Category

The category class contains the mutual properties and methods held within its subclasses, explained below. The one method which doesn’t require polymorphism is the getRandomWords method, which receives a string value, and randomises and returns that value’s corresponding list of words.

Large Category

The large category contains three lists of words, organised as Easy, Medium and Hard.

Medium Category

The medium category contains two lists of words, organised as firstList and secondList (regardless of difficulty).

Small Category

The small category contains a single, short list of words.