**Methods:**

|  |  |
| --- | --- |
| Identifier: | start() |
| Parameters: |  |
| Return Value: |  |
| Other: | Executes the game logic. This can be one large method, but it is suggested to create several private methods to accomplish specific tasks. |

**Potential Instance Variables:**

The sample game includes the following instance variables. You may use these or others.

* A Camel object reference
* A Rider object reference
* A double representing a difficulty modifier on all random numbers generated
* ints for distance traveled, pursuer distance, the distance between the pursuers and the Rider, and the current day
* Strings for the time of day, the weather, and the location.
* A Random number generator

**Recommended Private Methods:**

|  |  |
| --- | --- |
| Identifier: | checkCamelCanTravel() |
| Parameters: |  |
| Return Value: | boolean – If the camel is too tired, too hungry, or too thirsty to ride, return false, else return true |
| Other: | Also displays a message on the screen indicating the status of the camel (if true is returned) |

|  |  |
| --- | --- |
| Identifier: | checkRiderIsDead() |
| Parameters: |  |
| Return Value: | boolean – If the rider has starved, dehydrated, or died of exhaustion return true, else return false |
| Other: | Also displays a message on the screen indicating the status of the rider (if true is returned) |

|  |  |
| --- | --- |
| Identifier: | getNewLocation() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs a random calculation (a number between 0-14) and changes the location variable depending on the value.  0-1 – Oasis  2-3 – Ruins  4-5 – River Bank  6-11 – Desert Plains  12-14 – Desert Hills |

|  |  |
| --- | --- |
| Identifier: | getNewWeather() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs a random calculation (a number between 0-9) and changes the weather variable depending on the value.  0 – Sandstorm  1 – Raining  2 – Cloudy  3-5 Warm  6-9 Extremely Hot or Warm depending on the time of day |

|  |  |
| --- | --- |
| Identifier: | getNewTimeOfDay() |
| Parameters: |  |
| Return Value: |  |
| Other: | Cycles through the times of day and changes the time of day variable and day variable as appropriate. Times of Day include Morning, Afternoon, Evening, and Night |

|  |  |
| --- | --- |
| Identifier: | getPursuerDistanceDescription() |
| Parameters: |  |
| Return Value: | String - a textual description of how far back the pursuers are. (Rather than just stating the distance) |
| Other: |  |

|  |  |
| --- | --- |
| Identifier: | outputTurnInformation() |
| Parameters: |  |
| Return Value: |  |
| Other: | Displays the information in the current turn: the time of day, the current day, the number of miles traveled, the current location (as text), the current weather, and the camel and rider object references. |

|  |  |
| --- | --- |
| Identifier: | processTurn() |
| Parameters: |  |
| Return Value: |  |
| Other: | Display a menu of different options available to the player for their current turn and then call the appropriate method responsible for processing that action. This method may also be responsible for ensuring that a player is capable of taking a particular action. |

|  |  |
| --- | --- |
| Identifier: | processRest() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Rest from the menu |

|  |  |
| --- | --- |
| Identifier: | processFoodSearch() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Search for Food from the menu |

|  |  |
| --- | --- |
| Identifier: | processWaterSearch() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Search for Water from the menu |

|  |  |
| --- | --- |
| Identifier: | processTravelCarefully() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Travel Carefully from the menu |

|  |  |
| --- | --- |
| Identifier: | processTravelRegularly() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Travel Regularly from the menu |

|  |  |
| --- | --- |
| Identifier: | processRideAllOut() |
| Parameters: |  |
| Return Value: |  |
| Other: | Performs what happens when a player selects Ride Hard from the menu |

|  |  |
| --- | --- |
| Identifier: | processPursuers() |
| Parameters: |  |
| Return Value: |  |
| Other: | Calculate a random distance (4-7), then change the pursuer distance and distance between variables to adjust the fact that the pursuers moved this turn. You may also want to consider using the time of day, weather, or other factors to adjust how far the pursuers can move. |

**Potential Constructor Method:**

|  |  |
| --- | --- |
| Identifier: | Game(int difficulty, Camel camel, Rider rider) |
| Parameters: | difficulty – The difficulty modifier  camel – The initialized camel  rider – The initialized rider |
| Return Value: |  |
| Other: | Should initialize the other instance variables to reasonable values |