Milestone One

**Problem Statement:** The activities within the zoo need to be monitored daily. Such a system requires identifying the animal type, status, health, and habitat of each animal. Therefore, as an IT person, I plan to develop a program to allow the user to check the status of each animal and their respective habitats.

**Pseudocode 1:**

1. PROMPT the user to chose to monitor an “animal”, “habitat” or “exit” program
2. RECEIVE input selection option from user
3. READ in file according to the user input in step 2
4. PROMPT user to specify detailed selection from Step 1
5. RECEIVE input selection from user
6. DISPLAY the monitoring system by finding appropriate section in the file
   1. IF user selection matches item in file,
      1. DISPLAY appropriate data
   2. Otherwise if data contains “\*\*\*\*\*”
      1. PARSE data from asterisks to capture appropriate message
      2. DISPLAY alert message to user showing something is wrong
   3. Otherwise, throw exception due to failure to read file
7. RETURN to the main menu by accepting a user input
8. LOOP entire program until user exits the program.

**Pseudocode 2:**

PROMPT the user to examine (A)nimal, (H)abitat, or (Q)uit

RECEIVE input selection option from user

If user selects ‘A’ or ‘a’, THEN call function launchAnimals()

OTHERWISE IF user selects ‘H’ or ‘h’, THEN call function launchHabitat()

OTHERWISE IF user selects ‘Q’ or ‘q’, THEN exit program.

OTHERWISE, DISPLAY “Invalid input”

IF FUNCTION launchAnimals():

DECLARE ReadAnimal objects, subMenu, and animalSpec, and open “animals.txt” file.

LOOP through the animals.txt file menu and parse data to read “Details on” menu

PROMPT user to select animal to monitor

ACCEPT user input

LOOP through the remainder of the animals.txt file and search for specified animals

DISPLAY animal information

IF any line in the file contains “\*\*\*\*\*”, launch dialog box

CLOSE both animals.txt files

IF FUNCTION launchHabitat():

DECLARE ReadHabitat objects, subMenu, and habitatSpec, and open “habitats.txt” file.

LOOP through the habitats.txt file menu and parse data to read “Details on” menu

PROMPT user to select habitat to monitor

ACCEPT user input

LOOP through the remainder of the habitats.txt file and search for specified habitats

DISPLAY habitat information

IF any line in the file contains “\*\*\*\*\*”, launch dialog box

CLOSE both habitat.txt files

DEFININING ReadAnimal Class:

IMPORT FileInputStream, IOException, and Scanner classes.

DEFINE class constructors to open animals.txt file into private variable, animalFile.

THROW exception to each constructor

PASS animalFile into a new Scanner object.

DEFINE methods in ReadAnimal class:

closeFile(), setInput(Scanner input), getInput(), readLine(), and hasInput()

DEFININING ReadHabitat Class:

IMPORT FileInputStream, IOException, and Scanner classes.

DEFINE class constructors to open animals.txt file into private variable, habitatFile.

THROW exception to each constructor

PASS habitatFile into a new Scanner object.

DEFINE methods in ReadHabitat class:

closeFile(), setInput(Scanner input), getInput(), readLine(), and hasInput()