

1st Problem

We create an input stream to read the names from the file, as well as an output stream in order to write the sorted names to the new file

We use a while loop to store all the names in the input file into a string array, we also use the variable counter to keep track of how many names there are

We write the function writeletter that uses a for loop to iterate over the array of names and writes to an external file all the names that start with a specific letter

We write the function writename that calls the function writeletter and iterates over a string with the letters of the alphabet in order to plug each letter in the function writeletter so that it writes each name to the file based on the alphabetical order of its first letter

2nd problem

We can start by creating a test array with seven animals

For the function cheapest we have two for loops, the first one is there to get an initial minimum value that we can use to then compare it with the prices of all the animals in the array (we do this by using the second for loop). So once the variable min has been initialized, by the first loop, to the price of the first animal of that type, we can then use it to see if there is a new animal that has an even lower price. If such animal is found then the index variable will be updated to point to that animal in the array.

For the function livetogether we just need to compare the types of the animals and return that result, since the == operator is going to give us a bool value.

3rd problem

For this class we are using the private member function testRating() in order to validate the rating value. This function is used in the constructor that takes three arguments, the input() member function and the setMovieRating function.

For the mergeMovie function we just need to compare if the names are equal and if they are we use a series of if else statements to make sure that the most restrictive rating is used. Otherwise we return the movie with the name "Could not Combine"

For the movieShowing function we use the += operator to update the revenue value.