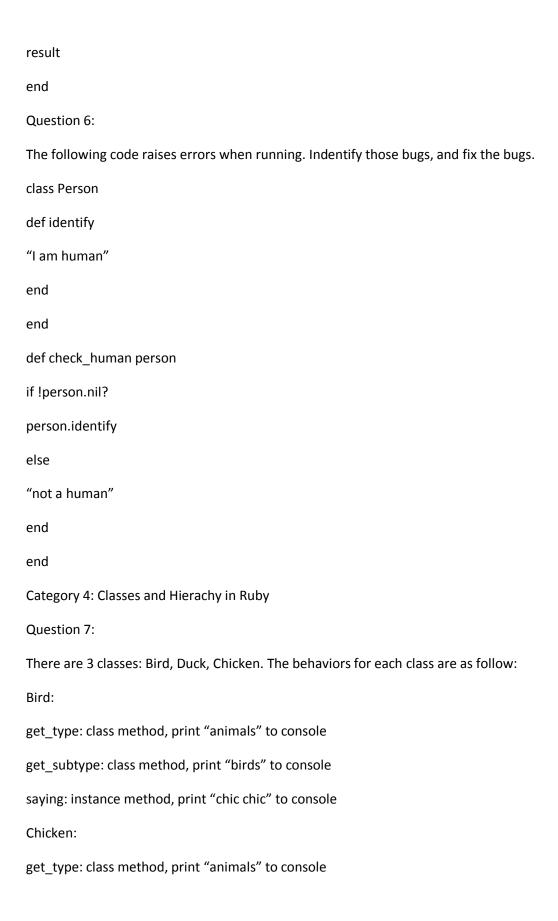Category 1: Simple Ruby functions:

Question 1:

Write a Ruby function to take in a valid date string (e.g. "18-10-2007"), and compute how many days from

that date until today

Question 2:

Write a Ruby function to take in a sentence (e.g. "I am a man"), and convert that sentence to an array of

words whose the first character of each word is capitalized (e.g. ["I", "Am", "A", "Man"])

Category 2: Iterations

Question 3:

Write a Ruby function to take in a array of string or number with any structure (e.g. [[1, "name", 3], ["this",

5, 6, ["that", 8]], 9, 10]), wipe out all nil elements, and convert that array to a string containing all contents

in that array, separated by comma (e.g "1,name,3,this,5,6,that,9,10")

Question 4:

Write a Ruby function to take in a time string (hh:mm:ss), and convert to total number of seconds

Category 3: Find bugs and fix

Question 5:

The following code raises errors when running. Indentify those bugs, and fix the bugs.

```
def concatenate arr

result = ""

if arr.kind_of?(Array)

arr.each do |x|

result = result + x.to_s

end

end
```

result

end

Question 6:

The following code raises errors when running. Indentify those bugs, and fix the bugs.

```
class Person

def identify

"I am human"

end

end

def check_human person

if !person.nil?

person.identify

else

"not a human"

end

end
```

Category 4: Classes and Hierachy in Ruby

Question 7:

There are 3 classes: Bird, Duck, Chicken. The behaviors for each class are as follow:

Bird:

get_type: class method, print "animals" to console

get_subtype: class method, print "birds" to console

saying: instance method, print "chic chic" to console

Chicken:

get_type: class method, print "animals" to console

get_subtype: class method, print "chickens" to console

saying: instance method, print "ot ot" to console

action: instance method, print "running" to console

Duck:

get_type: class method, print "animals" to console

get_subtype: class method, print "ducks" to console

saying: instance method, print "quack quack" to console

action: instance method, print "swimming" to console

Write Ruby code for those classes

Question 8:

There are 3 classes: Vehicle, TwoWheelsVehicle, Bicycle. The behaviors for each class are as follow:

Vehicle:

get_type: class method, print "vehicles" to console

get_subtype: class method, print "vehicles" to console

wheels_count: instance method, print "2 or 4" to console

TwoWheelsVehicle:

get_type: class method, print "vehicles" to console

get_subtype: class method, print "two wheels vehicles" to console

wheels_count: instance method, print "2" to console

speed: instance method, print "lower than 300 km/h" to console

Bicycle:

get_type: class method, print "vehicles" to console

get_subtype: class method, print "bicycles" to console

wheels_count: instance method, print "2" to console

speed: instance method, print "lower than 30 km/h" to console

energy_source: instance method, print "human energy" to console

Write Ruby code for those classes