

ECE 325 Assignment 3

(20 pts total, all questions 1pt)

This assignment covers your understanding of the discussed topics so far. Make sure to answer the questions in your own words.

For each of the following code snippets (1-4), indicate (1) whether you can do this in Java, (2) explain why (not) and (3) if applicable, how you would fix this.

1)

```
String[] strings = new String[1];  
strings[0] = "Hello";  
strings[1] = "World";
```

2)

```
String[] strings = new String[1];  
strings[0] = "Hello";  
strings[0]++;
```

3)

```
long longVar = 42L;  
short shortVar = 42;  
shortVar = longVar;
```

4)

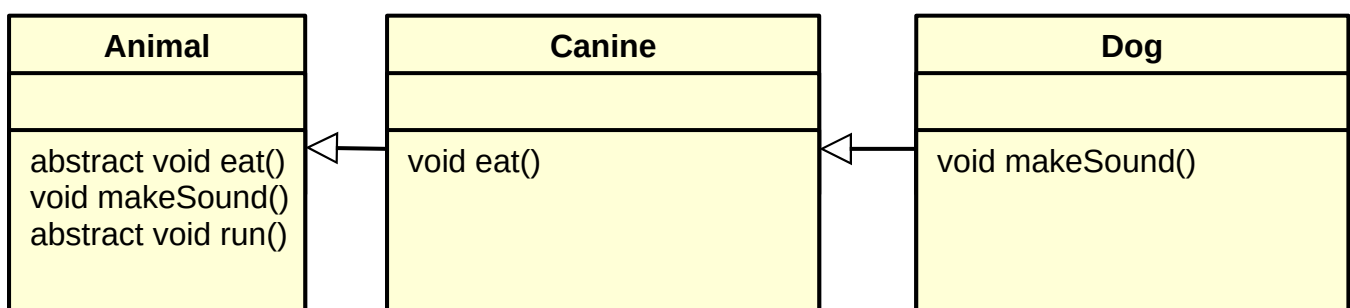
```
ArrayList<int> ints = new ArrayList<int>();  
ints.add(3);
```

5) During the lectures I talked several times about ‘good ways to start a bar fight between programmers’. Can you name two examples and explain what programmers would argue over?

6) Explain for each of the following relationships whether they make sense, and why (not).

- a) Apple extends Food
- b) Ferrari extends RaceCar
- c) Dog extends Animal
- d) JustinBieber extends Artist
- e) Oven extends Kitchen

7) For the classes and code snippets below, explain (1) whether they are allowed, (2) why (not) and (3) if applicable, which version of the method (= from which class) is being called.



a)

```
Animal animal1 = new Animal();
```

b)

```
Animal animal2 = new Dog();
```

c)

```
Canine canine1 = new Canine();
```

d)

```
Dog dog1 = new Canine();
```

e)

```
Object obj1 = new Dog();
```

f)

```
Animal animal = new Dog();  
animal.eat();
```

g)

```
Canine canine = new Canine();  
canine.makeSound();
```

h)

```
Animal animal = new Dog();  
animal.makeSound();
```

i)

```
Object obj = new Dog();  
obj.eat();
```

j)

```
Animal animal = new Canine();  
animal.run();
```

Please submit:

1) A (typed, not handwritten) PDF file with the answers to the questions above.

Name the file 'FirstName_ID_asg3.pdf'.

No need to submit anything else for this assignment. Please submit only the PDF (so don't ZIP it).