COMP 2522 - Winter 2024 - Quizz 6

Note : I put one page per question but the answer can be very short for some of them.

1. There is an error (as shown in) in the code below. Why is there an error? What is the solution? (2 marks)

```
1  class Animal{
2          public void draw(){}
3  }
4
5  class Dog extends Animal{}
6
7  public class Test{
8          public void draw(List<Animal> list){
9                  for(Animal a : list)
10                         a.draw();
11         }
12
13         public static void main(String[] args){
14                 Test t = new Test();
15                 List<Dog> dogs = new ArrayList<Dog>();
16                 t.draw(dogs); // Error
17         }
18 }
```

Answer :

2. The function only works with actual Groceries and not its subclasses. The programmer would like it to work with Apple and Fruit and possibly other objects as well as Groceries. Change the code so it will work and explain why ot will work. (2 marks)

```
1  class Groceries{}
2  class Fruit extends Groceries{}
3  class Apple extends Fruit{}
4
5  public void bagIt(List<Groceries> items, Groceries g){
6          items.add(g);
7  }
```

Answer :

3. Which one of the following is NOT a subclass of Collection <String>? (1 mark)

   (a) Payload <String,String>

   (b) Payload <Integer,Integer>

   (c) Payload <String,Integer>

```
1   class List<T> extends Collection<T>{}
2   class ArrayList<T> extends List<T>{}
3   class Payload<X,T> extends ArrayList<T>{}
```

4. The code below does not compile. Why is there a problem? Fix the code so it will work. (2 marks)

```
1   void swapFirst(List<? extends Number> l1, List<? extends Number> l2){
2           Number temp = l1.get(0);
3           l1.set(0,l2.get(0));
4           l2.set(0,temp);
5   }
```

   Answer :