Computer Science AP
Interfaces Worksheet

Questions for Videos from the Inheritance Interfaces section.

What is an interface?

What are some similarities between interfaces and abstract classes?

What are some differences between interfaces and abstract classes?

Can you instantiate an instance of an interface?
(Example: Comparable C = new Comparable())

What must a class do to be able to 'implement' an interface?

Can a class implement more than one interface? If so, how? If no, why not.

What are two popular interfaces that you are required to know about in this course?

For each of the two popular interfaces you named, name a common class that implements the interface.

Would these two lines of code compile and run in a program? Explain.
Comparable temp = new String("Hi")
List myList = new ArrayList<String>()

Why is the method declaration
public void stuff(List<String> S) a better choice than *public void stuff(ArrayList<String> S)* ?

Consider the InheritanceExamples project, studentTeacher01 package.
Add an interface to the project called *Mailable* that has the methods
String getName()   and   Address getAddress() .

Now make changes to the Person class so that it implements the *Mailable* interface.

When you've checked that there are no compiler errors, copy and paste the code for the *Mailabe* interface and the Person class into this document.

Assuming that your code works as intended, would the following lines of code compile fine?
Mailable temp = new Person("Jenn", 18)
Mailable temp2 = new Student("Bob", 15, 123)

If you have a list created with the line   List<Mailable> people = new ArrayList<Mailable>() ,
could you add a Person or a Student into this list?

Consider the InheritanceExamples project, studentTeacher01 package.
Make the Student class implement the Comparable interface using the student's studentId for comparison. A 'larger' studentId will result in a 'larger' Student in the comparison.

After you have made the Student implement Comparable, use one of the runner programs and compare two Students using the compareTo method. If it works, provide your code here.

document.