

Answer the following after reading the lecture notes on `toString` methods and reviewing any available demo programs illustrating the `toString` methods.

1. What is the purpose of a `toString` method?
2. Write a `System.out.println` statement that would properly use the `toString` method for a `Student` object variable named `student1`.
3. What is a common mistake for programmers when implementing a `toString` method according to the lecture notes?
4. What is the return type of the `toString` method? That is, what type of data is returned by the `toString` method?
5. Explain why it is not a contradiction for the `toString` method to be called within the `toString` method of `CompositionDemo3`.
6. Why can't the following statement be used in the `toString` method for the `Student` class in `CompositionDemo3`?

```
return myName.toString() + " " + getGradeLevel() + " " + mySchedule;
```

7. Why can't the following statement be used in the `toString` method for the `Student` class in `CompositionDemo3`?

```
return myName + " " + getGradeLevel() + " " + scheduleList();
```

8. Implement a `toString` method (i.e. write out the whole method) for a fictitious class that has the following instance variables: `int myAge`, `double myWeight`, and `String myGender` ("male" or "female".)

```
public String toString()  
{
```

```
}
```

9. Rewrite the `toString` method that you implemented in the previous exercise in a different way.

```
public String toString()  
{
```

```
}
```