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Interface Assessment

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1. (Select all that apply) Interfaces can have _____.

1 / 1 point

☐ Attributes that are not final

☒ JavaBeans properties

✓ Correct

Sure. Abstract, yes, but they can be declared and thus polymorphic.

☒ Abstract methods

✓ Correct

Correct

☐ Methods that refer to non-static-final attributes

☒ Methods with code

✓ Correct

As of Java 8, yes, we can have both default and static methods on interfaces. But they can only reference other methods or constants. There is no data to reference.

☒ Attributes that are static and final

✓ Correct

Correct, and that is implicit for any attributes on an interface

2. (Select all that apply) Interfaces _____.

1 / 1 point

☐ Can implement one or more interfaces

☐ Can extend one, but only one, class

☒ Can extend multiple other interfaces

✓ Correct

Correct

☒ Provide polymorphism to classes that have nothing in common other than that they all implement that interface.

✓ Correct

Yes, this is literally why they exist.

3. Where the java.lang.Math class introduced in Java 8, could it have been an interface?

1 / 1 point

☒ Yes.

☐ No.

✓ Correct

Correct. It contains nothing but static members.

4. Where the java.lang.System class introduced in Java 8, could it have been an interface?

1 / 1 point

☒ No.

☐ Yes.



Correct

Correct. Even though they are static, members of System such as out and err can be modified.

5. (Select all that apply) Classes in Java can _____.

1 / 1 point

- ☐ Extend one or more interfaces
- ☒ Implement as many interfaces as they want



Correct

- ☒ Extend exactly one other class



Correct

- ☐ Extend one or more classes

6. To implement a default method, one must _____.

1 / 1 point

- ☐ Replace the ';' with a {}-block.
- ☐ Use the keyword abstract.
- ☒ Use the keyword default and provide a code body.



Correct

7. (Select all that apply) Static and default methods _____.

1 / 1 point

- ☒ Must have code bodies.



Correct

- ☐ Can refer to the instance data of the implementing class.
- ☒ Can refer to methods of the interface and/or static members of other interfaces and/or classes.



Correct

8. Interfaces are best used to _____.

1 / 1 point

- ☒ Provide polymorphism throughout Java, regardless of class inheritance.
- ☐ Provide a common implementation to child classes.



Correct

9. In the following code _____.

1 / 1 point

```
Interface EmployeeService {  
  
    static String END_POINT = "http://localhost:8080/employees";  
  
    public Employee[] findAll();  
    Employee findById(int empID);  
  
    EmployeeService(String endPoint);  
}
```

}

- ☐ The findById method has default (package) scope.
- ☒ The constructor declaration is invalid.
- ☐ The END_POINT variable can be changed at runtime to point to the real service, since it is not final.

✓ **Correct**
Correct.

10. True or false: Interfaces are the key to polymorphism in Java.

1 / 1 point

- ☒ True
- ☐ False

✓ **Correct**
Yes, as we've repeatedly covered in class.