**TASK-5.0**

Please read the source code below and try to understand what it does.

**public** **static** <T> T[] add(T[] array, T element) {

Class<?> type = array != **null** ? array.getClass() : (element != **null** ? element.getClass() : Object.**class**);

T[] newArray = (T[]) *copyArrayGrow1*(array, type);

newArray[newArray.length - 1] = element;

**return** newArray;

}

**Q.5.0 How well do you think you understand the code?**

* Well
* Not so well

**TASK-5.1**

This same code produced a Failure Message when it was Tested.

**Failure Message:**

java.lang.ClassCastException: [Ljava.lang.Object; cannot be cast to [Ljava.lang.String;

**Test:**

String[] stringArray=null; String aString=null;

String[] sa= ArrayUtils.add(stringArray,aString);

fail(\"Should have caused IllegalArgumentException\");

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We will ask you **four** questions about the **same code** with the **same failure** above.

**Q.5.1. Do you think that something in the highlighted code causes the failure?**

* Yes
* No

**public** **static** <T> T[] add(T[] array, T element) {

Class<?> type = array != **null** ? array.getClass() : (element != **null** ?

element.getClass() : Object.**class**);

T[] newArray = (T[]) *copyArrayGrow1*(array, type);

newArray[newArray.length - 1] = element;

**return** newArray;

}

**Q5.2. How confident are you that your answer is correct?**

* Confident
* Not so confident

**TASK-5.2**

**Failure Message:**

java.lang.ClassCastException: [Ljava.lang.Object; cannot be cast to [Ljava.lang.String;

**Test:**

String[] stringArray=null; String aString=null;

String[] sa= ArrayUtils.add(stringArray,aString);

fail(\"Should have caused IllegalArgumentException\");

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**Q.5.3. Do you think that something in the yellow section causes the failure?**

* Yes
* No

**public** **static** <T> T[] add(T[] array, T element) {

Class<?> type = array != **null** ? array.getClass() : (element != **null** ?

element.getClass() : Object.**class**);

T[] newArray = (T[]) *copyArrayGrow1*(array, type);

newArray[newArray.length - 1] = element;

**return** newArray;

}

**Q.5.4. How confident are you that your answer is correct?**

* Confident
* Not so confident