Questions

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Implementing poison pills

3/3 points (graded)

Using the data type definition above:

```
SquareRequest = IntegerRequest + StopRequest
```

For each option below: is the snippet of code a correct outline for how you would implement this in Java that takes maximum advantage of static checking? For each option below: is the snippet of code a correct outline for how you would implement this in Java that takes maximum advantage of static checking?

```
interface SquareRequest { ... }
class IntegerRequest implements SquareRequest { ... }
class StopRequest implements SquareRequest { ... }
```

- (●) Yes
- ( ) No

✔

Explanation
This approach follows the pattern used in the recursive data types reading to implement data type definitions.

```
class SquareRequest { ... }
class IntegerRequest { ... }
class StopRequest { ... }
```

- ( ) Yes
- (●) No

✔

Explanation
This approach declares no static relationships between the kinds of requests, so Java would not statically check it. In fact, Java would forbid putting objects of type IntegerRequest or StopRequest onto a queue declared as BlockingQueue<SquareRequest> so you would have to declare it as BlockingQueue<Object> and lose the static checking.

```
class SquareRequest {
  private final String requestType;
  public static final String INTEGER_REQUEST = "integer";
  public static final String STOP_REQUEST    = "stop";
  ...
}
```

- ( ) Yes
- (●) No

✔

Explanation
This approach uses particular string values to distinguish the type of request. Java can't check statically that a string must be either "integer" or "stop", so you would lose static checking here as well.

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