Question 2

15 minutes to complete, 5 minutes to upload answer.

This question involves the LogMessage class used to process log messages. A list of sample log messages is given below.

```
"security alert - repeated login failures"
"disk offline"
"file not found"
"read error on disk DSK1"
"write error on disk DSK2"
"error on /dev/disk"
```

The following LogMessage class is used to represent a log message.

```java
public class LogMessage
{
    private String message;
    private String type;

    /** Precondition: m is a valid log message. */
    public LogMessage(String m)
    { /* To be implemented */ }

    public String getMessage()
    { return message; }

    public String getType()
    { return type; }

    // There may be instance variables, constructors, and methods that are not shown.
}
```

Write the LogMessage constructor. The `message` instance variable references a string containing the entire log message, and the `type` instance variable references one of the following three strings:
- "note"
- "alert"
- "error"

If `message` contains the word "error", separated by spaces from other words, then `type` is set to "error". `type` is set to "alert" if the message contains the word "alert" (but does not contain the word "error"), separated by spaces from other words. If neither "error" nor "alert" (separated from other words by spaces) exist in the message, then `type` is set to "note".

Examples:

Message	**Type**
"security alert – repeated login failures"	"alert"
"disk offline"	"note"
"file not found"	"note"
"alert: read error on disk DSK1"	"error"
"error on /dev/disk"	"error"
"errors logged in error.txt"	"note"

Write the LogMessage constructor:

```
/** Precondition: m is a valid log message. */
public LogMessage (String m)
```