

Abstract basic class

In a customer project a global logging functionality is needed. A class needs to be implemented for this purpose, using the singleton pattern. The interface for the abstract basic class looks as follows:

```
interface TechDivision_Logger_Interface {  
    public function info($message, $line = NULL);  
    public function warning($message, $line = NULL);  
    public function error($message, $line = NULL);  
}
```

In the first step you have to implement an abstract basic class with a protected, abstract method `_log($logLevel, $message, $line = NULL)` implementing the interface shown above. The class has to be in line with the namespace conventions (Zend Framework).

Singleton design pattern

Write a real implementation *TechDivision_Logger* of the abstract basic class which will send the logging output by calling the protected method `_log($logLevel, $message, $line = NULL)` to the output configured in `php.ini`. Use the function `error_log` (<http://de.php.net/manual/de/function.error-log.php>) for this purpose. The class shall use the singleton design pattern in a reasonable way.

Usage

```
class TechDivision_Example {  
    protected $_names = array();  
    public function __construct($names) {  
        $this->setNames($names);  
    }  
    public function setNames($names) {  
        $this->_names = $names;  
    }  
    public function getNames() {  
        return $this->_names;  
    }  
}  
  
$names = array(  
    'Tim Wagner',  
    'Johann Zelger',  
    'Stefan Willkommer');  
  
$example = new TechDivision_Example($names);  
$example->renderNamesSorted();
```

Enlarge the class given above by a method `renderNamesSorted()` using the function `usort` (<http://de.php.net/manual/de/function.usort.php>) which sorts the array with the names ordered by name on the command line as follows:

```
console:~ php -f Example.php  
console:~ Tim Wagner, Stefan Willkommer, Johann Zelger
```

For debugging purposes use the logger you implemented before. The logging output shall be as follows (or comparable):

TechDivision_Example[info] 2010-09-28 18:40:25 - line 25 Tim Wagner
TechDivision_Example[info] 2010-09-28 18:40:25 - line 25 Stefan Willkommer
TechDivision_Example[info] 2010-09-28 18:40:25 - line 25 Johann Zelger