

Abstract basic class

In a customer project a global logging functionality is needed. A class needs to be created for this purpose. The interface for the abstract base 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 create an abstract base 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 *Atwix_Logger* of the abstract base 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://php.net/manual/en/function.error-log.php>) for this purpose. The class shall use the singleton design pattern in a reasonable way.

Usage:

```
class Atwix_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',
    'Yaroslav Rogoza',
    'Alexander Turyak',
);
```

```
'Viacheslav Kravchuk',);
```

```
$example = new Atwix_Example($names);
```

```
$example->renderNamesSorted();
```

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

```
console:~ php -f Example.php
```

```
console:~ Viacheslav Kravchuk, Yaroslav Rogoza, Alexander Turyak, Tim Wagner
```

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

```
Atwix_Example[info] 2010-09-28 18:40:25 – line 25 Viacheslav Kravchuk
```

```
Atwix_Example[info] 2010-09-28 18:40:25 – line 25 Yaroslav Rogoza
```

```
Atwix_Example[info] 2010-09-28 18:40:25 – line 25 Alexander Turyak
```

```
Atwix_Example[info] 2010-09-28 18:40:25 – line 25 Tim Wagner
```