

Specification of Task Adjacency Model

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Features of Test Project

- Handling adjacency tree model according to the test requirement with typical tree UI
 - Creating the new task using popup form and context menu
 - Renaming the title of task using the context menu
 - Changing the position of task node using drag & drop handling
 - Updating the status of relationship among tree nodes
 - Listing a hierarchical tree from the flat data in the relational database
- Updating automatically the tree among all of clients via push command (This is optional.)
- Searching for specific tree nodes on the client side

Frameworks

- PHP v5.6
- jsTree v3.3
- JQuery 2.1, JQuery ui 1.12
- MySQL 5.6 (InnoDB Version)
- WebSocket for push command

Tools

- NetBeans IDE
- HeidiSQL
- Fiddler
- XAMPP

Database Structure

```
CREATE TABLE `tasks` (  
    `id` INT(11) NOT NULL AUTO_INCREMENT,  
    `title` VARCHAR(255) NOT NULL,  
    `parent_id` INT(11) UNSIGNED NOT NULL DEFAULT '0',  
    `status` TINYINT(1) UNSIGNED NOT NULL DEFAULT '0',  
    PRIMARY KEY (`id`)  
)  
COLLATE='latin1_swedish_ci'  
ENGINE=InnoDB  
AUTO_INCREMENT=1
```

Limitations

- This project need to be optimized and implemented only based on basic concepts.
- The pagination was not implemented.
- The modern MVC framework was not applied such as CakePHP or Symfony.
- The unit testing framework such as PHPUnit was not applied at this time.
- The query and protocols are not optimized for this time.
- You can test and operate this project only on your local machine, since this was tested only on my local machine.

Tips

- First of all, run the websocket_server.php
 - On the command prompt, type and run "php web_socket.php".
 - This is to use the real time push updating operation.
 - Without running this , this can be run with manual updating among multiple clients.

```

Administrator: C:\Windows\system32\cmd.exe - php websocket_server.php

Directory of C:\xampp\htdocs\jsTreeTest2

2016-11-06 09:06 <DIR> .
2016-11-06 09:06 <DIR> ..
2016-04-04 07:34 1,077 fancywebsocket.js
2016-10-26 09:35 43,431 jstreegrid.js
2016-11-05 10:54 <DIR> Library
2016-11-06 09:03 18,338 Main.php
2016-11-01 08:35 <DIR> nbproject
2016-11-06 09:06 204 phpinfo.php
2016-11-05 10:49 12,559 response.php
2016-11-05 09:35 2,136 websocket_server.php
6 File(s) 77,745 bytes
4 Dir(s) 127,203,983,360 bytes free

C:\xampp\htdocs\jsTreeTest2>php websocket_server.php
2016-11-06 05:21:08: 127.0.0.1 (<1) has connected.
2016-11-06 05:21:10: 127.0.0.1 (<1) has disconnected.
2016-11-06 05:21:10: 127.0.0.1 (<1) has connected.
2016-11-06 05:21:10: 127.0.0.1 (<1) has disconnected.
2016-11-06 05:21:11: 127.0.0.1 (<1) has connected.
2016-11-06 05:21:11: 127.0.0.1 (<1) has disconnected.
2016-11-06 05:21:11: 127.0.0.1 (<1) has connected.

```

- Run more than one client browsers(Main.php) in order to test broadcasted command.

