PHP, Javascript & HTML

All about PHP, JS and HTML including its frameworks

- Useful PHP Codes
- Standard PHP/JS/HTML Procedures
- How to do Everything in CakePHP 2.x
- How to do Everything in AngularJS
- How to do Everything in Javascript (Pure JS)
- How to do Everything in Metro UI CSS
- ReactJS REDUX Summary
- Standard ReactJS Procedures

Useful PHP Codes

Increment a Date by Month, Day or Year

Increment by month

```
$time = strtotime("2014-12-11");
$d = date("Y-m-d", strtotime("+1 month", $time));
```

Increment by day

```
$time = strtotime("2014-12-11");
$d = date("Y-m-d", strtotime("+1 day", $time));
```

Increment by year

```
$time = strtotime("2014-12-11");
$d = date("Y-m-d", strtotime("+1 year", $time));
```

Verify Email Accounts

```
<?php
function verifyEmail($toemail, $fromemail, $getdetails = false)
{
    $email_arr = explode("@", $toemail);
    $domain    = array_slice($email_arr, -1);
    $domain    = $domain[0];
    // Trim [ and ] from beginning and end of domain string, respectively
    $domain    = ltrim($domain, "[");
    $domain    = rtrim($domain, "]");
    if ("IPv6:" == substr($domain, 0, strlen("IPv6:"))) {
        $domain = substr($domain, strlen("IPv6") + 1);
    }
    $mxhosts = array();
    if (filter_var($domain, FILTER_VALIDATE_IP))
        $mx_ip = $domain;
    else
```

```
    getmxrr($domain, $mxhosts, $mxweight);
$details = '';
if (!empty($mxhosts))
    $mx_ip = $mxhosts[array_search(min($mxweight), $mxhosts)];
else {
    if (filter_var($domain, FILTER_VALIDATE_IP, FILTER_FLAG_IPV4)) {
        $record_a = dns_get_record($domain, DNS_A);
    } elseif (filter_var($domain, FILTER_VALIDATE_IP, FILTER_FLAG_IPV6)) {
        $record_a = dns_get_record($domain, DNS_AAAA);
    }
    if (!empty($record_a))
        $mx_ip = $record_a[0]['ip'];
    else {
        $result = "invalid";
        $details .= "No suitable MX records found.";
        return ((true == $getdetails) ? array(
            $result,
            $details
        ) : $result);
    }
}

$connect = @fsockopen($mx_ip, 25);
if ($connect) {
    if (preg_match("/^220/i", $out = fgets($connect, 1024))) {
        fputs($connect, "HELO $mx_ip\r\n");
        $out = fgets($connect, 1024);
        $details .= $out . "\n";

        fputs($connect, "MAIL FROM: <$fromemail>\r\n");
        $from = fgets($connect, 1024);
        $details .= $from . "\n";
        fputs($connect, "RCPT TO: <$toemail>\r\n");
        $to = fgets($connect, 1024);
        $details .= $to . "\n";
        fputs($connect, "QUIT");
        fclose($connect);
        if (!preg_match("/^250/i", $from) || !preg_match("/^250/i", $to)) {
            $result = "invalid";
        } else {
            $result = "valid";
        }
    }
} else {
    $result = "invalid";
    $details .= "Could not connect to server";
}
if ($getdetails) {
    return array(
        $result,
        $details
    );
} else {
```

```
        return $result;
    }
}

//Sample usage:
print_r(verifyEmail('<to email>', '<from email>'));
```

Calculate Coordinate Distances

```
function getDistance( $latitude1, $longitude1, $latitude2, $longitude2 ) {
    $earth_radius = 6371;

    $dLat = deg2rad( $latitude2 - $latitude1 );
    $dLon = deg2rad( $longitude2 - $longitude1 );

    $a = sin($dLat/2) * sin($dLat/2) + cos(deg2rad($latitude1)) * cos(deg2rad($latitude2)) * sin
    $c = 2 * asin(sqrt($a));
    $d = $earth_radius * $c;

    return $d;
    }

    $distance = getDistance( 56.130366, -106.34677099999, 57.223366, -106.34675644699 );
    if( $distance < 100 ) {
        echo "Within 100 kilometer radius";
    } else {
        echo "Outside 100 kilometer radius";
    }
}
```

Standard PHP/JS/HTML Procedures

Updating PHPUnit to Version 3.7

```
sudo mv /opt/lampp/lib/php/PHPUnit /opt/lampp/lib/php/PHPUnit.bak
curl -sS https://getcomposer.org/installer | php
sudo mv composer.phar /opt/lampp/bin/composer
sudo rm -rf /opt/lampp/share/openssl/certs/
sudo ln -s /etc/ssl/cert.pem /opt/lampp/share/openssl/cert.pem
sudo ln -s /etc/ssl/certs /opt/lampp/share/openssl/certs
composer global require "phpunit/phpunit=4.7.*"
```

How to do Everything in CakePHP 2.x

Writing Test Case for AuthComponent's login() Function with CakePHP's Mocking

```
$this->controller = $this->generate('Users', array(
    'components' => array('Auth' => array('login')) //Mock all Auth methods
));

//This will make sure that Auth->login() function returns true
$this->controller->Auth->expects($this->once())
    ->method('login') //The method login()
    ->will($this->returnValue(true)); //And will return something for me
```

Loading other models from AppModel

Use `ClassRegistry::init('anothermodel);`

Irregular Naming Convention

```
Edit app/Config/bootstrap.php and add the following line:
Inflector::rules('plural', array('irregular' => array('staff' => 'staves')));
```

Expecting exception in CakePHP 2.x Test Case

```
$this->expectException();
$this->testAction('/controller/action');
```

Cakephp - Saving to Multiple Models from a Single Form

Controller: `$this->Model->saveAll($this->request->data);`

View:

```
echo $this->Form->input('<CURRENT MODEL>.<CURRENT MODEL FIELD>');
echo $this->Form->input('<MODEL A>.0.<MODEL A FIELD>');
echo $this->Form->input('<MODEL B>.0.<MODEL B FIELD>');
```

Problem Cakephp blank for certain controller actions only

Cause:

- Extra characters after the php tag "`?>`"
- Retrieved text is not in `UTF-8`

Solutions:

- Do not close php tag for php only files
- Remove the extra characters
- use `utf8_encode([text])` function to convert it before returning the data.

How to do Everything in AngularJS

Prevent Route Change

1. Add `target="_self"` to all elements
2. Create new directive to prevent the defaults:
3. ```
   app.directive('a', function() {
     return {
       restrict: 'E',
       link: function(scope, elem, attrs) {
         if (attrs.ngClick || attrs.href === '' || attrs.href === '#') {
           elem.on('click', function(e) {
             e.preventDefault();
           });
         }
       }
     };
   });
   ```

Updating Model Within Directives

```
App.directive('myDirective', function ($parse) {
  return {
    require: 'ngModel',
    link: function (scope, elm, attrs, ctrl) {
      ctrl.$setViewValue(newValue);
      ctrl.$render();
      e.preventDefault();
      scope.$apply();
    });
  };
});
```

Making AngularJS Work with Bootstrap Vertical Button Group
```

```
<div class="btn-group-vertical" ng-class="{'active':selected}">
    <input type="checkbox" autocomplete="off" ng-checked="selected" />
</div>
```

<Enter> Key Event Directive

JS:

```
app.directive('ngEnter', function () {
  return function (scope, element, attrs) {
    element.bind("keydown keypress", function (event) {
      if(event.which === 13) {
        scope.$apply(function (){
          scope.$eval(attrs.ngEnter);
        });
        event.preventDefault();
      }
    });
  };
});
```

HTML Usage:

```
<div ng-app="" ng-controller="MainCtrl">
    <input type="text" ng-enter="doSomething()">
</div>
```

Passing Functions to Directives

HTML:

```
<test color1="color1" update-fn="updateFn(msg)"></test>
```

JS:

```
var app = angular.module('dr', []);

app.controller("testCtrl", function($scope) {
  $scope.color1 = "color";
    $scope.updateFn = function(msg) {
    alert(msg);
  }
});

app.directive('test', function() {
  return {
```

```
    restrict: 'E',
    scope: {
      color1: '=',
      updateFn: '&'
    },
    // object is passed while making the call
    template: "<button ng-click='updateFn({msg : \"Hello World!\"})'>Click</button>",
    replace: true,
    link: function(scope, elm, attrs) {
    }
  }
});
```

Angular JS Best Practices

1. Do not put the main controller into the main module, instead the main controller should be declared in a new module, this will make the application more modular e.g.

```
angular.module('app', ['Controller'])
angular.module('Controller', []).controller('Controller', function($scope) {
  $scope.something = 100
})
```

2. Do not call functions for ng-show and ng-hide directives, as it may degrade performance

3. Using too much $scope.$watch is going to degrade performance, try only watch what you really need to and remove the watchers when it's not needed anymore

How to do Everything in Javascript (Pure JS)

Mobile user-agent detection

```
var isMobile = {
  Android: function() {
    return navigator.userAgent.match(/Android/i);
  },
  BlackBerry: function() {
    return navigator.userAgent.match(/BlackBerry/i);
  },
  iOS: function() {
    return navigator.userAgent.match(/iPhone|iPad|iPod/i);
  },
  Opera: function() {
    return navigator.userAgent.match(/Opera Mini/i);
  },
  Windows: function() {
    return navigator.userAgent.match(/IEMobile/i);
  },
  any: function() {
  return (isMobile.Android()
    || isMobile.BlackBerry()
    || isMobile.iOS()
    || isMobile.Opera()
    || isMobile.Windows());
  }
};

if (isMobile.Android()) {
  document.location.href = "y";
} else if(isMobile.iOS()) {
  document.location.href = "x";
}
```

---

jQuery UI Datepicker Reset Date

```
$(document).ready(
  function () {
    $(.datepicker).datepicker({
```

```
    showOn: 'focus', showButtonPanel: true,
    closeText: 'Clear', // Text to show for close button
    onClose: function () {
      var event = arguments.callee.caller.caller.arguments[0]; // If Clear gets clicked, then re
      if ($(event.delegateTarget).hasClass('ui-datepicker-close')) {
        $(this).val('');
      }
    }
  });
});
```

Convert object to string

Use JSON.stringify() function:

```
var obj = new Date();
console.log(JSON.stringify(obj));
```

DataTables Editor jQuery UI Datepicker Issue

- When 2 datepickers are used, it will jump to first datepicker when the second datepicker's date is selected. Make sure that datepickers aren't used as the first field.

Problem: DataTable - Cannot read property 'style' of undefined jquery.dataTables.js

Make sure that HTML number table columns matches the number of 'mData' definition during data table initialization

How to do Everything in Metro UI CSS

Metro UI CSS with isLoading jQuery plugin

IsLoading jQuery plugin:

```
/* jQuery Plugin */
$.isLoading({
  class: 'spin',
  text: 'Loading',
  position: 'overlay',
  tpl: '<span class="bg-darker isloading-wrapper %wrapper%">%text%<i class="%class% icon-spin"><
});

/* CSS */
/* Chrome, Safari, Opera */
@-webkit-keyframes rotate {
  from {-webkit-transform: rotate(0deg);}
  to {-webkit-transform: rotate(360deg);}
}

/* Mozilla */
@-moz-keyframes rotate {
  from {-moz-transform: rotate(0deg);}
  to {-moz-transform: rotate(360deg);}
}

/* Opera */
@-moz-keyframes rotate {
  from {-o-transform: rotate(0deg);}
  to {-o-transform: rotate(360deg);}
}

/* Spin animation */
i.spin, span.spin {
  -webkit-animation: rotate 1s ease-in-out infinite;
  animation: rotate 1s ease-in-out infinite;
  -moz-animation: rotate 1s ease-in-out infinite;
}

/* jQuery isLoading styles */
span.isloading-wrapper.isloading-overlay {
```

```
  position: absolute;
  top: 50%;
  left: 50%;
  padding: 10px;
}
```

Metro UI CSS Datepicker Change Event

```
$("#datepicker").datepicker({
  selected: function(dateString, dateObject) {
    alert('date-selected');
  }
});
```

ReactJS REDUX Summary

Using stores and reducers

A simple example

```
import {createStore} from 'redux'

var reducer_1 = (state, action) => {
  console.log('reducer_0 was called with state', state, 'and action', action);
};
var store_1 = createStore(reducer_1);
```

Real world example

```
import {createStore} from 'redux'

var reducer_1 = (state = {}, action) => {
  switch(action.type) {
  case '':
  return {
    ...state,
    message: action.value
  };
  default:
    return state;
  }
};
var store_1 = createStore(reducer_1);
```

Combining reducers

```
import {combineReducers, createStore} from 'react';

var userReducer = (state = {}, action) => {
  switch(action) {
    case 'ADD_USER':
    return {
      //Return modified state
  };
  default:
    return state;
  }
};
```

```
var itemReducer = (state = [], action) => {
  switch(action) {
    case 'ADD_ITEM':
      return {
        //Return modified state
      };
    default:
      return state;
  }
};

var reducers = combineReducers(user: userReducer, item: itemReducer);
var store = createStore(reducers);
console.log(store.getState());
// {
// user: {}, // {} is the slice returned by our userReducer
// items: [] // [] is the slice returned by our itemsReducer
// }
```

Dispatching an action

Flow of application: ActionCreator -> Action -> dispatcher -> reducer

Without action creator

```
import {combineReducers, createStore} from 'react';

var userReducer = (state = {}, action) => {
  switch(action) {
  case 'ADD_USER':
    return {
      //Return modified state
    };
    default:
      return state;
  }
};

var itemReducer = (state = [], action) => {
  switch(action) {
    case 'ADD_ITEM':
      return {
        //Return modified state
      };
      default:
        return state;
    }
};

var reducers = combineReducers(user: userReducer, item: itemReducer);
```

```
var store = createStore(reducers);
store.dispatch({type: 'ACTION'});
```

With Action Creator (Adopted from Flux)

```
import {combineReducers, createStore} from 'react';

var userReducer = (state = {}, action) => {
  switch(action) {
    case 'ADD_USER':
      return {
        //Return modified state
      };
    default:
      return state;
  }
};

var itemReducer = (state = [], action) => {
  switch(action) {
    case 'ADD_ITEM':
      return {
        //Return modified state
      };
    default:
      return state;
  }
};

var reducers = combineReducers(user: userReducer, item: itemReducer);
var store = createStore(reducers);
var addItemActionCreator = (name) => {
  return {
    item: name,
    type: 'ADD_ITEM'
  };
};
store.dispatch(addItemActionCreator);
```

Async Action with Middleware

```
import {combineReducers, createStore, applyMiddleware} from 'react';

var userReducer = (state = {}, action) => {
  switch(action) {
    case 'ADD_USER':
      return {
        //Return modified state
      };
    default:
      return state;
```

```
  }
};

var itemReducer = (state = [], action) => {
  switch(action) {
    case 'ADD_ITEM':
      return {
        //Return modified state
      };
    default:
      return state;
    }
};

//Set the state after 2s
var addItemActionCreator = (name) => {
  return (dispatch) => {
    setTimeout(() => {
      dispatch({
        item: name,
        type: 'ADD_ITEM'
      });
    }, 2000);
  };
};

// 1) The first level provide the dispatch function and a getState function (if your
// middleware or your action creator needs to read data from state) to the 2 other levels
// 2) The second level provide the next function that will allow you to explicitly hand over
// your transformed input to the next middleware or to Redux (so that Redux can finally call all
// 3) the third level provides the action received from the previous middleware or from your dis
// and can either trigger the next middleware (to let the action continue to flow) or process
// the action in any appropriate way.
var thunkMiddleware = ({dispatch, getState}) => {
  return (next) => {
    return (action) => {
      return typeof action === 'function' ? action(dispatch, getState) : next(action);
    }
  };
};

var reducers = combineReducers(user: userReducer, item: itemReducer);
var finalCreateStore = applyMiddleware(thunkMiddleware)(createStore);
var store = finalCreateStore(reducers);
store.dispatch(addItemActionCreator);
```

Subscribing to a Store

```
import {createStore} from 'redux'

var reducer_1 = (state = {}, action) => {
```

```
  switch(action.type) {
    case '':
      return {
        ...state,
        message: action.value
      };
    default:
      return state;
  }
};
var store_1 = createStore(reducer_1);
store_1.subscribe(() => {
  //Update react views
});
```

Standard ReactJS Procedures

Initialize ReactJS Project

1. Enter npm init
2. Enter npm install --save-dev babel-core babel-loader babel-preset-react babel-preset-es2015 webpack webpack-dev-server
3. Enter npm install --save react react-dom jquery
4. Append "scripts": {"start": "node_modules/.bin/webpack-dev-server --progress"},
5. Create and edit webpack.config.js:
    1. ```
       module.exports = {
         entry: [
           './src/app.js'
         ],
         output: {
           path: __dirname,
           filename: "bundle.js"
         },
         module: {
           loaders: [{
             test: /\.jsx?$/,
             loader: 'babel',
             exclude: 'node_modules',
             query: {
               presets:['react', 'es2015']
             }
           }]
         }
       };
       ```
6. Enter `npm start`
       ```