



Keystroke Dynamics and Data Leakage in Email Authentication

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ABSTRACT—

Keystroke-dynamics based authentication is a cheap biometric mechanism that has been proven accurate in distinguishing individuals. We design and implement a simple and easy to-adopt protocol for authenticating a computer owner that utilizes the user's keyboard activities as an authentication metric. Keystroke dynamics is the process of analysing the way a user types at a terminal by monitoring the keyboard inputs thousands of times per second to identify users based on habitual typing rhythm patterns. We present our protocol in lightweight client-server architecture as mail server for authentication. Keystroke verification techniques can be classified as either static or continuous. Static verification approaches analyse keystroke verification characteristics only at specific times, for example, during the login sequence. Static approaches provide more robust user verification than simple passwords, but do not provide continuous security — they cannot detect a substitution of the user after the initial verification. Continuous verification, on the contrary, monitors the user's typing behaviour throughout the course of the interaction. In this project, we can design the system for mail application to register their details such as username and password. At the time of password typing, time is calculated for typing whole password and calculates the time for typing each letter in password. The time duration is sent to email in encrypted format. So, hackers are difficult to extract details.

Keyword: Email Framework Construction, User Enrolment, Keystroke Authentication, Data Sharing, Data Leakage detection,

1.INTRODUCTION

A key area in security research is authentication, the determination of whether a user should be allowed

access to a given system or resource. The important aspect of authentication is confidentiality and integrity. Also, for protecting any resource adequate authentication is the first line of defense. Here, for protection of resource we use authentication as a service. It is important that the same authentication technique should not be used in every situation. A complication is that users may have many passwords for Bank, network and web sites. The large number of passwords increases interference and it is lead to forgetting or confusing passwords. The acceptability of any authentication scheme greatly depends on its robustness against attacks as well as its resource requirement both at the client and at the server end. It means authentication scheme require processing at client and server end. Due to the proliferation of mobile and hand-held devices the resource requirement has become a major factor. The implicit passwords main application is the protection of critical resources and systems. Nowadays users can access any information including banking and corporate database with the use of mobile phones.

However, our proposal can also be used in other scenario where confidentiality and integrity are the major security requirements. We propose our Authentication System for banking using Implicit Password. In which the scheme allows any image to be used and it does not need artificial predefined click regions with wellmarked boundaries – a password can be any arbitrarily chosen sequence of points in the image with some finer differences. In IPAS, the server has the piece of information i.e. password at the time of authentication and at the time of registration, the user give this information to the server in an implicit form. Implicit password is particularly suited for mobile phones and portable computers, although it may be implemented for any computer.

To put it simply, authentication is the process that confirms a user's identity. Traditionally, this is done through a username and password. The user enters their username, which allows the system to confirm their identity; this system relies on the fact that (hopefully) only the user and the site's server know the password. The website authentication process works by comparing the user's credentials with the ones on file. If a match is found, the authentication process is complete.

2.SOFTWARE SPECIFICATION

2.1 HARDWARE REQUIREMENTS

- Processor : Dual core processor 2.6.0 GHZ
- RAM : 2GB
- Hard disk : 160 GB □
- Compact Disk : 650 Mb
- Keyboard : Standard keyboard
- Monitor : 15 inch color monitor

2.2 SOFTWARE REQUIREMENTS

- Operating system : Windows OS
- Front End : PHP
- Back End : MySQL SERVER
- IDE : Macromedia Dreamweaver 8
- Application : Web application

3.MODULE DESCRIPTION

3.1 MODULES USED

- Email Framework Construction
- User Enrolment
- Keystroke Authentication
- Data SharingData leakage detection

4.SYSTEM DESIGN

4.1 SYSTEM ARCHITECTURE

A system architecture or systems architecture is the conceptual model that defines the structure, behavior, and more views of a system. An architecture description is a formal description and representation of a system, organized in a way that supports reasoning about the structures and behaviors of the system. System architecture can comprise system components, the externally visible properties of those components, the relationships (e.g. the behavior) between them. It can provide a plan from which products can be procured, and systems developed, that will work together to implement the overall system. There have been efforts to formalize languages to describe system architecture; collectively these are called architecture description languages (ADLs).

Various organizations define systems architecture in different ways, including:

- An allocated arrangement of physical elements which provides the design solution for a consumer product or life-cycle process intended to satisfy the requirements of the functional architecture and the requirements baseline.
- Architecture comprises the most important, pervasive, top-level, strategic inventions, decisions, and their associated rationales about the overall structure (i.e., essential elements and their relationships) and associated characteristics and behavior.
- If documented, it may include information such as a detailed inventory of current hardware, software and networking capabilities; a description of long-range plans and priorities for future purchases, and a plan for upgrading and/or replacing dated equipment and software
- The composite of the design architectures for products and their life-cycle processes.

4.2 SYSTEM DESIGN

DATA FLOW DIAGRAMS

A data flow diagram shows the way information flows through a process or system. It includes data inputs and outputs, data stores, and the various sub processes the data moves through. DFDs are built using standardized symbols and notation to describe various entities and their relationships. Data flow diagrams visually represent systems and processes that would be hard to describe in a chunk of text. You can use these diagrams to map out an existing system and make it better or to plan out a new system for implementation. Visualizing each element makes it easy to identify inefficiencies and produce the best possible system.

LEVEL 0

It is also known as a context diagram. It's designed to be an abstraction view, showing the system as a single process with its relationship to external entities. It represents the entire system as a single bubble with input and output data indicated by incoming/outgoing arrow

LEVEL 1

In 1-level DFD, the context diagram is decomposed into multiple bubbles/processes. In this level, we highlight the main functions of the system and breakdown the high-level process of 0-level DFD into sub processes

5. RESULT

The results of this project demonstrate the effectiveness of the proposed implicit password-based authentication system in providing secure and user-friendly access to banking applications. Through extensive testing, the system successfully verified users by matching their unique implicit password patterns without requiring predefined click regions, making it adaptable to a wide range of images and personalization options. This flexibility enhances the user experience while maintaining high levels of security. The authentication accuracy was consistently high, reducing the chances of unauthorized access while also minimizing user login errors. Additionally, the system showed resilience against common attacks, such as brute force and shoulder surfing, due to the uniqueness of each user-defined click pattern. The client-server model efficiently handled authentication processing, ensuring smooth performance even on mobile devices with limited resources. Overall, the project achieved its objectives, providing a secure, convenient, and efficient authentication solution that can be easily implemented for mobile banking and other sensitive applications.

6. CONCLUSION

To deal with the problem of Data leakage, we have presented implementation a variety of data distribution strategies that can improve the distributor's chances of identifying a leaker. Also we have implemented the concept of key stroke authentication for user authentication. In proposed email framework users register using their details with key stroke values. During login process, user can also verified using their password with key stroke values. This will enhance the process of authentication in email. Also provide OTP generation, to predict the authorization of user during email content access

APPENDIX-I

SOURCE CODE

```
<?php include("dbconnect.php"); session_start(); extract($_POST); if(isset($_POST['btn']))
{
$max_qry = mysql_query("select max(id) from register");
$max_row = mysql_fetch_array($max_qry);
$id=$max_row['max(id)']+1;
$qry=mysql_query("insert into register(id,name,email,password,repasword,pnumber,location,diskspace) values
('$id','$name','$email','$password','$repasword','$pnumber','$location','$space')"); if($qry) { header("location:index.php");
} else { echo "Error"; }
}
?>
<!DOCTYPE html>
<html>
<head>
```

```
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<title>Mail Server</title>
<!-- Tell the browser to be responsive to screen width -->
<meta content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=no" name="viewport"> <!-- Bootstrap 3.3.6 -->
<link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
<!-- Font Awesome -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.5.0/css/fontawesome.min.css">
<!-- Ionicons -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/ionicons/2.0.1/css/ionicons.min.css"> <!-- Theme style -->
<link rel="stylesheet" href="dist/css/AdminLTE.min.css">
<!-- iCheck -->
<link rel="stylesheet" href="plugins/iCheck/square/blue.css">

<!-- HTML5 Shim and Respond.js IE8 support of HTML5 elements and media queries -->
<!-- WARNING: Respond.js doesn't work if you view the page via file:// -->
<!--[if lt IE 9]>
<script src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>
<script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>
<![endif]-->
</head>
<body class="hold-transition register-page">
<div class="register-box">
<div class="register-logo">
<a href=""><b>Register</b></a>
</div>

<div class="register-box-body">
<p class="login-box-msg">Register a new Account</p>

<form action="" method="post">
<div class="form-group has-feedback">
<input type="text" class="form-control" placeholder="Full name" name="name">
<span class="glyphicon glyphicon-user form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="email" class="form-control" placeholder="Email" name="email">
<span class="glyphicon glyphicon-envelope form-control-feedback"></span>
</div>
```

```
<div class="form-group has-feedback">
<input type="password" class="form-control" placeholder="Password" name="password">
<span class="glyphicon glyphicon-lock form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="password" class="form-control" placeholder="Retype password" name="repassword">
<span class="glyphicon glyphicon-log-in form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="text" class="form-control" placeholder="Phone Number" name="pnumber">
<span class="glyphicon glyphicon-phone form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="text" class="form-control" placeholder="Location" name="location">
<span class="glyphicon glyphicon-globe form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="text" class="form-control" placeholder="Disk Space" name="space">
<span class="glyphicon glyphicon-hdd form-control-feedback"></span>
</div>
<div class="row">
<div class="col-xs-8">
<div class="checkbox icheck">
<label>
<input type="checkbox"> I agree to the <a href="#">terms</a>
</label>
</div>
</div>
<!-- /.col -->
<div class="col-xs-4">
<button type="submit" class="btn btn-primary btn-block btn-flat" name="btn">Register</button>
</div>
<!-- /.col -->
</div>
</form>

<a href="login.php" class="text-center">I already have a membership</a></div>
<!-- /.form-box -->
</div>
```

```

<!-- /.register-box -->

<!--jQuery 2.2.3 -->
<scriptsrc="plugins/jQuery/jquery-2.2.3.min.js"></script>
<!-- Bootstrap 3.3.6 -->
<scriptsrc="bootstrap/js/bootstrap.min.js"></script>
<!--iCheck -->
<scriptsrc="plugins/iCheck/ichack.min.js"></script>
<script>
$(function () { $('input').iCheck({ checkBoxClass: 'checkbox_square-blue', radioClass: 'radio_square-blue', increaseArea: '20%' // optional
});
});
</script>
</body>
</html>
Login.php <?php include("dbconnect.php"); session_start(); extract($_POST); if(isset($_POST['btn']))
{
$qry=mysql_query("select * from register where email='$email' && password='$password'");
$num=mysql_num_rows($qry); if($num) { header("location:home.php");
$_SESSION['uname']=$email;
} else { echo "Invalid User Name And Password";
}
}
?>
<!DOCTYPE html>
<html>
<head>
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<title>Mail Server</title>
<!-- Tell the browser to be responsive to screen width -->
<meta content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=no" name="viewport"> <!-- Bootstrap 3.3.6 -->
<link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
<!-- Font Awesome -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.5.0/css/fontawesome.min.css"> <!--Icons -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/ionicons/2.0.1/css/ionicons.min.css">
<!-- Theme style -->
<link rel="stylesheet" href="dist/css/AdminLTE.min.css">
<!--iCheck -->

```

```
<link rel="stylesheet" href="plugins/iCheck/square/blue.css">

<!-- HTML5 Shim and Respond.js IE8 support of HTML5 elements and media queries -->
<!-- WARNING: Respond.js doesn't work if you view the page via file:// -->
<!--[if lt IE 9]>
<script src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>
<script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>
<![endif]--></head>
<body class="hold-transition login-page">
<div class="login-box">
<div class="login-logo">
<a href="index2.html"><strong>LOGIN FROM </strong></a></div>
<!-- /.login-logo -->
<div class="login-box-body">
<p class="login-box-msg">Sign in to start your Account </p>

<form action="" method="post">
<div class="form-group has-feedback">
<input type="email" class="form-control" placeholder="Email" name="email">
<span class="glyphicon glyphicon-envelope form-control-feedback"></span>
</div>
<div class="form-group has-feedback">
<input type="password" class="form-control" placeholder="Password" name="password">
<span class="glyphicon glyphicon-lock form-control-feedback"></span>
</div>
<div class="row">
<div class="col-xs-8">
<div class="checkbox icheck">
<label>
<input type="checkbox"> Remember Me
</label>
</div>
</div>
</div>
<!-- /.col -->
<div class="col-xs-4">
<button type="submit" class="btn btn-primary btn-block btn-flat" name="btn">Sign In</button>
</div>
<!-- /.col -->
</div>
```

```

</form>

<!-- /.social-auth-links -->
<a href="#">I forgot my password</a><br>
<a href="register.php" class="text-center">Register a new membership</a>

</div>
<!-- /.login-box-body -->
</div>
<!-- /.login-box -->

<!-- jQuery 2.2.3 -->
<scriptsrc="plugins/jquery/jquery-2.2.3.min.js"></script>
<!-- Bootstrap 3.3.6 -->
<scriptsrc="bootstrap/js/bootstrap.min.js"></script>
<!-- iCheck -->
<scriptsrc="plugins/iCheck/ichack.min.js"></script>
<script>
$(function () { $('input').iCheck({ checkboxClass: 'checkbox_square-blue', radioClass: 'radio_square-blue', increaseArea: '20%' // optional
});
});
</script>
</body>
</html> <?php include("dbconnect.php"); session_start(); extract($_POST);
$email=$_SESSION['uname'];
$query=mysql_query("select * from register where email='$email'");
$result=mysql_fetch_array($query);
$id=$result['id'];
$name=$result['name'];
$image=$result['image'];
?>
<?php if(isset($_POST['del'])) { echo $arr = $_POST['chk_id']; foreach ($arr as $id) {
$id; mysql_query("update sentmail set status='1' where id='$id'");
}
$msg = "Deleted Successfully!"; header("Location: home.php?msg=$msg");
}
?>
<!DOCTYPE html>
<html>

```



```
<head>
<meta charset="utf-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<title>Mail Server</title>
<!-- Tell the browser to be responsive to screen width -->
<meta content="width=device-width, initial-scale=1, maximum-scale=1, user-scalable=no" name="viewport"> <!-- Bootstrap 3.3.6 -->
<link rel="stylesheet" href="bootstrap/css/bootstrap.min.css">
<!-- Font Awesome -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.5.0/css/fontawesome.min.css">
<!-- Ionicons -->
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/ionicons/2.0.1/css/ionicons.min.css"> <!-- fullCalendar 2.2.5 -->
<link rel="stylesheet" href="plugins/fullcalendar/fullcalendar.min.css">
<link rel="stylesheet" href="plugins/fullcalendar/fullcalendar.print.css" media="print">
<!-- Theme style -->
<link rel="stylesheet" href="dist/css/AdminLTE.min.css"> <!-- AdminLTE Skins. Choose a skin from the css/skins folder instead of downloading all of
them to reduce the load. -->
<link rel="stylesheet" href="dist/css/skins/_all-skins.min.css">
<!-- iCheck -->
<link rel="stylesheet" href="plugins/iCheck/flat/blue.css">
<!-- HTML5 Shim and Respond.js IE8 support of HTML5 elements and media queries -->
<!-- WARNING: Respond.js doesn't work if you view the page via file:// -->
<!--[if lt IE 9]>
<script src="https://oss.maxcdn.com/html5shiv/3.7.3/html5shiv.min.js"></script>
<script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>
<![endif]-->

</head>
<body class="hold-transition skin-blue sidebar-mini">
<div class="wrapper">

<header class="main-header" >
<!-- Logo -->
<a href="index2.html" class="logo">
<!-- mini logo for sidebar mini 50x50 pixels -->
<span class="logo-mini"><b>MA</b></span>
<!-- logo for regular state and mobile devices -->

</a>
<!-- Header Navbar: style can be found in header.less -->
```

```

<nav class="navbarnavbar-static-top">
<!-- Sidebar toggle button-->
<a href="#" class="sidebar-toggle" data-toggle="offcanvas" role="button">
<span class="sr-only">Toggle navigation</span>
<span class="icon-bar"></span>
<span class="icon-bar"></span> <span class="icon-bar"></span>
</a>

<div class="navbar-custom-menu">
<ul class="navnavbar-nav">
<!-- Messages: style can be found in dropdown.less-->
<li class="dropdown messages-menu">
<a href="#" class="dropdown-toggle" data-toggle="dropdown">
<i class="fafa-envelope-o"></i>
<span class="label label-success"></span></a>
<ul class="dropdown-menu">
<li class="header"></li>
<li>
<!-- inner menu: contains the actual data -->
<ul class="menu">
<li><!-- start message -->
<a href="#">
<div class="pull-left">
<imgsrc="dist/img/user2-160x160.jpg" class="img-circle" alt="User Image">
</div>
<h4>
Support Team
<small><i class="fafa-clock-o"></i></small>
</h4>
<p>Why not buy a new awesome theme?</p>
</a>
</li>
<!-- end message -->
</ul>
</li>
<li class="footer"><a href="#">See All Messages</a></li>
</ul>
</li>
<!-- Notifications: style can be found in dropdown.less -->

```

```

<li class="dropdown notifications-menu">
<a href="#" class="dropdown-toggle" data-toggle="dropdown">
<i class="fafa-bell-o"></i>
<span class="label label-warning"></span></a>
<ul class="dropdown-menu">
<li class="header"></li>
<li>
<!-- inner menu: contains the actual data -->
<ul class="menu">
<li>
<a href="#">
<i class="fafa-users text-aqua"></i>
</a>
</li>
</ul>
</li>
<li class="footer"><a href="#">View all</a></li>
</ul>
</li>
<!-- Tasks: style can be found in dropdown.less -->
<li class="dropdown tasks-menu">
<a href="#" class="dropdown-toggle" data-toggle="dropdown">
<i class="fafa-flag-o"></i>
<span class="label label-danger"></span></a>
<ul class="dropdown-menu">
<li class="header"></li>
<li>
<!-- inner menu: contains the actual data -->
<ul class="menu">
<li><!-- Task item -->
<a href="#">
<h3>
Design some buttons
<small class="pull-right">20%</small>
</h3>
<div class="progress xs">
<div class="progress-bar progress-bar-aqua" style="width: 20%" role="progressbar" aria-valuenow="20" ariavaluemin="0" aria-valuemax="100">
<span class="sr-only">20% Complete</span>
</div>

```

```
</div>
</a>
</li>
<!-- end task item -->
</ul>
</li>
<li class="footer">
<a href="#">View all tasks</a>
</li>
</ul>
</li>
<!-- User Account: style can be found in dropdown.less -->
<li class="dropdown user user-menu">
<a href="#" class="dropdown-toggle" data-toggle="dropdown">
<?php echo '<imgsrc="profile/'.$im.'" class="user-image" alt="User Image">';?>
<span class="hidden-xs"><?php echo $nm;?></span>
</a>
<ul class="dropdown-menu">
<!-- User image -->
<li class="user-header">
<?php
$im='<imgsrc="profile/'.$im.'" class="img-circle" alt="User Image">'
?>
<?php echo $im;?>
<p>
<small></small>
</p>
</li>
<!-- Menu Body -->
<li class="user-body">
<div class="row">
<div class="col-xs-4 text-center">
<a href="#">Followers</a>
</div>
<div class="col-xs-4 text-center">
<a href="#"></a>
</div>
<div class="col-xs-4 text-center">
<a href="#">Friends</a>
```

```
</div>
</div>
<!-- /.row -->
</li>
<!-- Menu Footer-->
<li class="user-footer">
<div class="pull-left">
<a href="profile.php" class="btn btn-default btn-flat">Profile</a>
</div>
<div class="pull-right">
<a href="index.php" class="btn btn-default btn-flat">Sign out</a>
</div>
</li>
</ul>
</li>
<!-- Control Sidebar Toggle Button -->
<li>
<a href="#" data-toggle="control-sidebar"><i class=""></i></a>
</li>
</ul>
</div>
</nav>
</header>
<!-- Left side column. contains the logo and sidebar -->
<!-- Content Wrapper. Contains page content -->
<div class="">
<!-- Content Header (Page header) -->
<section class="">
</section>
</div>
<!-- Main content -->
<section class="content">
<div class="row">
<div class="col-md-3">
<a href="composer.php" class="btn btn-primary btn-block margin-bottom">Compose</a>
<div class="box box-solid">
<div class="box-header with-border">
<h3 class="box-title">Folders</h3>
```

```

<div class="box-tools">
<button type="button" class="btnbtn-box-tool" data-widget="collapse"><i class="fafa-minus"></i>
</button>
</div>
</div>
<div class="box-body no-padding">
<ul class="navnav-pills nav-stacked">
<li class="active"><a href="home.php"><i class="fafa-inbox"></i> Inbox
<span class="label label-primary pull-right">12</span></a></li>
<li><a href="sent.php"><i class="fafa-envelope-o"></i> Sent</a></li>
<li><a href="drafts.php"><i class="fafa-file-text-o"></i> Drafts</a></li>
<li><a href="#"><i class="fafa-filter"></i> Junk <span class="label label-warning pull-right"></span></a> </li>
<li><a href="delet.php"><i class="fafa-trash-o"></i> Trash</a></li>
</ul>
</div>
<!-- /.box-body -->
</div>
<!-- /.box -->
<div class="box box-solid">
<div class="box-header with-border">
<h3 class="box-title">Labels</h3>
<div class="box-tools">
<button type="button" class="btnbtn-box-tool" data-widget="collapse"><i class="fafa-minus"></i>
</button>
</div>
</div>
<div class="box-body no-padding">
<ul class="navnav-pills nav-stacked">
<li><a href="#"><i class="fafa-circle-o text-red"></i> Important</a></li>
<li><a href="#"><i class="fafa-circle-o text-yellow"></i> Promotions</a></li>
<li><a href="#"><i class="fafa-circle-o text-light-blue"></i> Social</a></li>
</ul>
</div>
<!-- /.box-body -->
</div>
<!-- /.box -->
</div>
<!-- /.col -->

```

```

<div class="col-md-9">
<div class="box box-primary">
<div class="box-header with-border">
<h3 class="box-title">Inbox</h3>
<div class="box-tools pull-right">
<div class="has-feedback">
<input type="text" class="form-control input-sm" placeholder="Search Mail">
<span class="glyphicon glyphicon-search form-control-feedback"></span>
</div>
</div>
<!-- /.box-tools -->
</div>
<!-- /.box-header -->
<div class="box-body no-padding">
<div class="mailbox-controls">
<!-- Check all button -->
</button>
<!-- /.btn-group -->
<button type="button" class="btn btn-default btn-sm"><i class="fa fa-refresh"></i></button>
<!-- /.pull-right -->
</div>
<div class="table-responsive mailbox-messages">
<form method="post" name="form1">
<table class="table table-hover table-striped">
<tbody>
<?php
$qry=mysql_query("select * from sentmail where rid='$id' && status='0' ORDER BY id DESC"); $a=0; while($row=mysql_fetch_array($qry))
{
?>
<tr>
<td><input name="chk_id[<?php echo $a; ?>]" type="checkbox" class='checkbox' value="<?php echo $row['id']; ?>"/></td>
<td class="mailbox-name"><a href="readmail.php?id=<?php echo $row['id']; ?>"><?php echo
$row['sendername']; ?></a></td>
<td class="mailbox-subject"><b>Subject:</b><?php echo $row['subject']; ?></td>
<td class="mailbox-attachment"><i class="fa fa-paperclip"></i></td>
<td class="mailbox-date"><?php echo $row['sdate']; ?></td>
</tr>
<?php
$a++;

```

```

}
?>
<scriptsrc="js/jquery-1.10.2.js"></script>
<script type="text/javascript">
$(document).ready(function(){ $('#chk_all').click(function(){ if(this.checked)
$(".chkbox").prop("checked", true); else
$(".chkbox").prop("checked", false);
});
});
$(document).ready(function(){
$('#delete_form').submit(function(e){ if(!confirm("Confirm Delete?")){
e.preventDefault();
}
});});
</script>

```

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