

# **Hands On Devops Using AWS**

## **Online Coding Examination System Using HTML CSS PHP and AWS for Value Added Course (Hands on DevOps using AWS)**

in

***Computer Science and Engineering***

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# Hands On Devops Using AWS

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## Declaration

I hereby declare that the work which is being presented in the Project “**Online Coding Examination System Using HTML CSS PHP and AWS**”, submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of my own work carried under the supervision of **Mr. Jitesh Kumar Bhatia**, **Mr. Pawan Kumar Verma** and **Mr. Rishi Raj**.

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# Hands On Devops Using AWS

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# **Hands On Devops Using AWS**

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# **Hands On Devops Using AWS**

## **Chapter-1**

# **INTRODUCTION**

---

# Hands On Devops Using AWS

## **1. Project : Online Coding Examination System**

### **1.1 index.html**

```
<html>
<head>
<title> DashBoard</title>
<script type="text/javascript">
    function preventBack() {
        window.history.forward();

    }
    setTimeout("preventBack()", 0);
    window.onunload = function () { null };
</script>

<style>
body, html
{
    height: 100%;
    margin: 0;
}
#head {
    background-color: lightyellow;
    text-align: center;
    margin: auto;
    padding: 40px;
}
.bg{
    background-image: url("a.jpg");
    height: 100%;
    background-position: center;
    background-repeat: no-repeat;
    background-size: cover;
}
table {
    border-collapse: collapse;
    width: 50%;
}
td {
    height: 70px;
}
table.center{
    margin-left: auto;
    margin-right: auto;
}
</style>
</head>
```

# Hands On Devops Using AWS

```
<body>
  <header id="head"><h1> STATUS INFOTAINMENT </h1></header>
<div class="bg">
  <h1><center><u>Register</u></center></h1>
<form action="store.php" method="Post">
<center>
<table class="center" style="width: 100px; border: 1px solid black;"
bgcolor=#F0F8FF; >

<tr>
<td> Name :
<td> <input type=text name=t1 placeholder="Enter Your Name" required>
</tr>

<tr>
<td> Password:
<td> <input type=password name=t2 placeholder="Enter your password"
required>
</tr>

<tr>
<td> Email :
<td> <input type=text name=t3 placeholder="Enter Your Email" required>
</tr>

<tr>
<td colspan=2 align=center> <input type=submit value="Submit">
<td colspan="2" align="center"><button type="button"><a
href="login.html">Login</button></a>
</tr>
</table>
</center>
</form>
</div>
</body>
</html>
```

## **1.2 Login.html**

```
<html>
<head>
<title>Login Form</title>
</head>
<script type="text/javascript">
  function preventBack() {
    window.history.forward();
  }
  setTimeout("preventBack()", 0);
```



# Hands On Devops Using AWS

```
        window.onload = function () { null };
</script>
<style>
#head {
    background-color: rosybrown;
    text-align: center;
    margin: auto;
    padding: 40px;
}
.bg{
    background-image: url("b.jpg");
    height: 100%;
    background-position: center;
    background-repeat: no-repeat;
    background-size: cover;
}
table.center{
    margin-left: auto;
    margin-right: auto;
}
table {
    border-collapse: collapse;
    width: 50%;
}
td {
    height: 70px;
}
</style>
<body>
    <header id="head"><h1> STATUS INFOTAINMENT
</h1></header>
<div class="bg">
    <h1><center><u>Login Form</u></center></h1>
<form action="validate.php" method="Post">

<center>
<table class="center" style="width: 100px; border: 1px solid
black;" bgcolor=#F0F8FF;>

<tr>
<td> Email
<td> <input type=text name=t1 placeholder="Enter your Email
here" required>
</tr>

<tr>
<td> Password
<td> <input type=password name=t2 placeholder="Enter your
Password here" required>
</tr>
<tr>
```

# Hands On Devops Using AWS

```
<td colspan=2 align=center> <input type=submit value=Submit>
<td align="center"><button type="button"><a
href="index.html">SignUp</button></a>
</tr>
</table>
</center>
</form>
</div>
</body>
</html>
```

## **1.3 Store.php**

```
<!DOCTYPE html>
<html>
<head>

<title>Successful Alert</title>
<script type="text/javascript">
    function preventBack() {
        window.history.forward();

    }
    setTimeout("preventBack()", 0);
    window.onunload = function () { null };
</script>
</head>
<body>
<?php
$name=$_POST['t1'];
$pass=$_POST['t2'];
$email=$_POST['t3'];

$file = fopen("details.txt", 'a+');
$s=fread($file, filesize("details.txt"));
$pos = strpos($s, $email);
if(!$pos){
    $f=fopen("jobappnum.txt","r");
    $j_a_n=fread($f, filesize("jobappnum.txt"));
    fclose($f);
    $f=fopen("jobappnum.txt","w");
    $text = $name."::".$pass."::".$email."::". $j_a_n."::\r\n";
    $j_a_n=$j_a_n+1;
    fwrite($f,$j_a_n);
    fwrite($file, $text);
    fclose($file);
    fclose($f);
```

# Hands On Devops Using AWS

```
echo "Your data submitted successfully<br>";}
else
{
echo "You are already registered";
}
echo "<a href=login.html>Click Here to login</a>";
?>
</body>
</html>
```

## **1.4 Validate.php**

```
<<!DOCTYPE html>
<html>
<head>

<title>Main Form</title>
<script type="text/javascript">
    function preventBack() {
        window.history.forward();

    }
    setTimeout("preventBack()", 0);
    window.onunload = function () { null };
</script>
<style>
.bg{
    background-image: url("b.jpg");
    height: 100%;
    background-position: center;
    background-repeat: no-repeat;
    background-size: cover;
}
#head {
    background-color: lightyellow;
    text-align: center;
    margin: auto;
    padding: 20px;
}

</style>
</head>
<body bgcolor="Blue">
    <header id="head"><h1> STATUS INFOTAINMENT </h1></header>

    <div class="bg">

<?php
$email=$_POST['t1'];
$psw=$_POST['t2'];
$flag=0;
$s=array();
$file = fopen("details.txt", 'r');
```

# Hands On Devops Using AWS

```
while(!feof($file))
{
    $s=fgets($file);
    $str_arr = array_pad(explode(':', $s),4,null);
    if ($str_arr[1]==$psw and $str_arr[2]==$email)
    {
        $rem=$str_arr[3];
        echo "<h1><center>You are Authorized User</h1></center>". "<br>";
        echo "<h3>Your job Application number is</h3>". $str_arr[3]. "<br>";
        $job = $rem % 20;
        $job = $job + 1;
        echo "<h3>Your Question Is</h3>";
        echo readfile("./$job.txt");

        ?>

        <form method="post" action="abc.php">
            <table border="1">
                <tr>
                    <td>choose your programming language
                        <td colspan="10">
                            <select name="lang">
                                <option value="Java">Java</option>
                                <option value="Python">Python</option>
                            </select>
                        </td>
                    </tr>
                    <tr>
                        <td colspan="11" align="center"><textarea name="prog"
rows="20" cols="150" placeholder="Write your code here"></textarea>
                    </td>
                    <td colspan="11" align="center"><input type="submit"
name="save_select" value="Submit">
                    <td colspan="11" align="center"><button type="button"><a
href="login.html">Logout</button></a>
                    </td>
                </tr>
            </table>
        </form>

        <?php

            $flag=1;
            break;
        }

    }

    if ($flag==0)
        echo "Please register before login <a href=index.html>Click Here to
```

# Hands On Devops Using AWS

```
Register</a>";
```

```
fclose($file);
```

```
?>
```

```
</div>
```

```
</body>
```

```
</html>
```

## **1.5 Abc.php**

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Code Submit</title>
```

```
<script type="text/javascript">
```

```
function preventBack() {
```

```
    window.history.forward();
```

```
}
```

```
setTimeout("preventBack()", 0);
```

```
window.onunload = function () { null };
```

```
</script>
```

```
<style>
```

```
.bg{
```

```
    background-image: url("b.jpg");
```

```
    height: 100%;
```

```
    background-position: center;
```

```
    background-repeat: no-repeat;
```

```
    background-size: cover;
```

```
}
```

```
#head {
```

```
    background-color: lightyellow;
```

```
    text-align: center;
```

```
    margin: auto;
```

```
    padding: 20px;
```

# Hands On Devops Using AWS

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
    <header id="head"><h1> STATUS INFOTAINMENT </h1></header>
```

```
<div class="bg">
```

```
<?php
```

```
$language=$_POST['lang'];
```

```
$text=$_POST['prog'];
```

```
if ($language=='Java') $exe='java';
```

```
else $exe='py';
```

```
$fil=fopen("ansp.$exe",'a');
```

```
$texted=$text."\r\n";
```

```
fwrite($fil, $texted);
```

```
fclose($fil);
```

```
echo "Your code is saved<br>";
```

```
echo "Please here to go the Register Page <a href=index.html>Register  
Page</a><br>";
```

```
echo "Login Page<a href=index.html>Login Page</a><br>";
```

```
?>
```

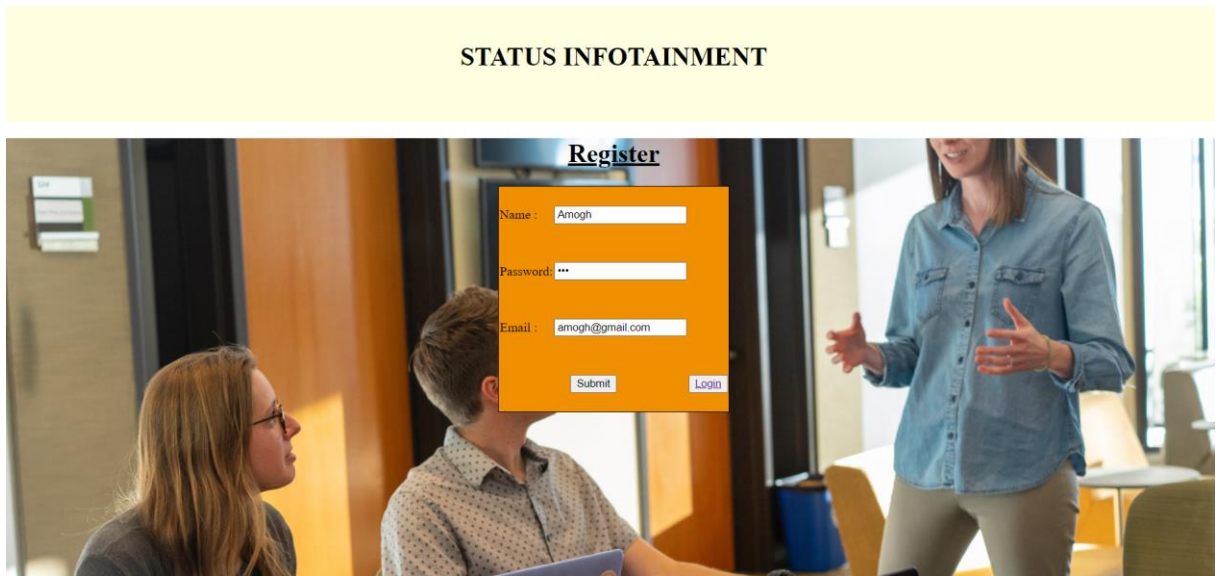
```
</div>
```

```
</body>
```

```
</html>
```

# Hands On Devops Using AWS

## ScreenShots



**Fig 1.1.1 index.html page**

# Hands On Devops Using AWS

Your data submitted successfully  
[Click Here to login](#)

## **1.2 Store.php**



# Hands On Devops Using AWS

STATUS INFOTAINMENT

**Login Form**

Email	<input type="text" value="amogh@gmail.com"/>
Password	<input type="password" value="..."/>
<input type="button" value="Submit"/>	<input type="button" value="SignUp"/>

## 1.3 Login.html

# Hands On Devops Using AWS

**You are Authorized User**

**Your job Application number is**  
1000

**Your Question Is**  
Q = How to reverse a String in Java35

choose your programming language Java ▾

Write your code here

Submit Logout

**Fig 1.4 Validate.php**

# Hands On Devops Using AWS

## STATUS INFOTAINMENT

Your code is saved  
Please here to go the Register Page [Register Page](#)  
Login Page [Login Page](#)

**Fig 1.5 abc.php**

# Hands On Devops Using AWS

## Output

```
-rw-rw-r-- 1 ec2-user apache 38 Jul 30 14:00 5.txt
-rw-rw-r-- 1 ec2-user apache 60 Jul 30 14:00 6.txt
-rw-rw-r-- 1 ec2-user apache 41 Jul 30 14:01 7.txt
-rw-rw-r-- 1 ec2-user apache 43 Jul 30 14:02 8.txt
-rw-rw-r-- 1 ec2-user apache 67 Jul 30 14:02 9.txt
-rw-rw-r-- 1 ec2-user apache 1022 Jul 30 13:51 abc.php
-rw-rw-r-- 1 ec2-user apache 4583043 Jul 30 08:57 a.jpg
-rw-r--r-- 1 apache apache 9 Jul 30 10:12 ansp.java
-rw-r--r-- 1 apache apache 14 Jul 30 11:58 ansp.py
-rw-rw-r-- 1 ec2-user apache 2536797 Jul 30 11:48 b.jpg
-rwxrwxrwx 1 ec2-user apache 288 Jul 30 11:57 details.txt
-rw-rw-r-- 1 ec2-user apache 1501 Jul 30 13:51 index.html
-rwxrwxrwx 1 ec2-user apache 4 Jul 30 11:57 jobappnum.txt
-rw-rw-r-- 1 ec2-user apache 1350 Jul 30 13:50 login.html
drwxrwsr-x 2 ec2-user apache 6 Jul 30 09:04 project
-rw-rw-r-- 1 ec2-user apache 6913359 Jul 30 08:50 project.zip
-rw-rw-r-- 1 ec2-user apache 905 Jul 30 13:51 store.php
-rw-rw-r-- 1 ec2-user apache 2043 Jul 30 13:51 validate.php
```

**Fig 1.6 Contents After Input Including Output File “ansp.java”**

# Hands On Devops Using AWS

## Chapter-2

# Software Requirement Analysis

---

### 1. : Software Requirements

- 1.1 Notepad
- 1.2 Amazon Ec2 Console
- 1.3 Apache Server and PhP in ec2 instance
- 1.4 Browser
- 1.5 Windows OS

### 2.Implementation Process

1. Login to your AWS Account.
2. Launch an EC2Instance:
  - a. Choose Amazon Linux 2 AMI (HVM), SSD Volume Type (Free Tier only). Click on Select.
  - b. Select t2. Click on Next.
  - c. Set all the default values. Click on Next.
  - d. Set all default values. Click on Next.
  - e. Click on Add Tags. Give "Name" as Key and "Any Name" as Value. Click on Configure Security Group.
  - f. Click on Add Rule. Select HTTP, TCP, 80, Custom, 0.0.0.0/0, ::/0. Click on Review and Launch.
  - g. Click on Launch.
  - h. Create a new Key-Pair with a new name. Download Key-Pair. Click on Launch Instance.
  - i. Your instance is now getting initialized and will be in running state after few seconds.
  - j. Wait until Instance Status for your instance reads as Running before continuing.
3. Go to EC2-Dashboard→Instances. Click on Newly created instance.
4. Click on Connect on the upper right corner. Click Connect button on the bottom right on the new page. You can see your console on the browser.
5. Update the Linux by giving the command: `sudo yum update -y`
6. If it shows an error of "cannot find a baseurl for repo", then do the following:
  - (a) Give permission to write in the file: `sudo chmod 777 /etc/resolv.conf`
  - (b) Open the file using vi editor: `vi /etc/resolv.conf`
  - (c) Add these entries to /etc/resolv.conf:  
nameserver 8.8.8.8  
nameserver 8.8.4.4
  - (d) Save and exit using pressing Esc, followed by typing :wq, and press Enter Key.
  - (e) Go to Step5
7. Install PHP on your Linux console: `sudo amazon-linux-extras install -y php7.2`
8. Install Apache on the EC2-Instance: `sudo yum install -y httpd`
9. Start the web server with the command shown following: `sudo systemctl start httpd`

# Hands On Devops Using AWS

10. Enable the service: `sudo systemctl enable httpd`
11. Check whether the httpd service is started or not: `systemctl status httpd` (An active running value of Active field indicates running)
12. Open the Apache Home page by entering the **Public IPv4 DNS** of your instance. Make sure it is using **http protocol and not https protocol**.
13. Add the www group to your EC2 instance with the following command: `sudo groupadd www`
14. Add the ec2-user user to the www group: `sudo usermod -a -G www ec2-user`
15. Log out to refresh your permissions and include the new www group: `exit`
16. Log back in again and verify that the www group exists with the groups command.  
`groups`
17. Your output looks similar to the following:  
`ec2-user adm wheel systemd-journal www`
18. Change the group ownership of the /var/www directory and its contents to the www group.  
`sudo chgrp -R www /var/www`
19. Change the directory permissions of /var/www and its subdirectories to add group write permissions and set the group ID on subdirectories created in the future.  
`sudo chmod 2775 /var/www`  
`find /var/www -type d -exec sudo chmod 2775 {} +`
20. Recursively change the permissions for files in the /var/www directory and its subdirectories to add group write permissions.  
`find /var/www -type f -exec sudo chmod 0664 {} +`
21. Change the directory to /var/www/html.  
`cd /var/www/html`
22. So Finally the dynamic is Hosted.

## 3. Software Testing

- 3.1 EC2 Instance
- 3.2 Apache Web Server
- 3.3 Windows OS
- 3.4 Google Chrome

# **Hands On Devops Using AWS**

## **Conclusion**

It was a wonderful and learning experience for me while working on this project. This Project took me through the various phases of project development and the joy of work and the thrill involved while tackling the various problems and challenges and it was good to solve all the problems while making the project. I will have gained a better understanding of the projects.

# **Hands On Devops Using AWS**

## **References**

**Amazon web services : Book By Andreas Wittig and Michael Wittig**

**Amazon Web Services : A Hands-On Guide to the Fundamentals of AWS Cloud = Book  
by Mark Wilkins**



# **Hands On Devops Using AWS**