Login.php

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Login</title>
</head>
<body>
<h2>Login</h2>
<form action="login_process.php" method="post">
<label for="username">Username:</label>
<input type="text" id="username" name="username" required><br><br>
<label for="password">Password:</label>
<input type="password" id="password" name="password" required><br><br>
<input type="submit" value="Login">
</form>
</body>
</html>
```

Logout.php

```
<?php
session_start();

// Unset all session variables
$_SESSION = array();

// Destroy the session

session_destroy();
```

```
// Delete the session cookie by setting its expiration time to a past value
setcookie(session_name(), '', time() - 3600, '/');

// Redirect to the login page after logout
header("Location: login.php");
exit();
?>
```

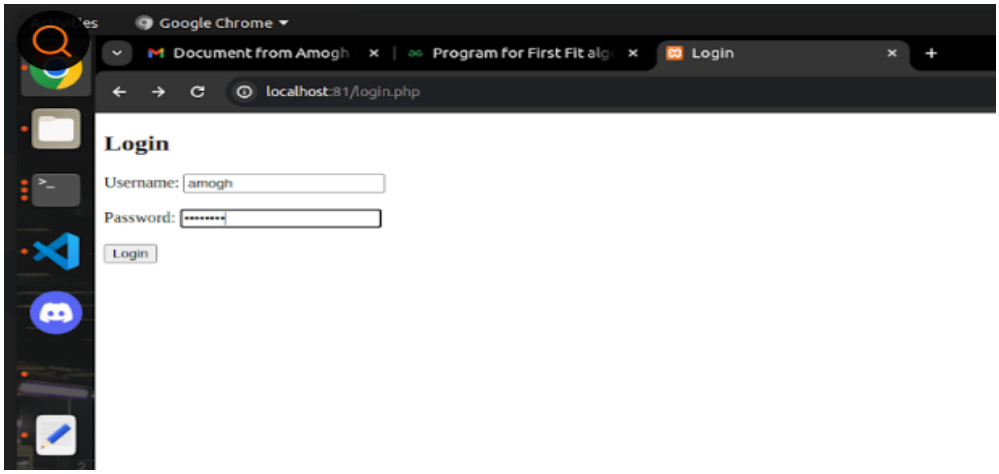
Home.php

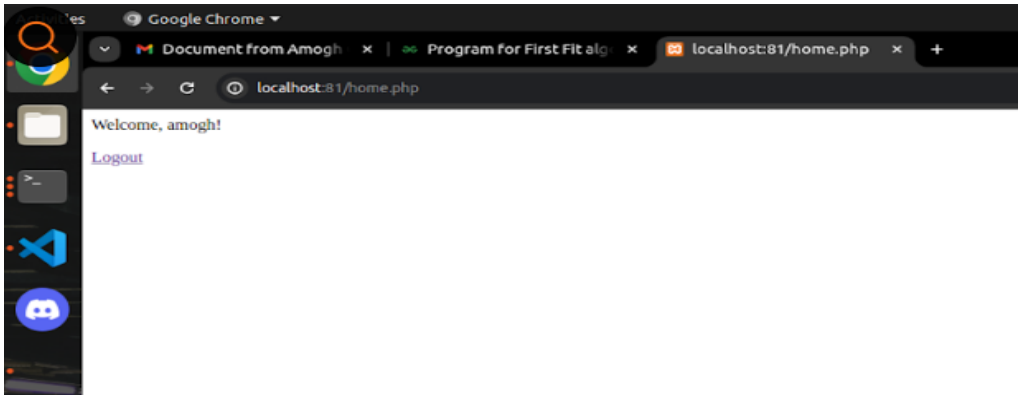
```
<?php
session_start();

// Check if the user is logged in, if not redirect to login page
if (!isset($_SESSION["username"])) {
// Check if the remember me cookie is set
if(isset($_COOKIE['username'])) {
$_SESSION["username"] = $_COOKIE['username'];
} else {
header("Location: login.php");
exit();
}
}

// Display welcome message
echo "Welcome, " . $_SESSION["username"] . "!";

// Provide a logout option
echo "<br><br><a href='logout.php'>Logout</a>";
?>
```

Login_process.php

```php
<?php
session_start();

// Dummy username and password (you should retrieve these from your database)
$valid_username = “amogh”;
$valid_password = "password";

// Check if the form is submitted
if ($_SERVER["REQUEST_METHOD"] == "POST") {
$username = $_POST["username"];
$password = $_POST["password"];

// Check if username and password are correct
if ($username === $valid_username && $password === $valid_password) {
// Set session variables
$_SESSION["username"] = $username;

// Check if remember me is checked
if(isset($_POST['remember'])) {
// Set the cookie to remember the username for 1 week (adjust as needed)
setcookie('username', $username, time() + (7 * 24 * 60 * 60), '/');
}

// Redirect to the home page or any other page after successful login
header("Location: home.php");
exit();
} else {
echo "Invalid username or password.";
}
}
?>
```

Output:-


Google Chrome
Document from Amogh
Program for First Fit alg
Login
localhost:81/login.php
Login
Username: amogh
Password:
Login


Google Chrome
Document from Amogh
Program for First Fit alg
localhost:81/home.php
localhost:81/home.php
Welcome, amogh!
Logout

app.rb:-

```
require 'sinatra'
# Method to reverse the name
def reverse_name(first_name, last_name)
"#{last_name} #{first_name}"
end
get '/' do
erb :index
end
post '/reverse' do
first_name = params[:first_name]
last_name = params[:last_name]
@reversed_name = reverse_name(first_name, last_name)
erb :reverse
end
```

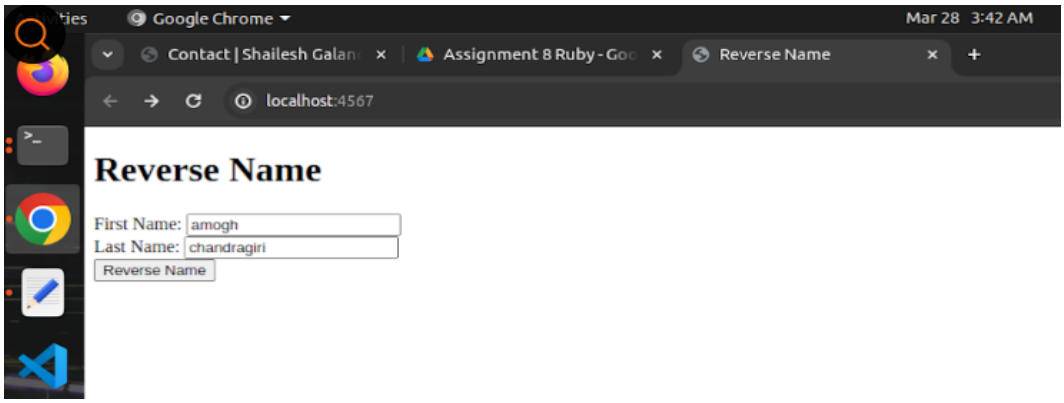
index.erb:-

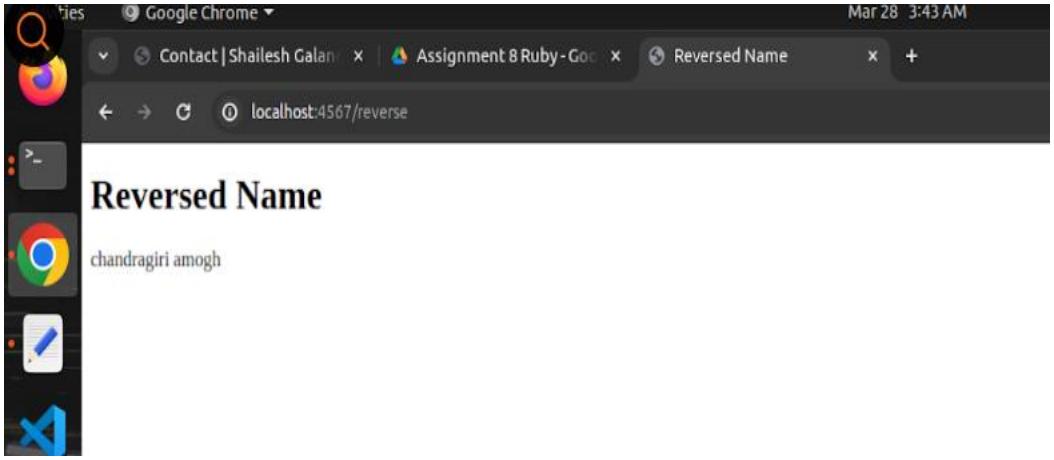
```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Reverse Name</title>
</head>
<body>
<h1>Reverse Name</h1>
<form action="/reverse" method="POST">
<label for="first_name">First Name:</label>
<input type="text" id="first_name" name="first_name" required><br>
<label for="last_name">Last Name:</label>
<input type="text" id="last_name" name="last_name" required><br>
<button type="submit">Reverse Name</button>
</form>
</body>
</html>
```

reverse.erb:-

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Reversed Name</title>
</head>
<body>
<h1>Reversed Name</h1>
<p><%= @reversed_name %></p>
</body>
</html>
```

Output:-

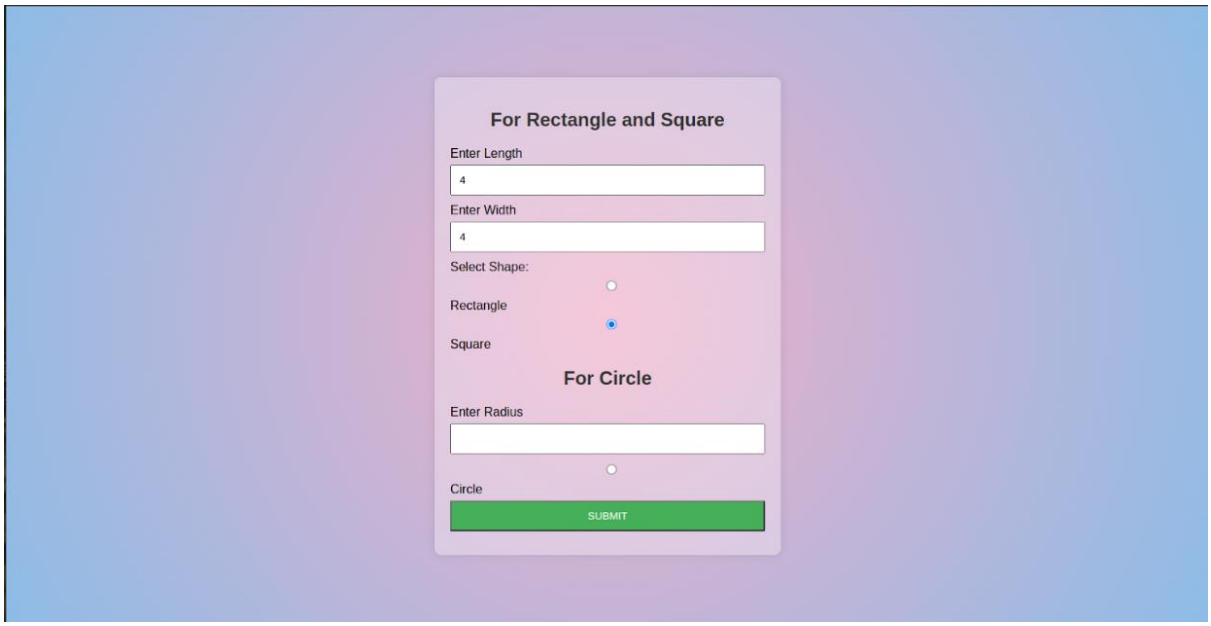

Google Chrome
Mar 28 3:42 AM
Contact | Shailesh Galan
Assignment 8 Ruby - Goo
Reverse Name
localhost:4567
Reverse Name
First Name: amogh
Last Name: chandragiri
Reverse Name


Google Chrome
Mar 28 3:43 AM
Contact | Shailesh Galan
Assignment 8 Ruby - Goo
Reversed Name
localhost:4567/reverse
Reversed Name
chandragiri amogh

```php
<?php
define('pi', 3.14);

interface shape
{
    function calc_area($l, $w);
    function calc_peri($l, $w);
}

class Circle implements shape
{
    function calc_area($l, $w)
    {
        return pi * $l * $l;
    }

    function calc_peri($l, $w)
    {
        return 2 * pi * $l;
    }
}

class Rectangle implements shape
{
    function calc_area($l, $w)
    {
        return $l * $w;
    }

    function calc_peri($l, $w)
    {
        return 2 * ($l + $w);
    }
}

class Square implements shape
{
    function calc_area($l, $w)
    {
        return $l * $l;
    }

    function calc_peri($l, $w)
    {
        return 4 * $l;
    }
}

$op = isset($_GET['op']) ? $_GET['op'] : null;

echo '<html>';
echo '<head>';
echo '<style>';
echo 'body {';
echo '    font-family: Arial, sans-serif;';
echo '    background-color: #f4f4f4;';
echo '    margin: 0;';
echo '    padding: 0;';
```

```
echo '    display: flex;';
echo '    justify-content: center;';
echo '    align-items: center;';
echo '    height: 100vh;';
echo '}';
echo 'div {';
echo '    max-width: 400px;';
echo '    width: 100%;';
echo '    background-color: #fff;';
echo '    padding: 20px;';
echo '    border-radius: 8px;';
echo '    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);';
echo '}';
echo '</style>';
echo '</head>';
echo '<body>';
echo '<div>';

switch ($op) {
    case 1:
        $l = isset($_GET['l']) ? (int)$_GET['l'] : 0;
        $w = isset($_GET['w']) ? (int)$_GET['w'] : 0;
        $ob = new Rectangle();
        $a = $ob->calc_area($l, $w);
        $v = $ob->calc_peri($l, $w);
        echo "<p>Area of Rectangle is: $a</p><p>Perimeter of Rectangle
is: $v</p>";
        break;

    case 2:
        $l = isset($_GET['l']) ? (int)$_GET['l'] : 0;
        $w = isset($_GET['w']) ? (int)$_GET['w'] : 0;
        $ob = new Square();
        $a = $ob->calc_area($l, $w);
        $v = $ob->calc_peri($l, $w);
        echo "<p>Area of Square is: $a</p><p>Perimeter of Square is:
$v</p>";
        break;

    case 3:
        $r = isset($_GET['r']) ? (int)$_GET['r'] : 0;
        $ob = new Circle();
        $a = $ob->calc_area($r, 0);
        $v = $ob->calc_peri($r, 0);
        echo "<p>Area of Circle is: $a</p><p>Perimeter of Circle is:
$v</p>";
        break;

    default:
        echo "<p>Invalid operation.</p>";
}

echo '</div>';
echo '</body>';
echo '</html>';
?>
```

Output:-



Area of Square is: 16

Perimeter of Square is: 16

Area of Circle is: 50.24

Perimeter of Circle is: 25.12

Area of Rectangle is: 16

Perimeter of Rectangle is: 16