

Service Oriented Computing
IT31063

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HORIZON CAMPUS

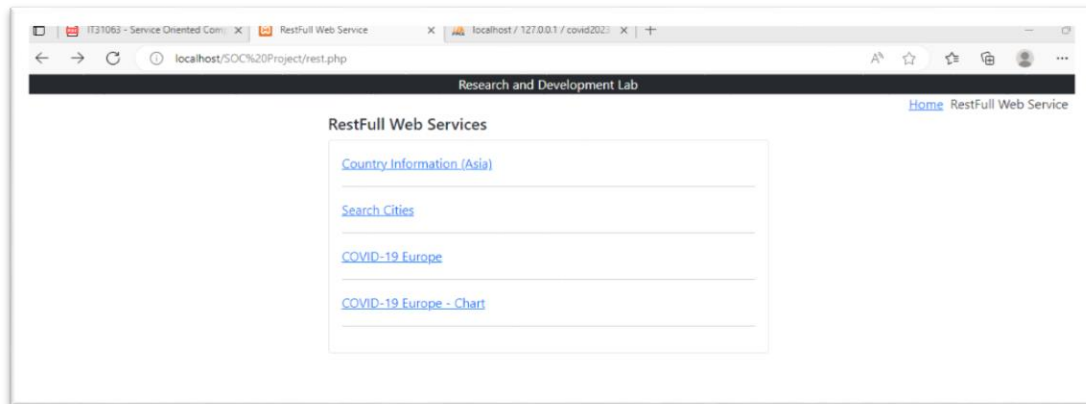
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BSc (Hons) in Information technology

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01). Question 1



Restful Web Service 1

The screenshot shows a web browser window with the address bar displaying 'localhost/SOC%20Project/country.php'. The page has a dark header with 'Research and Development Lab' and a 'Home' link. Below the header, the title 'Asian Countries' is displayed. A table of Asian countries is shown with columns: Flag, Country Name, Capital City, Region, Subregion, Currencies, and Country Code. Each row has a 'View' button.


Flag	Country Name	Capital City	Region	Subregion	Currencies	Country Code	
	Jordan	Amman	Asia	Western Asia	Jordanian dinar(ﷵ)	JO	View
	Lebanon	Beirut	Asia	Western Asia	Lebanese pound(ﷵ)	LB	View
	Mongolia	Ulan Bator	Asia	Eastern Asia	Mongolian tögrög(₮)	MN	View
	Thailand	Bangkok	Asia	South-Eastern Asia	Thai baht(฿)	TH	View
	Armenia	Yerevan	Asia	Western Asia	Armenian dram(֏)	AM	View
	Brunei	Bandar Seri Begawan	Asia	South-Eastern Asia	Brunei dollar(\$) Singapore dollar(\$)	BN	View
	Turkey	Ankara	Asia	Western Asia	Turkish lira(₺)	TR	View
	Maldives	Malé	Asia	Southern Asia	Maldivian rufiyaa(ރ.)	MV	View
	Laos	Vientiane	Asia	South-Eastern Asia	Lao kip(₭)	LA	View
	Bhutan	Thimphu	Asia	Southern Asia	Bhutanese ngultrum(Nu.) Indian rupee(₹)	BT	View
	Palestine	Ramallah	Asia	Western Asia	Egyptian pound(£) Israeli new shekel(₪) Jordanian dinar(JD)	PS	View
	Iraq	Baghdad	Asia	Western Asia	Iraqi dinar(ﷵ)	IQ	View
	Azerbaijan	Baku	Asia	Western Asia	Azerbaijani manat(₼)	AZ	View

country.php 1.1

Research and Development Lab

[Home](#)
[RestFull Web Service](#)

Jordan



Official Name	Hashemite Kingdom of Jordan
Capital	Amman
Code	JO
Currency	Jordanian dinar
Subregion	Western Asia
Continent	Asia
Languages	IRQ,ISR,PSE,SAU,SYR
Polpulation	10203140
Area	89,342

countydetails.php 1.3

02. Question 2

Research and Development Lab

[Home](#)
[RestFull Web Service](#)

City Information

Search Cities:

Load Cities

cityinformation 2. 1

City Information

Search Cities:


kandy

City Details

ID	City Name	State Name	Country Name	
2788	Kandy District	No data available	Sri Lanka	City Details
65687	Kandyagash	Aktobe Region	Kazakhstan	City Details
66489	Kandy	Central Province	Sri Lanka	City Details
66490	Kandy District	Central Province	Sri Lanka	City Details
146168	Kandy Four Gravets	Kandy District	Sri Lanka	City Details

cityinformation 2. 2

City Information

City ID:	146168
City Name:	Kandy Four Gravets
State Name:	Kandy District
Country Name:	Sri Lanka
Country Flag:	

Google Maps Platform rejected your request. This API project is not authorized to use this API.

cityinformation 2. 3

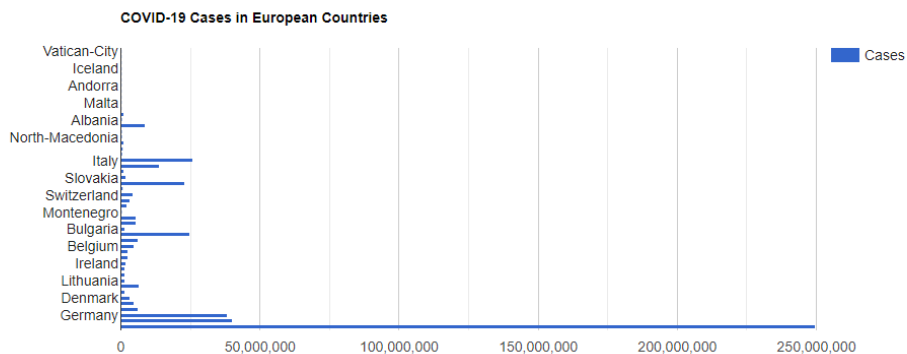
03). Question 3

COVID19 Information in Europe

Country	Population	Total Covid Cases	Total Deaths	Tests	Continent
Vatican-City	799	29	0	0	Europe
Isle-of-Man	85732	38008	116	150753	Europe
Faeroe-Islands	49233	34658	28	778000	Europe
Iceland	345393	209191	229	1996384	Europe
Channel-Islands	176463	101717	228	1252808	Europe
Gibraltar	33704	20550	113	534283	Europe
Andorra	77463	48015	165	249838	Europe
Liechtenstein	38387	21446	94	112457	Europe
San-Marino	34085	24298	125	196855	Europe
Malta	444033	118815	839	2140075	Europe
Monaco	39783	16804	67	78646	Europe
Belarus	9432800	994037	7118	13646641	Europe

covid19.php 3. 2

COVID19 Information in Europe - Bar Chart



Covid19chart.php 3. 1

phpMyAdmin

Server: 127.0.0.1 » Database: covid2023 » Table: covidcases

Recent Favorites

Navigation: New, covid2023, New, covidcases, information_schema, mysql, performance_schema, phpmyadmin, soc2023it, test

Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.

Showing rows 0 - 24 (238 total, Query took 0.0015 seconds.)

SELECT * FROM `covidcases`

Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

1 > >> Show all Number of rows: 25 Filter rows: Search this table

+ Options

id	countryName	population	totalcases	deaths	tests	continent	date
NULL	Isle-of-Man	85732	38008	116	150753	Europe	2023-06-08
NULL	Lesotho	2175699	34790	723	431221	Africa	2023-06-08
NULL	Faeroe-Islands	49233	34658	28	778000	Europe	2023-06-08
NULL	Cayman-Islands	67277	31472	37	222773	North-America	2023-06-08
NULL	Congo	5797805	25375	386	347815	Africa	2023-06-08
NULL	Solomon-Islands	721159	24575	153	0	Oceania	2023-06-08
NULL	Nicaragua	6779100	18491	225	0	North-America	2023-06-08
NULL	South-Sudan	11618511	18368	138	410280	Africa	2023-06-08
NULL	Tajikistan	9957464	17786	125	0	Asia	2023-06-08
NULL	Dominica	72344	15760	74	229344	North-America	2023-06-08
NULL	Djibouti	1016097	15690	189	305941	Africa	2023-06-08
NULL	CAR	5016678	15368	113	81294	Africa	2023-06-08
NULL	Greenland	56973	11971	21	164926	North-America	2023-06-08
NULL	en	31154867	11945	2159	329592	Asia	2023-06-08

Console

Data Base 4. 1

04. Source Codes

- Rest. Php

```
•
• <!DOCTYPE html>
• <html>
•   <head>
•
•     <title>RestFull Web Service</title>
•     <meta charset="UTF-8">
•     <title>Asian Countries</title>
•     <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
•   </head>
•   <body>
•     <div id="main">
•       <div id="header" class="bg bg-dark text text-white"><center>Research and
Development Lab </center></div>
•       <div id="navigation" class="container-fluid" align="right" > <a class="li"
href="rest.php">Home</a>&nbsp; RestFull Web Service</div>
•       <div id="content">
•         <div class="container">
•           <div class="row">
•             <div class="col-md-3">&nbsp;</div>
•             <div class="col-md-6" >
•               <h5 class="ali">RestFull Web Services</h5>
•             <div class="card">
•
•               <div class="card-body">
•                 <a href="country.php" class="l1">Country Information (Asia)</a>
•                 <hr />
•                 <a href="cityinformation.php" class="l1">Search Cities</a>
•                 <hr />
•                 <a href="covid19.php" class="l1">COVID-19 Europe</a>
•                 <hr />
•                 <a href="covid19chart.php" class="l1">COVID-19 Europe - Chart</a>
•                 <hr />
•
•               </div>
•             </div>
•           </div>
•         </div>
•       </div>
•     </div>
•
•     <div class="col-md-3">&nbsp;</div>
```

```

•                                     </div>
•
•                                     </div>
•
•                                     </div>
•
•                                     </div>
•
•                                     </body>
•
•                                     </html>
•

```

- Country. Php

```
<?php
//set path
    $path="https://restcountries.com/v3.1/region/asia";
    $data = json_decode(file_get_contents($path),true);
    //var_dump($data);
?>
<!DOCTYPE html>
<html>
    <head>
        <title>Asian Countries</title>
        <meta charset="UTF-8">
        <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@5.0.2/dist/css/bootstrap.min.css" />
    </head>
    <body>
        <div id="main">
<div id="header" class="bg bg-dark text text-white"><center>Research and Development Lab
</center></div>
            <div id="navigation" class="container-fluid" align="right" > <a class="li"
href="rest.php">Home</a>&nbsp;<a href="rest.php"> RestFull Web Service</a></div>
        <div class="container">
            <h2 class="text-primary alert"><center>Asian Countries </center></h2>
            <table class="table table-striped">
                <tr>
                    <th> Flag </th>
                    <th> Country Name </th>
                    <th> Capital City </th>
                    <th> Region </th>
                    <th> Subregion </th>
                    <th> Currencies </th>
                    <th> Country Code</th>
                    <th>&nbsp;</th>
                </tr>
            </table>
        </div>
    </body>
</html>
```

```

</tr>
<?php foreach($data as $value){ ?>
    <tr>

        <td></td>
        <td><?php echo $value['name']['common']; ?></td>
        <td><?php
            if(empty($value['capital'][0])){
            }
            else echo $value['capital'][0];
        ?>
    </td>
    <td><?php echo $value['region']; ?></td>
    <td><?php echo $value['subregion']; ?></td>
    <td><?php
        $currency_array = $value['currencies'];
        foreach ($currency_array as $c){
            $currency=$c['name'];
            $symbol=$c['symbol'];
            print($currency . "(" . $symbol . ")");
            echo "<br>";
        }
    ?>
    </td>
    <td><?php echo $value['cca2']; ?></td>
    <td><a href="countrydetails.php?q=<?php echo $value['cca2'];?>">
    <button class="btn btn-success" type="button">View</button></a></td>
    </tr>
<?php }?>
</table>
</div>
</div>
</body>
</html>

```

- Countrydetails.php

```

• <?php
• //set path
• $c= $_GET['q'];
• $path="https://restcountries.com/v3.1/alpha/$c";
• $data = json_decode(file_get_contents($path),true);
• ?>
• <!DOCTYPE html>
• <html>
• <head>

```

```

• <meta charset="UTF-8">
• <title>Asian Countries</title>
• <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
• </head>
• <body>
• <div id="main">
• <div id="header" class="bg bg-dark text text-white"><center>Research and
Development Lab </center></div>
• <div id="navigation" class="container-fluid" align="right" > <a class="li"
href="rest.php">Home</a>&nbsp;
• <a href="rest.php"> RestFull Web Service</a></div>
• <h2><center><?php echo $data[0]['name']['common'];?></center></h2>
• <div>
• <div class="row">
• <div class="col-2">&nbsp;</div>
• <div class="col-8">
• <table class="table table-striped ">
• <tr>
• <td colspan="2" style="text-align:center">
• <img src = "<?php echo $data[0]['flags']['png'];?>" width="220"
height="160"/></td>
• </tr>
• <tr>
• <th class="col-2">Official Name</th>
• <th><?php echo $data[0]['name']['official'];?></th>
• </tr>
• <tr>
• <th>Capital</th>
• <th><?php echo $data [0]['capital'][0];?></th>
• </tr>
• <tr>
• <th>Code</th>
• <th><?php echo $data[0]['cca2'];?></th>
• </tr>
• <tr>
• <th>Currency</th>
• <th>
• <?php
• $currency_array = $data[0]['currencies'];
• foreach ($currency_array as $c){
• $currency=$c['name'];
• print($currency);
• echo "<br>";
• }
• ?>

```

```

•         </th>
•     </tr>
•     <tr>
•         <th>Subregion</th>
•         <th><?php echo $data[0]['subregion'];?></th>
•     </tr>
•     <tr>
•         <th>Continent</th>
•         <th><?php echo $data[0]['region'];?></th>
•     </tr>
•     <tr>
•         <th>Languages</th>
•         <th><?php if(isset($data[0]['borders'])){\
•             $borders=$data[0]['borders'];
•             echo join(",",$borders);
•         }else{\
•             echo "No Borders";
•         }
•         ?></th>
•     </tr>
•     <tr><th>Polpulation</th>
•         <th><?php echo $data[0]['population'];
•         ?></th>
•     </tr>
•     <tr><th>Area</th>
•         <th><?php echo number_format( $data[0]['area'])?></th>
•     </tr>
•     </div>
• </div>
• </div>
• </div>
• </table>
• </html>

```

- Cityinformation.php

```

<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8">
    <title>City Information</title>
    <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />

```

```

<script>
  function showCities(event, input) {
    if (event.keyCode === 13) {
      var searchTerm = input.value.trim();
      if (searchTerm === "") {
        document.getElementById("city-details").innerHTML = "";
        return;
      }

      const xhr = new XMLHttpRequest();
      xhr.onreadystatechange = function() {
        if (this.readyState === 4 && this.status === 200) {
          document.getElementById("city-details").innerHTML = this.responseText;
        }
      };
      xhr.open("GET", "getinformation.php?q=" + searchTerm, true);
      xhr.send();
    }
  }
</script>
</head>
<body>
<div id="main">
<div id="header" class="bg bg-dark text text-white"><center>Research and Development Lab
</center></div>
  <div id="navigation" class="container-fluid" align="right" > <a class="li"
href="rest.php">Home</a>&nbsp;<a href="rest.php"> RestFull Web Service</a></div>
  <div id="main">
    <div id="content">
      <div class="container">
        <div class="row">
          <div class="col-md-1">&nbsp;</div>
          <div class="col-md-10">
            <h5 class="text-center">City Information</h5>
            <div class="container">
              <h5 class="text text-primary">
                <div class="row">
                  <div class="col-md-4">Search Cities:</div>
                  <div class="col-md-8">
                    <input type="text" id="search" class="form-control" onkeyup="showCities(event, this)" />
                  </div>
                </div>
              </h5>
              <hr />
            <div id="city-details">Load Cities</div>
          </div>
        </div>
      </div>
    </div>
  </div>

```

```

</div>
</div>
<div class="col-md-1">&nbsp;</div>
</div>
</div>
</div>
</div>
</div>
</body>
</html>

```

- Getinformation.php

```

• <?php
• $c = $_GET['q'];
•
• $curl = curl_init();
•
• curl_setopt_array($curl, [
•     CURLOPT_URL => "https://city-and-state-search-api.p.rapidapi.com/search?q=$c",
•     CURLOPT_RETURNTRANSFER => true,
•     CURLOPT_ENCODING => "",
•     CURLOPT_MAXREDIRS => 10,
•     CURLOPT_TIMEOUT => 30,
•     CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
•     CURLOPT_CUSTOMREQUEST => "GET",
•     CURLOPT_HTTPHEADER => [
•         "X-RapidAPI-Host: city-and-state-search-api.p.rapidapi.com",
•         "X-RapidAPI-Key: 7d404d4562mshabcd2912a57ec7ap181217jsna0b7caaf1660"
•     ],
• ];
•
• $response = curl_exec($curl);
• $error = curl_error($curl);
•
• curl_close($curl);
•
• if ($error) {
•     echo "cURL Error #:" . $error;
• } else {
•     $c = json_decode($response, true);
• }
• ?>

```

```

•
• <html>
• <head>
•   <meta charset="UTF-8">
•   <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
•   <title>City Details</title>
• </head>
• <body>
•   <div class="container">
•     <h1>City Details</h1>
•     <table class = "table">
•       <thead>
•         <tr>
•           <th>ID</th>
•           <th>City Name</th>
•           <th>State Name</th>
•           <th>Country Name</th>
•           <th></th>
•         </tr>
•       </thead>
•       <tbody>
•         <?php foreach ($c as $v) { ?>
•           <tr>
•             <td><?php echo $v['id']; ?></td>
•             <td><?php echo $v['name']; ?></td>
•             <td>
•               <?php
•                 if (isset($v['state_name'])) {
•                   echo $v['state_name'];
•                 }
•                 else {
•                   echo 'No data available';
•                 }
•               ?>
•             </td>
•             <td>
•               <?php
•                 if (isset($v['country_name'])) {
•                   echo $v['country_name'];
•                 }
•                 else {
•                   echo 'No data available';
•                 }
•               ?>
•             </td>

```



```

</td>
<td><a href="citydetails.php?q=<?php echo $v['id'];?>"><?php echo 'City Details'></a></td>
type="button" class="btn btn-success">City Details</button>; ?></a></td>
</tr>
<?php } ?>
</tbody>
</table>
</div>
</body>
</html>

```

- Citydetails.php

```
<?php
$city = $_GET['q'];

$curl = curl_init();

curl_setopt_array($curl, [
    CURLOPT_URL => "https://city-and-state-search-api.p.rapidapi.com/cities/$city",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "GET",
    CURLOPT_HTTPHEADER => [
        "X-RapidAPI-Host: city-and-state-search-api.p.rapidapi.com",
        "X-RapidAPI-Key: 7d404d4562mshabcd2912a57ec7ap181217jsna0b7caaf1660"
    ],
]);

$response = curl_exec($curl);
$error = curl_error($curl);
```

```

curl_close($curl);

if ($error) {
    echo "cURL Error #:" . $error;
} else {
    $cityDetails = json_decode($response, true);
}

function displayData($label, $value)
{
    echo '<tr>
        <th>' . $label . ' :</th>
        <th>' . $value . ' </th>
    </tr>';
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
<title>City Details</title>
</head>
<body>
<div id="main">
<div id="header" class="bg bg-dark text text-white"><center>Research and Development Lab
</center></div>
    <div id="navigation" class="container-fluid align="right" > <a class="li" href="rest.php">Home</a>
    &nbsp;<a href="rest.php"> RestFull Web Service</a></div>
<h1><center>City Information</center></h1>
<div>
<div class="row">
<div class="col-2">&nbsp;</div>
<div class="col-8">
<div class="clearfix">&nbsp;</div>
<div class="container">

    <hr />
    <table class="table table-striped" >
    <?php
        $data = [
            ['City ID', $cityDetails['id']],
            ['City Name', $cityDetails['name']],

```

```

        ['State Name', $cityDetails['state_name'] ?? 'No data available'],
        ['Country Name', $cityDetails['country_name'] ?? 'No data available'],
    ];

    foreach ($data as $row) {
        displayData($row[0], $row[1]);
    }
?>

<tr>
<th>Country Flag:</th>
<th>
    <?php
        echo "<img src='https://flagcdn.com/w320/' . strtolower($cityDetails['country_code']) . '.png' alt='' .
$cityDetails['country_name'] . " Flag' width='100' height='50'>";
    ?>
</th>
</tr>
<tr>
<th colspan="2">
    <iframe
        width="100%"
        height="250"
        frameborder="1" style="border:1"
        referrerpolicy="no-referrer-when-downgrade"
        src="https://www.google.com/maps/embed/v1/place?key=AIzaSyDsHr7Ogo7rhF_qEIXLx4jiIuDz5z
zsOUQ&q=<?php echo urlencode($cityDetails['name'] . ', ' . $cityDetails['country_name']); ?>&zoom=12"
        llowfullscreen>
    </iframe>
</th>
</tr>
</table>
</div>
</div>
</div>
</div>
</div>
</body>
</html>

```

- Covid19.php

```

• <?php
•
• $curl = curl_init();

```

```

•
• curl_setopt_array($curl, [
•     CURLOPT_URL => "https://covid-193.p.rapidapi.com/statistics",
•     CURLOPT_RETURNTRANSFER => true,
•     CURLOPT_ENCODING => "",
•     CURLOPT_MAXREDIRS => 10,
•     CURLOPT_TIMEOUT => 30,
•     CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
•     CURLOPT_CUSTOMREQUEST => "GET",
•     CURLOPT_HTTPHEADER => [
•         "X-RapidAPI-Host: covid-193.p.rapidapi.com",
•         "X-RapidAPI-Key: 7d404d4562mshabcd2912a57ec7ap181217jsna0b7caaf1660"
•     ],
• ]);
•
• $response = curl_exec($curl);
• $error = curl_error($curl);
•
• curl_close($curl);
•
• if ($error) {
•     echo "cURL Error #:" . $error;
• } else {
•     $result = json_decode($response, true);
•     $c = $result['response'];
• }
•
• ?>
• <!DOCTYPE html>
• <html lang="en">
• <head>
•     <meta charset="UTF-8">
•     <meta http-equiv="X-UA-Compatible" content="IE=edge">
•     <meta name="viewport" content="width=device-width, initial-scale=1.0">
•     <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
•     <title>COVID19 Information in Europe</title>
• </head>
• <body>
•     <div id="header" class="bg bg-dark text text-white"><center>Research and Development Lab
•     </center></div>
•     <div id="navigation" class="container-fluid" align="right"> <a class="li"
• href="rest.php">Home</a> &nbsp; <a href="rest.php"> RestFull Web Service</a></div>
•     <div class="container">
•         <h1><center>COVID19 Information in Europe</center></h1>
•         <table class="table">

```

```

•      <tr>
•          <th>Country</th>
•          <th>Population</th>
•          <th>Total Covid Cases</th>
•          <th>Total Deaths</th>
•          <th>Tests</th>
•          <th>Continent</th>
•      </tr>
•      <?php foreach ($c as $v) {
•          if ($v['continent'] == "Europe") { ?>
•              <tr>
•                  <td><?php echo $v['country']; ?></td>
•                  <td><?php echo $v['population'] ? $v['population'] : '0'; ?></td>
•                  <td><?php echo $v['cases']['total'] ? $v['cases']['total'] : '0'; ?></td>
•                  <td><?php echo $v['deaths']['total'] ? $v['deaths']['total'] : '0'; ?></td>
•                  <td><?php echo $v['tests']['total'] ? $v['tests']['total'] : '0'; ?></td>
•                  <td><?php echo $v['continent']; ?></td>
•              </tr>
•          <?php }
•          } ?>
•      </table>
•  </div>
• </body>
• </html>

```

- Covid19chart.php

```

• <?php
•
• $curl = curl_init();
•
• curl_setopt_array($curl, [
•     CURLOPT_URL => "https://covid-193.p.rapidapi.com/statistics",
•     CURLOPT_RETURNTRANSFER => true,
•     CURLOPT_ENCODING => "",
•     CURLOPT_MAXREDIRS => 10,
•     CURLOPT_TIMEOUT => 30,
•     CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
•     CURLOPT_CUSTOMREQUEST => "GET",
•     CURLOPT_HTTPHEADER => [
•         "X-RapidAPI-Host: covid-193.p.rapidapi.com",
•         "X-RapidAPI-Key: 7d404d4562mshabcd2912a57ec7ap181217jsna0b7caaf1660"
•     ],
• ];
•
• $response = curl_exec($curl);

```

```

• $error = curl_error($curl);
•
• curl_close($curl);
•
• if ($error) {
•     echo "cURL Error #:" . $error;
• } else {
•     $data = json_decode($response, true);
•     $c = $data['response'];
• }
•
• ?>
•
• <!DOCTYPE html>
• <html lang="en">
• <head>
•     <link rel="stylesheet" href="bootstrap-5.0.2-dist/css/bootstrap.min.css" />
•     <script type="text/javascript" src="https://www.gstatic.com/charts/loader.js"></script>
•     <script type="text/javascript">
•
•         google.charts.load('current', {'packages':['corechart']});
•
•         google.charts.setOnLoadCallback(drawChart);
•
•         function drawChart() {
•
•             var dataTable = new google.visualization.DataTable();
•             dataTable.addColumn('string', 'Country');
•             dataTable.addColumn('number', 'Cases');
•
•             <?php
•             foreach ($c as $v) {
•                 if ($v['continent'] == 'Europe') {
•
•                     $countryName = $v['country'];
•                     $cases = $v['cases']['total'];
•
•                     echo "dataTable.addRow(['$countryName', $cases]);";
•                 }
•             }
•             ?>
•
•             var options = {
•                 'title': 'COVID-19 Cases in European Countries',

```

```

•         'width': 1000,
•         'height': 450
•     };
•
•
•
•
•     var chart = new google.visualization.BarChart(document.getElementById('chart_div'));
•     chart.draw(dataTable, options);
•     }
•     </script>
•     <title>COVID19 Information </title>
•     </head>
•     <body>
•     <div id="header" class="bg bg-dark text text-white"><center>Research and Development Lab
•     </center></div>
•     <div id="navigation" class="container-fluid" align="right" > <a class="li"
•     href="rest.php">Home</a> &nbsp; <a href="rest.php"> RestFull Web Service</a></div>
•     <div class="container">
•     <h1 style="black"><center>COVID19 Information in Europe - Bar Chart</center></h1>
•     <div id="chart_div"></div>
•     </div>
•     </body>
•     </html>

```

- Covid19save.php

```

<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "covid2023";
$conn = new mysqli($servername, $username, $password, $dbname);
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
$curl = curl_init();
curl_setopt_array($curl, [
    CURLOPT_URL => "https://covid-193.p.rapidapi.com/statistics",
    CURLOPT_RETURNTRANSFER => true,
    CURLOPT_ENCODING => "",
    CURLOPT_MAXREDIRS => 10,
    CURLOPT_TIMEOUT => 30,
    CURLOPT_HTTP_VERSION => CURL_HTTP_VERSION_1_1,
    CURLOPT_CUSTOMREQUEST => "GET",

```

```

CURLOPT_HTTPHEADER => [
    "X-RapidAPI-Host: covid-193.p.rapidapi.com",
    "X-RapidAPI-Key: 7d404d4562mshabcd2912a57ec7ap181217jsna0b7caaf1660"
],
]);
$response = curl_exec($curl);
$error = curl_error($curl);
curl_close($curl);
if ($error) {
    echo "cURL Error #:" . $error;
} else {
    $data = json_decode($response, true);
    $c = $data['response'];
}
foreach ($c as $v) {
    $countryName = $v['country'];
    $population = $v['population'];
    $totalcases = $v['cases']['total'];
    $deaths = $v['deaths']['total'];
    $tests = $v['tests']['total'];
    $continent = $v['continent'];
    $date = $v['day'];
    $sql = "INSERT INTO covidcases (countryName, population, totalcases, deaths, tests, continent, date)
        VALUES ('$countryName', '$population', '$totalcases', '$deaths', '$tests', '$continent', '$date')";
    if ($conn->query($sql) === TRUE) {
    } else {
        echo "Error: ";
    }
}
echo "Data Insertion successfully";
$conn->close();
?>

```