VILNIUS UNIVERSITY
ŠIAULIAI ACADEMY
BACHELOR PROGRAMME SOFTWARE ENGINEERING

Service-oriented Architecture
LW4 REST client

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Task:
Create an application/website/standalone program or other software that would USE some external webservice, eg.g. Yahoo API, Google Maps API etc... There are no limitations on programming language.

In this task, I used "Frankfurter API" to create the currency converter website on PHP. I used HTML and CSS for its interface design. In the interface, User needs to fill amount, and proper currency code. After pressing "Convert" button, this website provides the amount in converted currency.

Script:
script.php

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Currency Converter</title>
    <link rel="stylesheet" href="design.css">
</head>
<body>
    <div class="converter">
    <form method="post">
    <h1>Currency Converter</h1><br>
        Amount: <input type="number" name="amount" step="0.01" required><br>
        From (currency code): <input type="text" name="from" required><br>
        To (currency code): <input type="text" name="to" required><br>
        <button type="submit">Convert</button>
        </form>
        <br>
    <?php
    if ($_SERVER["REQUEST_METHOD"] == "POST") {
        $amount = $_POST['amount'];
        $from = strtoupper($_POST['from']);
        $to = strtoupper($_POST['to']);
        $url = "https://api.frankfurter.app/latest?amount=$amount&from=$from&to=$to";
        $response = file_get_contents($url);
        echo "<h1>Result: </h1><br>";
        if ($response === FALSE) {
            echo "<p>Error: Could not retrieve data.</p>";
        } else {
            $data = json_decode($response, true);
            if (isset($data['rates'][$to])) {
                $converted = $data['rates'][$to];
                echo "<p>$amount $from = $converted $to</p>";
            } else {
                echo "<p>Error: Invalid currency code or API issue.</p>";
            }
        }
    }
```

```
    ?>
     </div>
</body>
</html>
```

design.css

```
body {
    height: 100vh;
    display: flex;
    justify-content: center;
    align-items: center;
    margin: 0;
}
form {
    display: flex;
    flex-direction: column;
    gap: 5px;
    width: 100%;
    box-sizing: border-box;
    backdrop-filter: brightness(40%);
}
    h1{
        font-weight: normal;
        font-size: 24px;
        text-shadow: 0px 0px 2px rgba(0,0,0,0.5);
        margin-bottom: 0 auto;
    }
    label{
        color: rgba(255, 255, 255, 0.8);
    text-transform: uppercase;
    font-size: 10px;
    letter-spacing: 2px;
    padding-left: 10px;
    }
    input{
        background: rgba(255, 255, 255, 0.3);
        height: 40px;
        line-height: 40px;
        border-radius: 20px;
        padding: 0px 20px;
        border: none;
        margin-bottom: 20px;
        color: white;
    }
    button{
        background: rgb(45, 126, 231);
        height: 40px;
```

```
        line-height: 40px;
        border-radius: 40px;
        border: none;
        margin: 10px 0px;
        box-shadow: 0px 0px 5px rgba(0,0,0,0.3);
        color: white;
        font-size: 12px;
        text-transform: uppercase;
    }
    .converter {
        border: 1px solid black;
        width: 400px;
        min-height: 500px;
        color: rgb(255, 255, 255);
        border-radius: 20px;
        box-shadow: 0px 0px 20px rgba(0,0,0,0.75);
        background-size: cover;
        background-position: center;
        overflow: hidden;
        padding: 20px;
        background-color: rgb(4, 4, 4);
    }
```

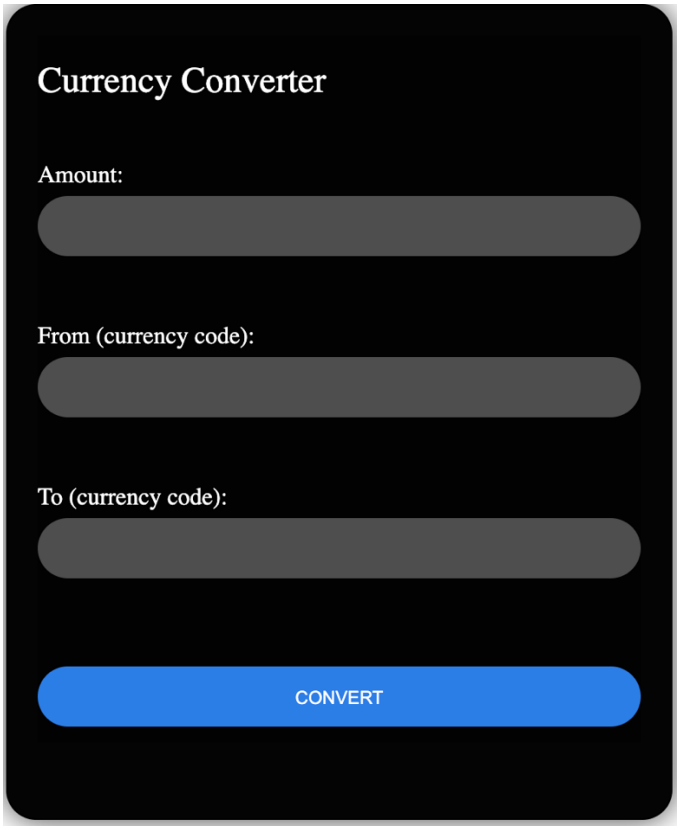

Figure1: Interface

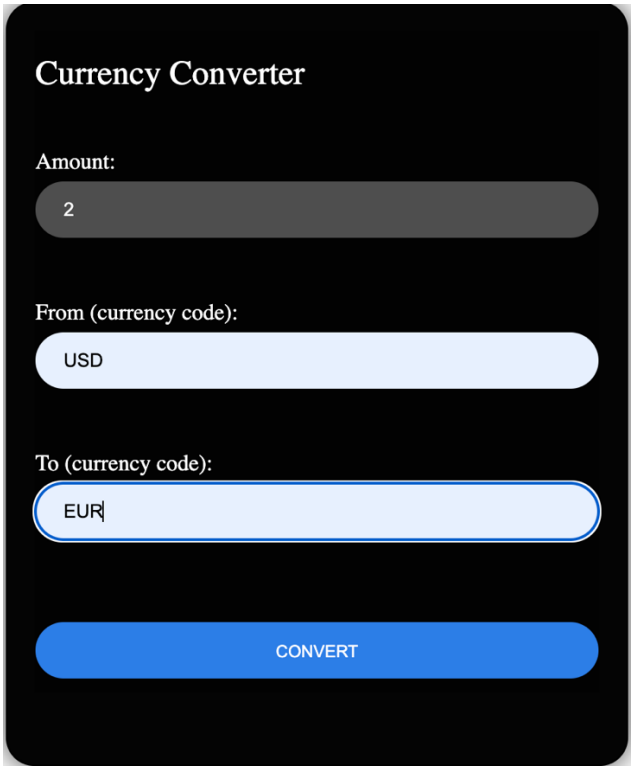

Figure2: The process of filling data

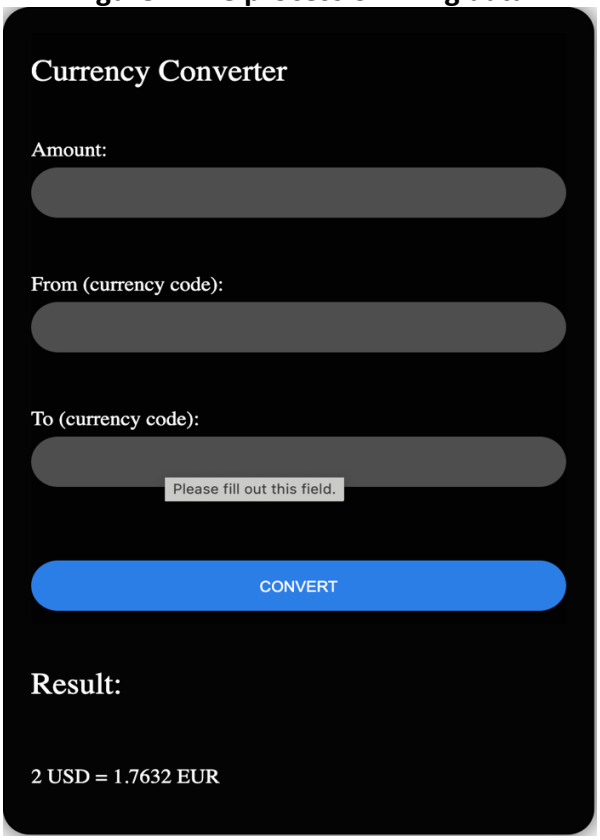

Figure3: After execution

Link: http://195.189.96.47/script.php