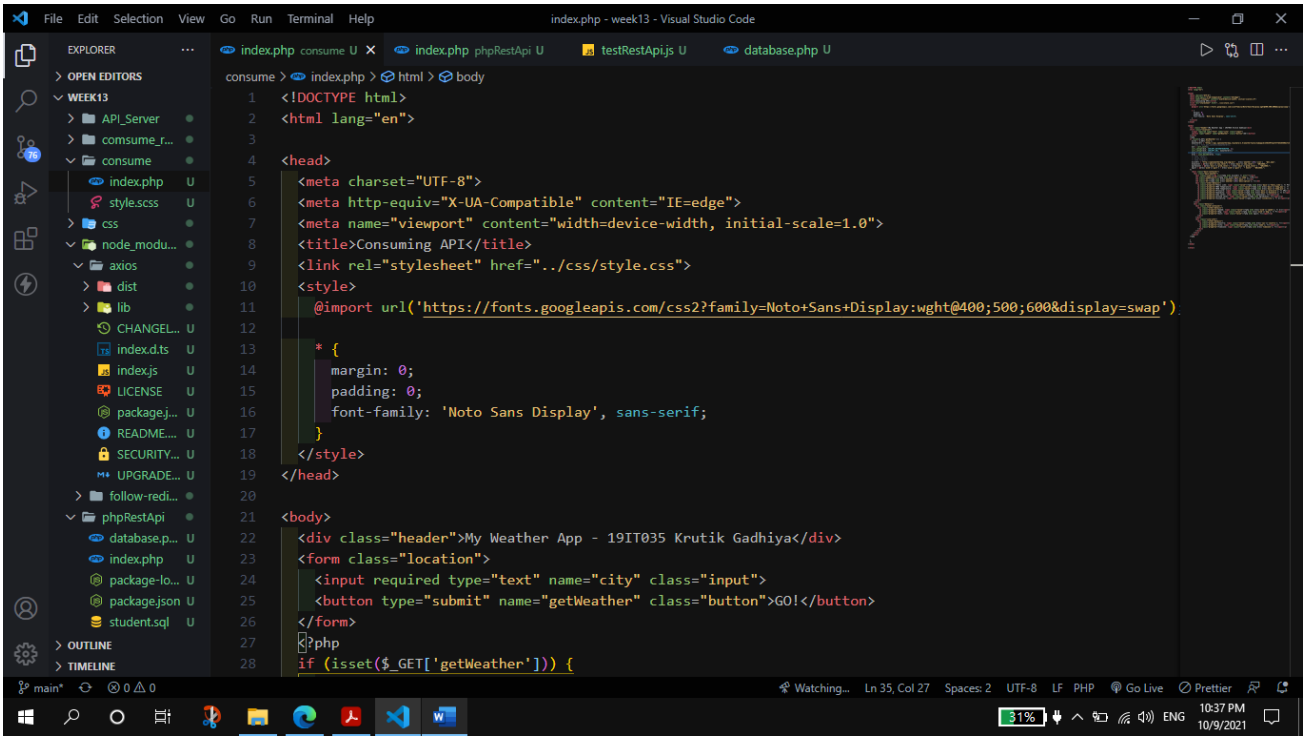
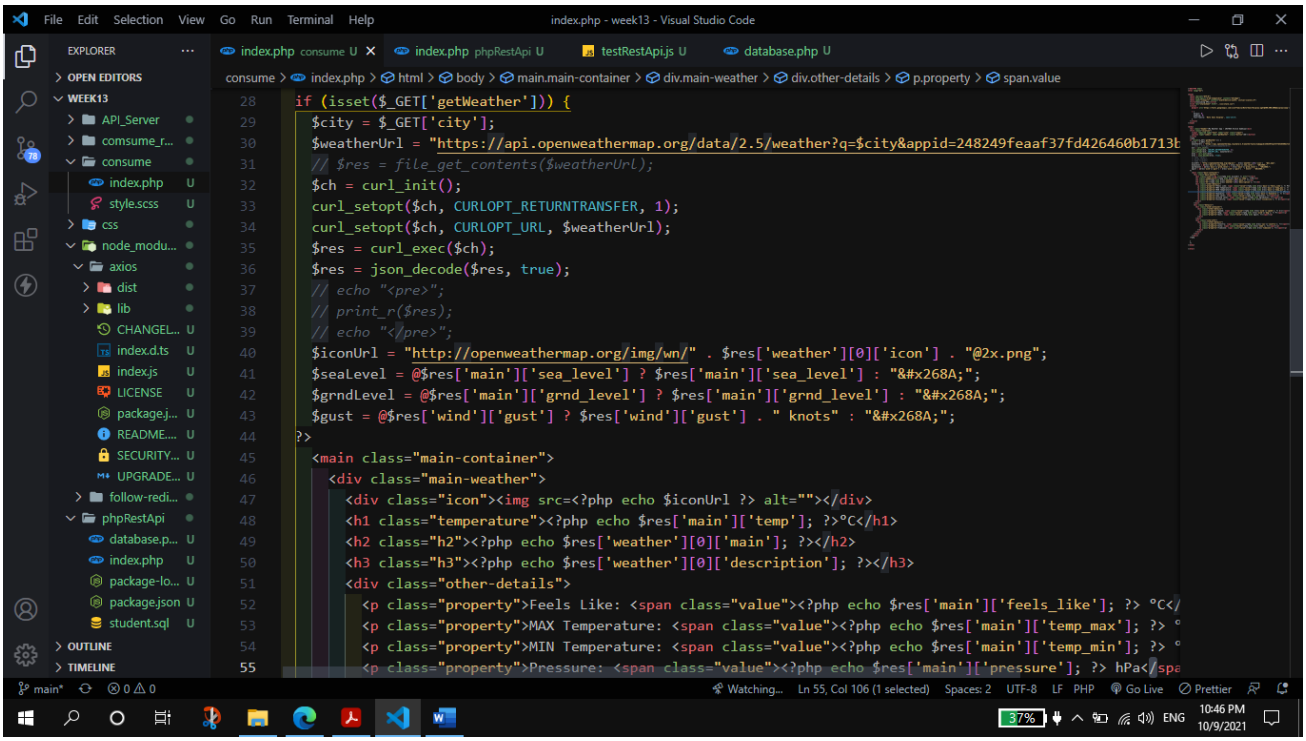
AWT Practical *Week - 13 Task*

Web Services Using PHP

1) Consume web-service(API) using php & display it on webpage from https://openweathermap.org/ or any other web-service.

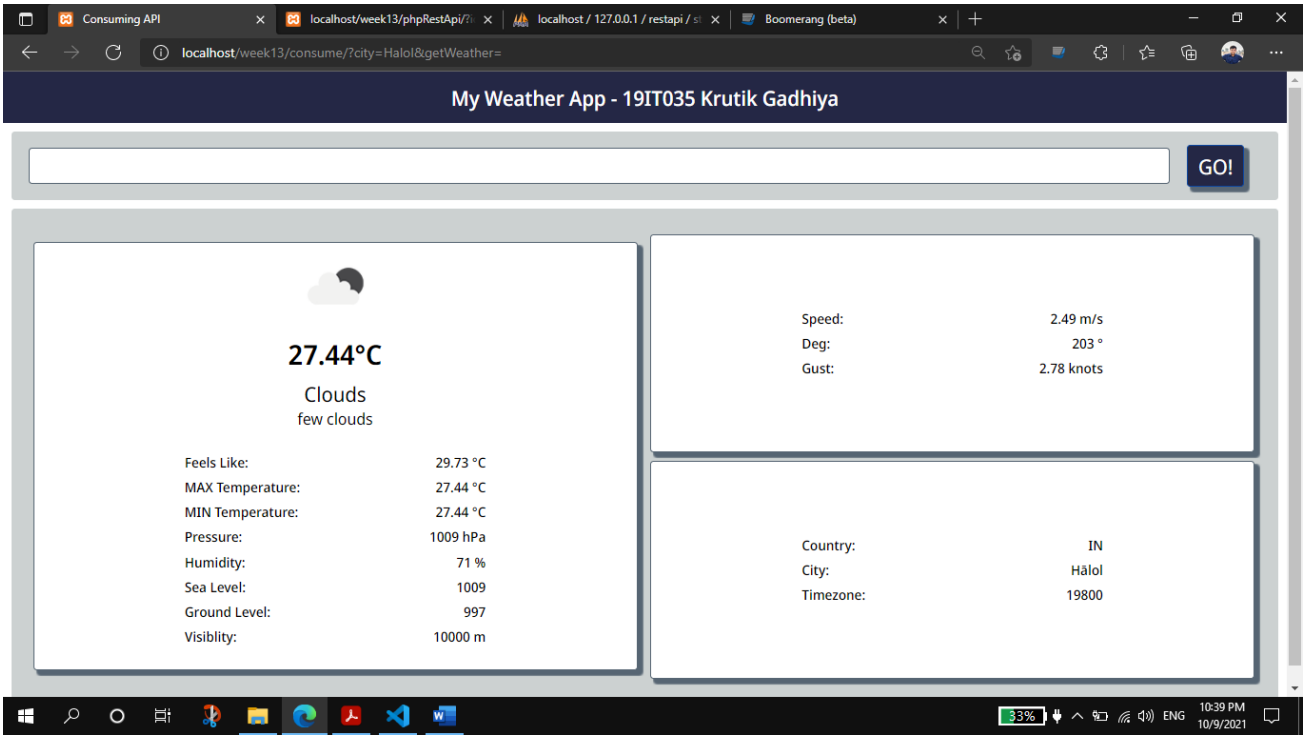
Code:





```
<p class="property">Feels Like: <span class="value"><?php echo $res['main']['feels_like']; ?> °C</span></p>
<p class="property">MAX Temperature: <span class="value"><?php echo $res['main']['temp_max']; ?> °C</span></p>
<p class="property">MIN Temperature: <span class="value"><?php echo $res['main']['temp_min']; ?> °C</span></p>
<p class="property">Pressure: <span class="value"><?php echo $res['main']['pressure']; ?> hPa</span></p>
<p class="property">Humidity: <span class="value"><?php echo $res['main']['humidity']; ?> %</span></p>
<p class="property">Sea Level: <span class="value"><?php echo $seaLevel; ?></span></p>
<p class="property">Ground Level: <span class="value"><?php echo $grndLevel; ?></span></p>
<p class="property">Visiblity: <span class="value"><?php echo $res['visibility']; ?> m</span></p>
</div>
</div>
<div class="details">
<div class="wind-container">
<div class="other-details">
<p class="property">Speed: <span class="value"><?php echo $res['wind']['speed']; ?> m/s</span></p>
<p class="property">Deg: <span class="value"><?php echo $res['wind']['deg']; ?> °</span></p>
<p class="property">Gust: <span class="value"><?php echo $gust; ?></span></p>
</div>
</div>
<div class="city-info">
<div class="other-details">
<p class="property">Country: <span class="value"><?php echo $res['sys']['country']; ?></span></p>
<p class="property">City: <span class="value"><?php echo $res['name']; ?></span></p>
<p class="property">Timezone: <span class="value"><?php echo $res['timezone']; ?></span></p>
</div>
</div>
</div>
</main>
<?php
```

Output:

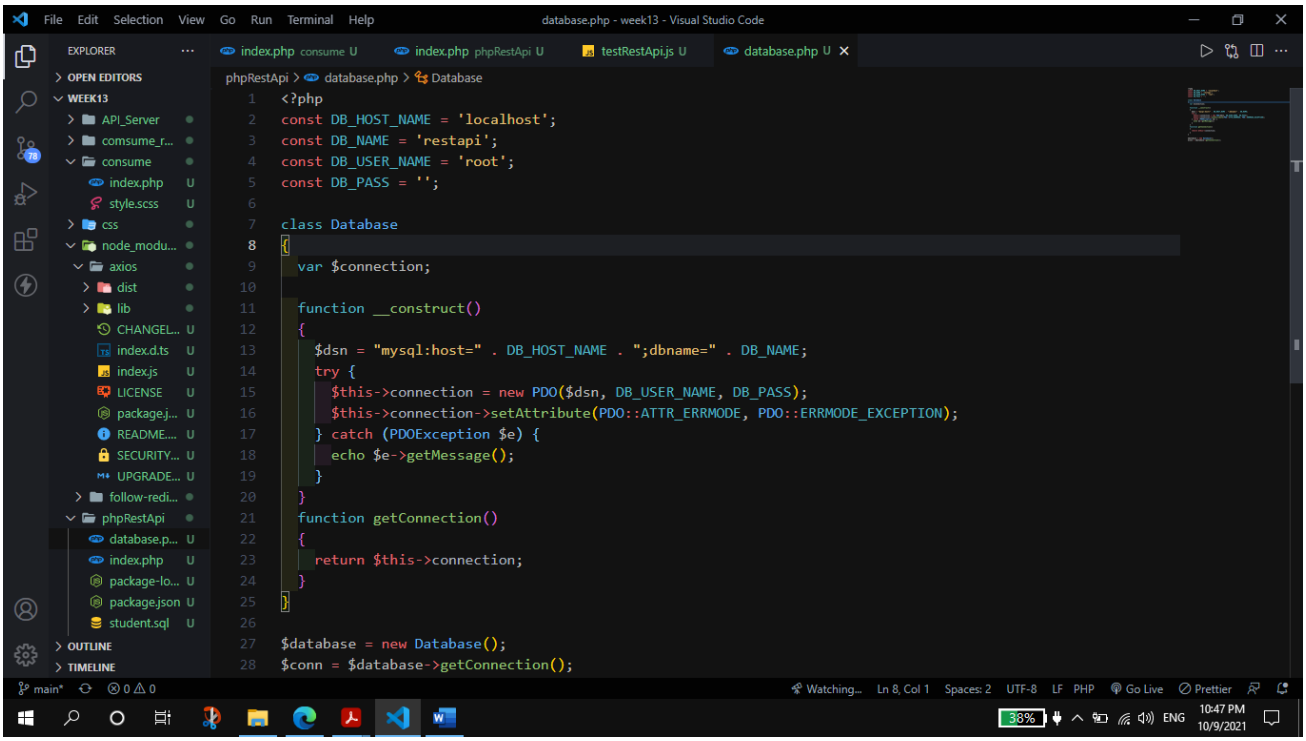


2) Create REST- API using PHP and Consume it in Python/Java/Nodejs.

a. API will receive Student Id using GET method and response with Student Details in JSON from Database.

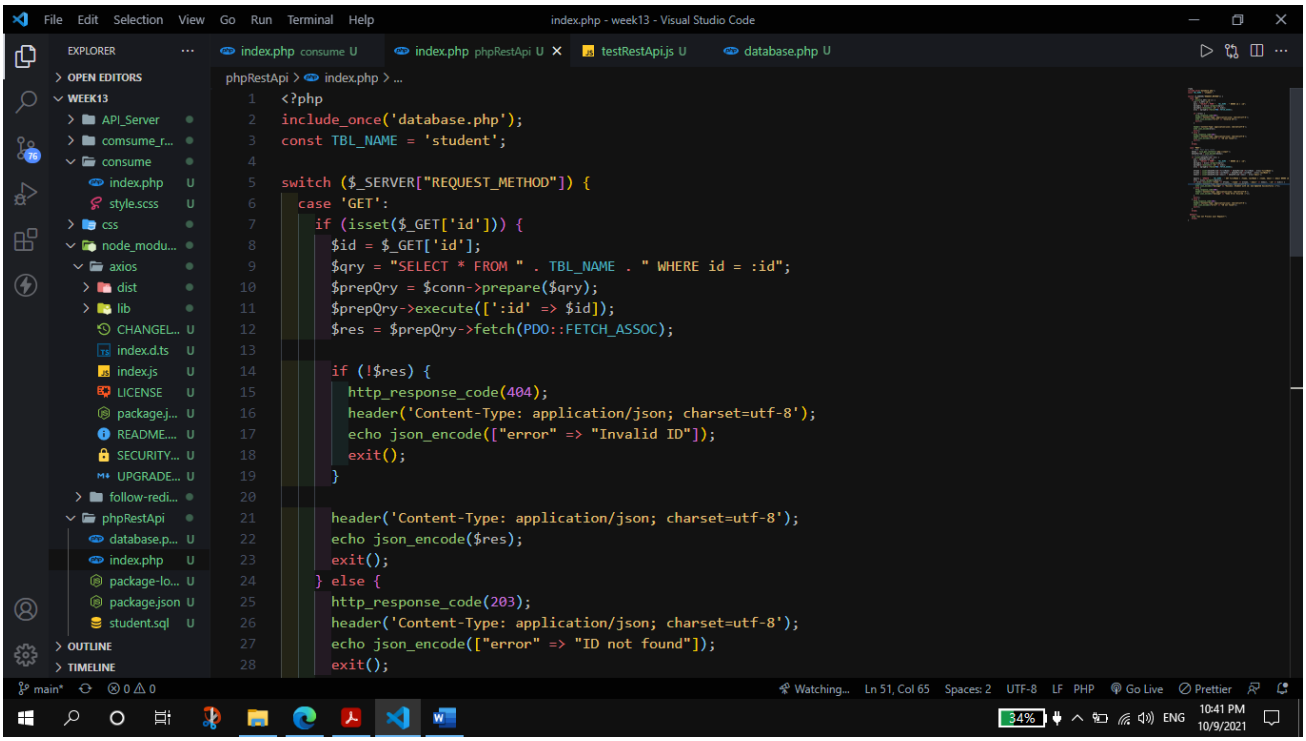
b. API will receive student data(json) to update student details in database using POST Method]

Code: **Database.php**

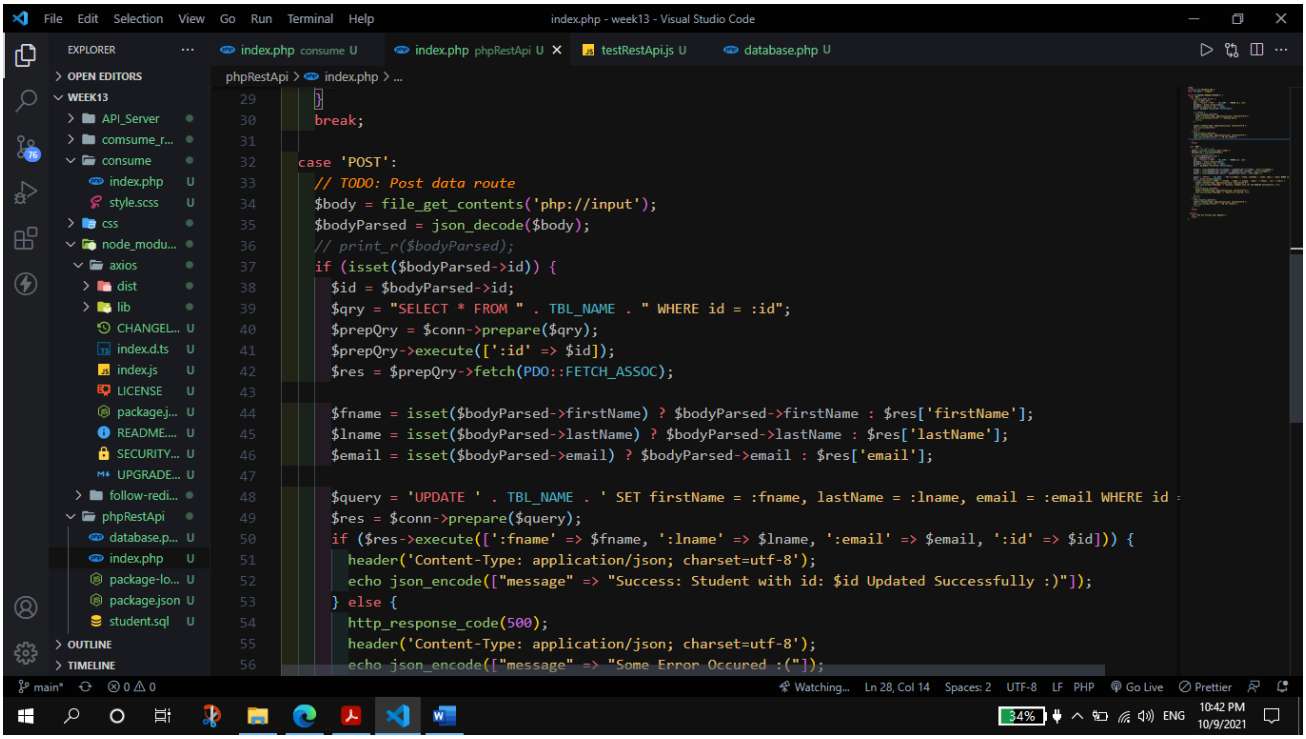


```php
<?php
const DB_HOST_NAME = 'localhost';
const DB_NAME = 'restapi';
const DB_USER_NAME = 'root';
const DB_PASS = '';

class Database
{
  var $connection;

  function __construct()
  {
    $dsn = "mysql:host=" . DB_HOST_NAME . ";dbname=" . DB_NAME;
    try {
      $this->connection = new PDO($dsn, DB_USER_NAME, DB_PASS);
      $this->connection->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
    } catch (PDOException $e) {
      echo $e->getMessage();
    }
  }
  function getConnection()
  {
    return $this->connection;
  }
}

$database = new Database();
$conn = $database->getConnection();
```

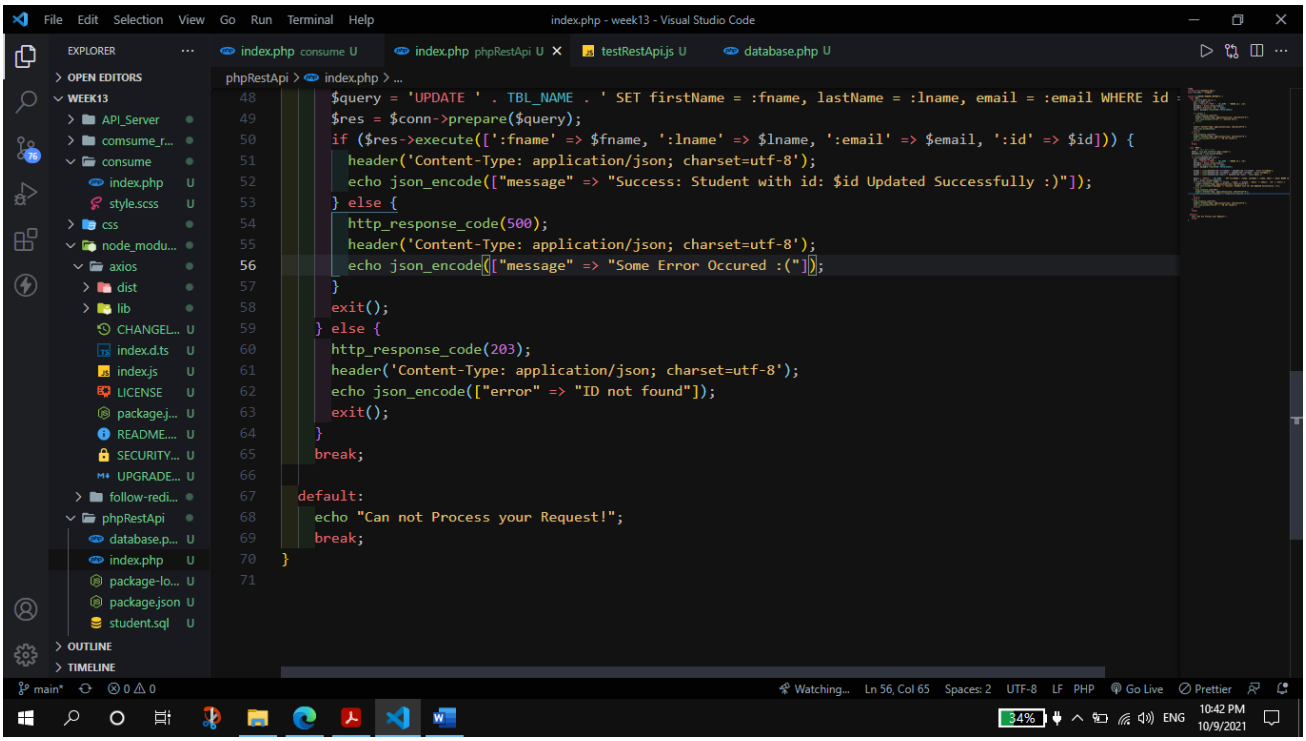
index.php (api)



```php
<?php
include_once('database.php');
const TBL_NAME = 'student';

switch ($_SERVER["REQUEST_METHOD"]) {
  case 'GET':
    if (isset($_GET['id'])) {
      $id = $_GET['id'];
      $qry = "SELECT * FROM " . TBL_NAME . " WHERE id = :id";
      $prepQry = $conn->prepare($qry);
      $prepQry->execute([':id' => $id]);
      $res = $prepQry->fetch(PDO::FETCH_ASSOC);

      if (!$res) {
        http_response_code(404);
        header('Content-Type: application/json; charset=utf-8');
        echo json_encode(["error" => "Invalid ID"]);
        exit();
      }

      header('Content-Type: application/json; charset=utf-8');
      echo json_encode($res);
      exit();
    } else {
      http_response_code(203);
      header('Content-Type: application/json; charset=utf-8');
      echo json_encode(["error" => "ID not found"]);
      exit();
```

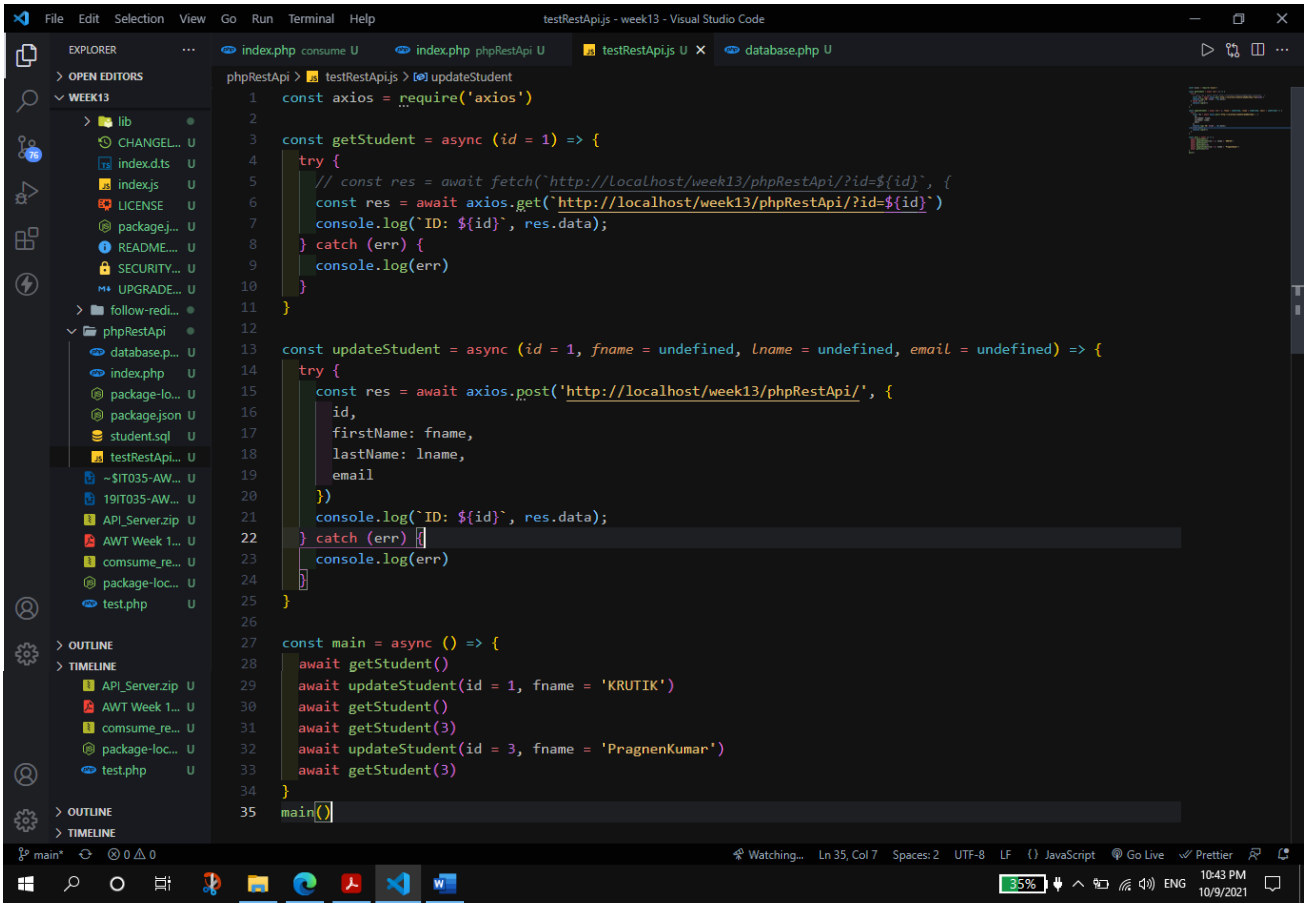


```php
    }
    break;

case 'POST':
    // TODO: Post data route
    $body = file_get_contents('php://input');
    $bodyParsed = json_decode($body);
    // print_r($bodyParsed);
    if (isset($bodyParsed->id)) {
        $id = $bodyParsed->id;
        $qry = "SELECT * FROM " . TBL_NAME . " WHERE id = :id";
        $prepQry = $conn->prepare($qry);
        $prepQry->execute([':id' => $id]);
        $res = $prepQry->fetch(PDO::FETCH_ASSOC);

        $fname = isset($bodyParsed->firstName) ? $bodyParsed->firstName : $res['firstName'];
        $lname = isset($bodyParsed->lastName) ? $bodyParsed->lastName : $res['lastName'];
        $email = isset($bodyParsed->email) ? $bodyParsed->email : $res['email'];

        $query = 'UPDATE ' . TBL_NAME . ' SET firstName = :fname, lastName = :lname, email = :email WHERE id =
        $res = $conn->prepare($query);
        if ($res->execute([':fname' => $fname, ':lname' => $lname, ':email' => $email, ':id' => $id])) {
            header('Content-Type: application/json; charset=utf-8');
            echo json_encode(["message" => "Success: Student with id: $id Updated Successfully :)"]);
        } else {
            http_response_code(500);
            header('Content-Type: application/json; charset=utf-8');
            echo json_encode(["message" => "Some Error Occured :("]);
```



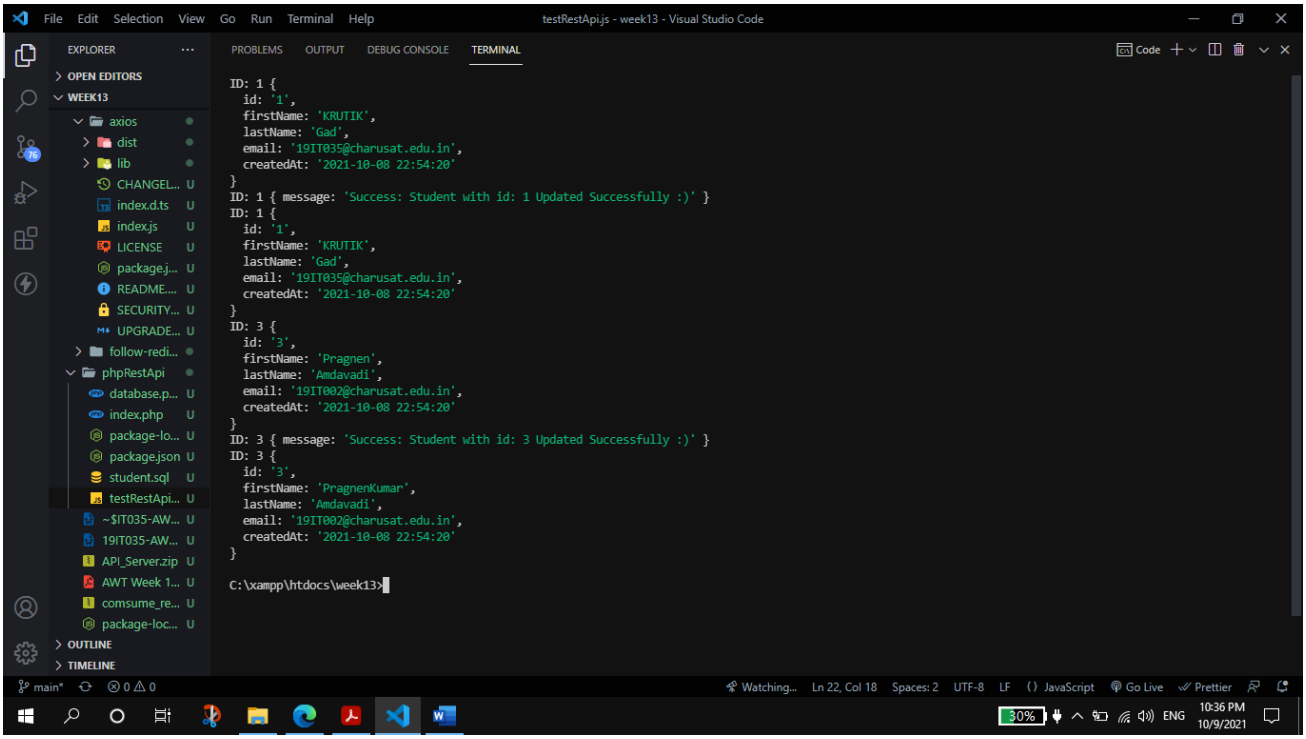
```php
        $query = 'UPDATE ' . TBL_NAME . ' SET firstName = :fname, lastName = :lname, email = :email WHERE id =
        $res = $conn->prepare($query);
        if ($res->execute([':fname' => $fname, ':lname' => $lname, ':email' => $email, ':id' => $id])) {
            header('Content-Type: application/json; charset=utf-8');
            echo json_encode(["message" => "Success: Student with id: $id Updated Successfully :)"]);
        } else {
            http_response_code(500);
            header('Content-Type: application/json; charset=utf-8');
            echo json_encode(["message" => "Some Error Occured :("]);
        }
        exit();
    } else {
        http_response_code(203);
        header('Content-Type: application/json; charset=utf-8');
        echo json_encode(["error" => "ID not found"]);
        exit();
    }
    break;

default:
    echo "Can not Process your Request!";
    break;
}
```

testRestApi.js



```
const axios = require('axios')

const getStudent = async (id = 1) => {
  try {
    // const res = await fetch(`http://localhost/week13/phpRestApi/?id=${id}`, {
    const res = await axios.get(`http://localhost/week13/phpRestApi/?id=${id}`)
    console.log(`ID: ${id}`, res.data);
  } catch (err) {
    console.log(err)
  }
}

const updateStudent = async (id = 1, fname = undefined, lname = undefined, email = undefined) => {
  try {
    const res = await axios.post('http://localhost/week13/phpRestApi/', {
      id,
      firstName: fname,
      lastName: lname,
      email
    })
    console.log(`ID: ${id}`, res.data);
  } catch (err) {
    console.log(err)
  }
}

const main = async () => {
  await getStudent()
  await updateStudent(id = 1, fname = 'KRUTIK')
  await getStudent()
  await getStudent(3)
  await updateStudent(id = 3, fname = 'PragnenKumar')
  await getStudent(3)
}
main()
```

Output:



```
ID: 1 {
  id: '1',
  firstName: 'KRUTIK',
  lastName: 'Gad',
  email: '19IT035@charusat.edu.in',
  createdAt: '2021-10-08 22:54:20'
}
ID: 1 { message: 'Success: Student with id: 1 Updated Successfully :)' }
ID: 1 {
  id: '1',
  firstName: 'KRUTIK',
  lastName: 'Gad',
  email: '19IT035@charusat.edu.in',
  createdAt: '2021-10-08 22:54:20'
}
ID: 3 {
  id: '3',
  firstName: 'Pragnen',
  lastName: 'Amdavadi',
  email: '19IT002@charusat.edu.in',
  createdAt: '2021-10-08 22:54:20'
}
ID: 3 { message: 'Success: Student with id: 3 Updated Successfully :)' }
ID: 3 {
  id: '3',
  firstName: 'PragnenKumar',
  lastName: 'Amdavadi',
  email: '19IT002@charusat.edu.in',
  createdAt: '2021-10-08 22:54:20'
}

C:\xampp\htdocs\week13>
```