



IT329

PHASE 5:

RESTful API

Supervised by Ghaida Alfayez

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Section : 56444

Group #42

WEB PROJECT PHASE 5 : RESTFUL API REPORT

1. GETSTUDENTS.PHP IS AN API.
2. ACCORDING TO THE JUSTIFICATION BELOW THE IPA ACHIEVED THE (CONSTRAINTS AND ELEMENTS) RESTFUL ARCHITECTURAL CRITERIAS SO THE API FOLLOW THE RESTFUL ARCHITECTURE

CONSTRAINTS OF RESTFUL ARCHITECTURE

CONSTRAINTS ACAVID !

CLIENT-SERVER SYSTEM	THE PAGE INTERFACE IS SEPARATED FROM THE DATABASE STORAGE	YES
STATELESSNESS	THE STATELESS OF THE WEB APPLICATION DOESN'T CONCEDED AS A PROBLEM IN OUR PAGE WHERE WE DON'T NEED THE SERVER TO REMEMBER ANY THING ABOUT THE CLIENT BECAUSE ALL INFORMATION THAT SERVER NEED TO PROCESS IS SEND BY GET IN URL	YES
CACHING	OUR PAGE HAS CACHING TO ,SAVE THE REOURCES SO THAT THE SERVER KEEPS A COPY IN THE CACHING FOR SPECIFIC PERIOD OF TIME .	YES
UNIFORMLY ACCESSIBLE	OUR PAGE URL HAS ONLY ONE URLBASE AND 0 TO MANY ENDPOINTS.	YES

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- ACCORDING TO THE TABLE OUR API ACHIEVED THE CONSTRAINTS OF RESTFUL ARCHITECTURE.
- AS LONG AS EVERY RE COURSE WE PROVIDE HAS ONE TO MANY UNIQUE URL FOR THIS UNIQUE RE COURSE AND OUR PAGE RETRIEVE THE INFORMATION FROM THE DATABASE AND REPRESENT THE DATA IN A CONSUMABLE WAY (AS XML) THEN OUR API ACHIEVED THE RESTFUL ARCHITECTURAL ELEMENTS CRITERIA .

3. TEST YOUR API USING POSTMAN AND SHOW SCREENSHOTS OF THE RESULTS.

The screenshot shows the Postman application interface. In the left sidebar, under 'History', there are three entries:

- GET http://g42.ksuit.org/getStudents.php?course=31
- GET http://g42.ksuit.org/getStudents.php?course=100
- GET http://g42.ksuit.org/getStudents.php?course=30

The main workspace shows an 'Untitled Request' with a GET method and the URL `http://g42.ksuit.org/getStudents.php?course=31`. The 'Params' tab is selected, showing a single parameter `course` with the value `31`. The 'Body' tab shows the XML response:

```
1 <?xml version="1.0" encoding="utf-8" ?>
2 <Course>
3   <Student>
4     <Name>dana</Name>
5     <Id>3</Id>
6   </Student>
7   <Student>
8     <Name>tasnim</Name>
9     <Id>6</Id>
10  </Student>
11 </Course>
```

The status bar at the bottom indicates `Status: 200 OK Time: 798 ms Size: 530 B`.

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The image displays two side-by-side screenshots of the Postman application interface, illustrating API requests for course IDs 100 and 30.

Top Screenshot (Unexisting course id):

- Request URL:** GET http://g42.ksuit.org/getStudents.php?course=100
- Query Params:** course (Value: 100)
- Response Body (Pretty):**

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <Course>
```

Bottom Screenshot (Existed course id):

- Request URL:** GET http://g42.ksuit.org/getStudents.php?course=30
- Query Params:** course (Value: 30)
- Response Body (Pretty):**

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <Course>
3   <Student>
4     <Name>ashwaq</Name>
5     <Id>2</Id>
6   </Student>
7   <Student>
8     <Name>tasnim</Name>
9     <Id>6</Id>
10  </Student>
11 </Course>
```

4. WRITE THE DOCUMENTATION OF YOUR API SO THAT IT IS USABLE BY 3RD PARTY DEVELOPERS.

DESCRIPTION :

THIS API GIVE YOU ACCESS TO THE LIST OF THE REGISTERED STUDENT IN SPECIFIC COURSE IN TAO FITNESS WEBSITE, WHERE YOU CAN RETURN THE LIST OF THE ENROLLED STUDENT (AS XML)IN THE COURSE THAT YOU WILL SEND IT'S ID IN THE GET METHOD .

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CATEGORY :

DATABASE

BASE URL:

HTTP://G42.KSUIT.ORG/GETSTUDENTS.PHP

METHOD:

GET

ENDPOINT:

GET: ?course={course_id}

PARAMETERS [REQUIRED]:

COURSE_ID: INT NUMBER THAT REPRESENT THE COURSE ID THAT YOU WANT TO RETRIEVE ITS STUDENT LIST .

RETURN TYPE:

XML

RESPONSE HEADERS

HTTP://G42.KSUIT.ORG/GETSTUDENTS.PHP?COURSE= {COURSE ID WE SEND}

CODE SNIPPETS:

```
<?php
header("Access-Control-Allow-Origin: *");
header("Access-Control-Allow-Headers: access");
header("Access-Control-Allow-Methods: GET");
header("Content-Type: application/xml; charset=UTF-8");
header('Cache-Control: public;max-age=84600');
require_once "config.php";
$id=isset($_GET['course'])?$_GET['course']:0;

$all_courses = "SELECT Student.id AS sid,Student.name AS name ...
FROM Enrolment,Student WHERE Enrolment.course_id='".$id."' AND Student.id=student_id";

$all_students = mysqli_query($link, $all_courses);
$xml='<?xml version="1.0" encoding="utf-8" ?>
<Course>';
if(($all_students != null)){
foreach ($all_students as $key => $Student) {
$xml.= '<Student>
<Name>' . $Student['name'] . '</Name>
<Id>' . $Student['sid'] . '</Id>
</Student>';

$xml.= '</Course>';
}
echo $xml;
```

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EXAMPLE RESPONSE BODY AND IT'S SCHEMA:

