



SERVICE-ORIENTED SOFTWARE ENGINEERING

Programs Directory PD

Composites Service

Team

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Abstract

For the final project, we will work on the web service project for Tawjihi students; we have many Universities in our country and any student's finished Tawjihi needs to know universities and Admission Requirements for academic programs in any university such as section and minimum Tawjihi average for admission for specific academic program.

Descriptions

In our project, we introduce a composite service follow this problem, the main idea to define new solution for students and to reduce time and effort for admission in any academic program in any university. our composite service follow the request from student to many services to get the final result, student use his Tawjihi seat number to request this service, first, we need to connect to the Ministry of Education to get information about the student, such as Tawjihi grades and the section based on seat number of student. Second, connect to each university and based on these information's from Ministry of Education to collect data about this student such as available academic programs accepted. Third, the result about academic programs accepted for the student displayed in readable form. Forth, The students can get other information about each accepted academic programs, such as how many students pay per credit hour for specific academic program, plan hours, admission period, and how to apply for any accepted academic program.

Motivations

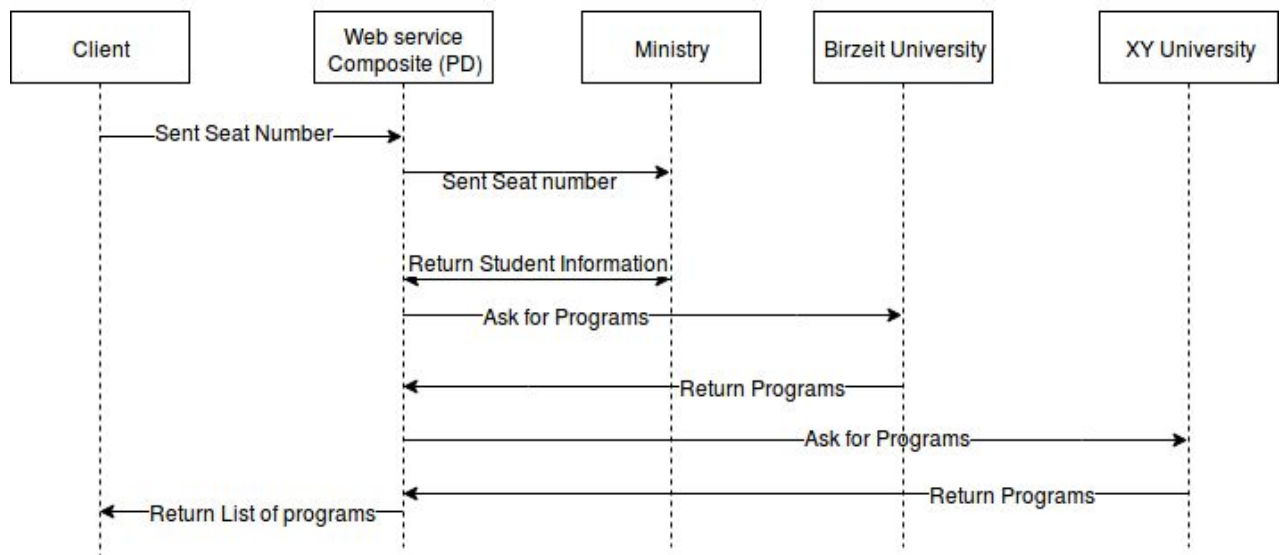
Our service provides the knowledge in all university programs suitable for the tawjihi students grade, rather than personally going to every university, this

service helps them save time and effort, also provides them the guidance when they pick the speciality that they like, so they could look for a brief summary describing it, which gives them the confidence in the university providing this service, as it shows a great care and concern of each student. On the other hand, this service lessen the pressure on the university faculty and attracts more students to the university.

Data Representation

- Programs Directory <--> Client: all request flow REST stander and JSON
- Programs Directory <--> Ministry, will flow SOP standards
- Programs Directory <--> Universitis, echo university have its own interface

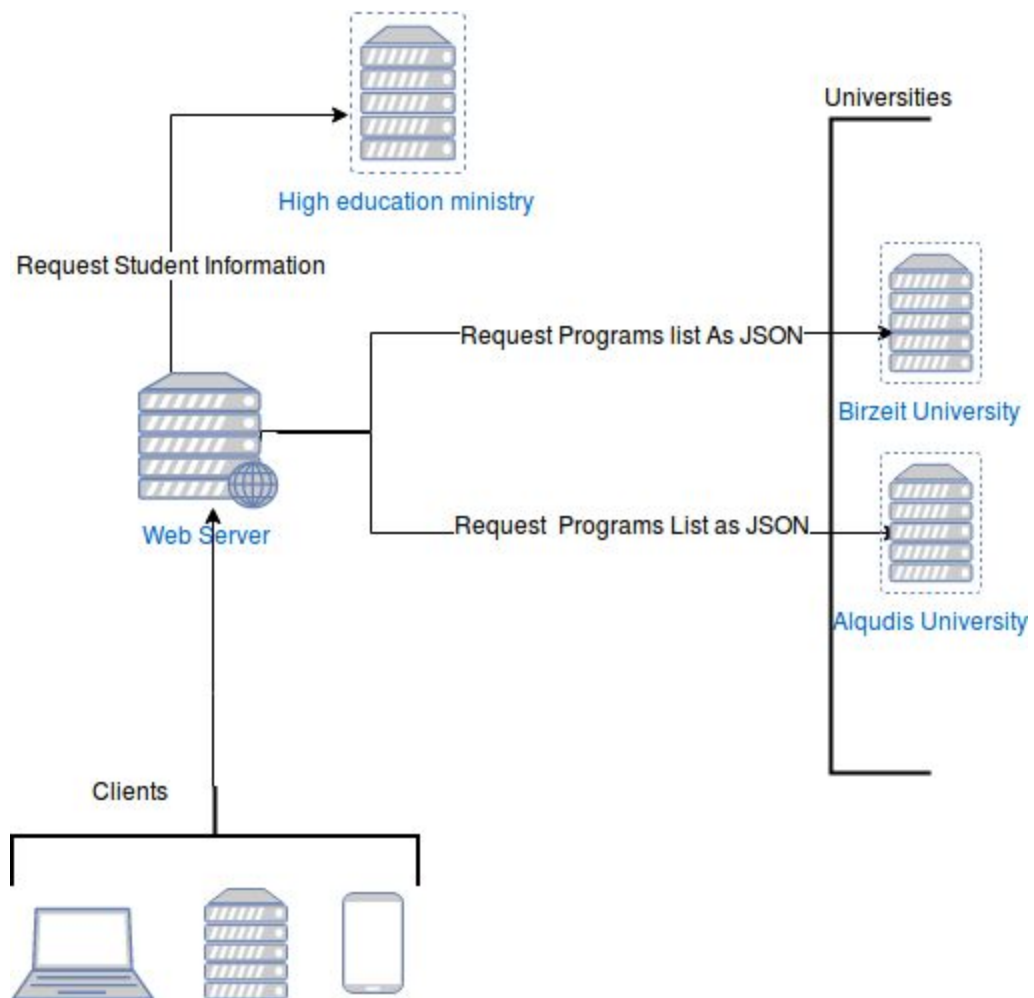
Sequence Diagram



Components

- **Client:** on our service its present any user using our service
- **Web Server:** Which the main component working as a aggregator.
- **Ministry service:** we are using Ministry to request about student informations. (Name, Grade, Branch)
- **Universities Service :** we are using student information to search for suitable programs

match students information (Grade, branch) cross all provided universities



API documentation

1. List of Programs

Returns json data about a Program's List.

- **URL** /Programs
- **Method:** GET
- **URL Params**
 - **min_grade** [Number] *// Tawjihi grade*
 - **type** [Bachelor | Master | Diploma]
 - **university** [BZU | PPU | NAU]
 - **seat_number** [number] *// Tawjihi seat number*
- **Success Response:**
 - **Code:** 200
 - **Content:** [{ "name": "Computer science",
"minGrade": 80,
"university": "BZU",
"description": "Good program",
"feed": "40 JOD"
}
{ "name": "Computer Engineering",
"minGrade": 83,
"university": "PPU",
"description": "Good program",
"feed": "45 JOD"
}]
- **Error Response:**
 - **Code:** 404 NOT FOUND
 - **Content:** { error : "Empty doesn't exist" }

2. List of Universities

Returns json data about a Program's List.

- **URL** /universities
- **Method:** GET
- **Success Response:**

- **Code:** 200
- **Content:** [{ "name": "Birzeit University",
"program count": 80,
"shot name": "BZU",
"description": "Good University",
}
{ "name": "Polytechnic University",
"program count": 50,
"shot name": "PPU",
"description": "Good University",
}
}]

- **Error Response:**

- **Code:** 404 NOT FOUND
- **Content:** { error : "Empty doesn't exist" }