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Spark Infinity

— 2022 —

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HUAWEI CLOUD
EVERYTHING AS A SERVICE

Project Name: Creating Certificate

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Overview

Project Overview

Project Name	Creating Certificate
Name	Hatice Dikmen
Technical Field	*PaaS, OBS, API, Function Graph*
Technologies	Python, Google Sheets, Huawei Cloud
Keywords	Certification, Cloud, Data, Education
Applicable Fields	All institutions and organizations issuing certificates
Description	*A certificate generation project will be designed using Huawei Cloud services. New certificates will be obtained by printing the name-surname data stored in Google Sheets to the blank certificate. This will be done by creating a button in Google Sheets, the API Gateway address will be given to the button to establish a connection, each time the button is clicked, the API will go to the empty image file in OBS and print the name it pulls from the table to the image file with the code in the function graph, then store these certificates in a different OBS address.*

Contents

Person Introduction

I am a 4th year Computer Engineering student, interested in cloud technologies and trying to develop myself as a Cloud Engineer.

I am also the training coordinator of the AWS Cloud Bootcamp program at Miuul&Veri Bilimi Okulu. I provide technical support to the participants in AWS Cloud. I create content by writing about Cloud Technologies for Miuul notebook.

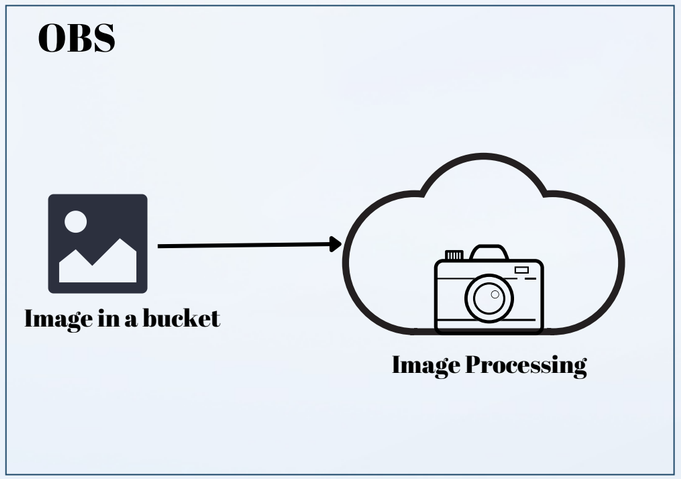
Project Introduction

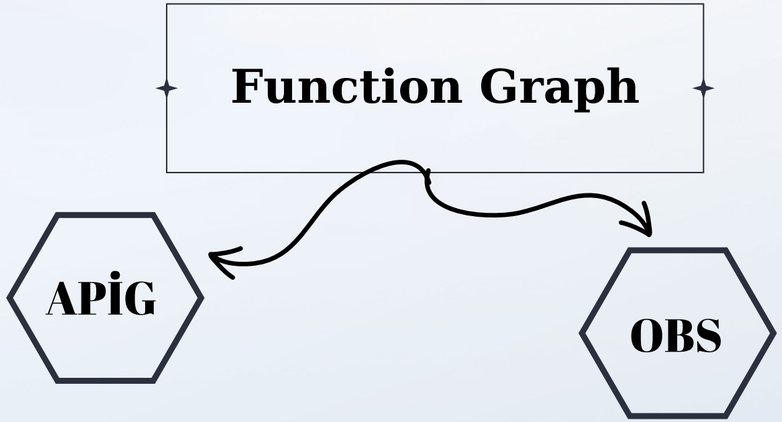
- With the Python pillow library, image processing was performed by taking the coordinates of a specific point on the image.
- The image used in the project was stored in the certificate-input bucket in the Object Storege Service. Another bucket, certificate-output, was created to store the image after processing.
- The function created in the Function Graph service was given one API Gateway output and one OBS output to store images in buckets. Image processing codes were integrated into the Function Graph service.
- A button was created in Google Sheets and the Function Graph service was triggered by integrating the API address into the function of the created button.
- Thus, when each button is clicked, the names in the table will be printed to the certificate in the input bucket on OBS and saved to the output bucket.

Technical Architecture

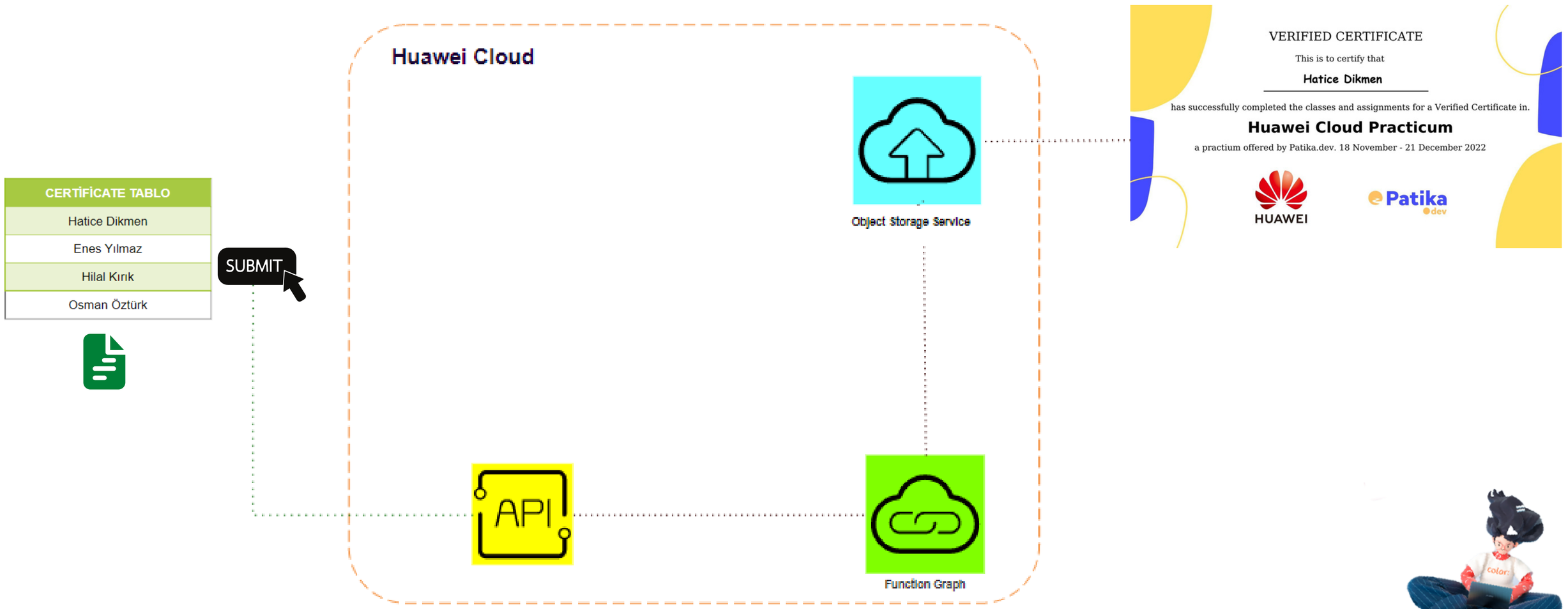
Used Huawei Cloud Services:

Function Graph: Function Graph transforms data and stores the transformed data in OBS and calls a function that writes the captured data to the image.
Object Storage Service: Image files are stored.
API Gatewey: The API Gateway represents incoming records and passes raw data records directly to the Function Graph.
Data Encryption Workshop: Thanks to this service, I generated keys for Function Graph.





Technical Architecture

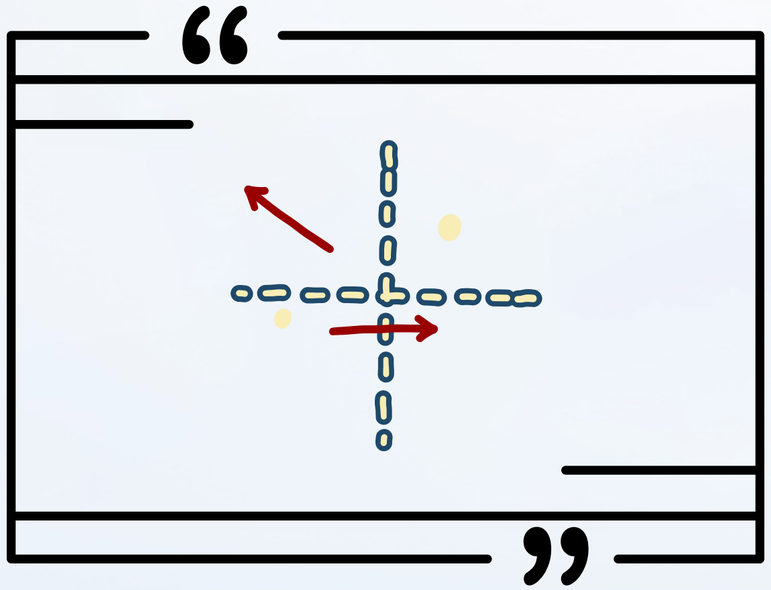


Functions

The data of 121 people in the Patika Cohorts were entered into the Google Sheets table and the function was written by creating a button.

	A	B	C	D	E
1	Name				
2	Hatice Dikmen				
3	Tarık Ulaş Taylan				
4	Fatih Kartal				
5	Canberk Yıldırım				
6	Yakup Kaya				
7	İrem Yağmur Simitci				
8	Büşra Büşra				
9	Burak Ekemen				
10	Furkan Sale				
11	Özge Açık				
12	Mehmet Kerem Kaya				
13	M.beytullah Genç				
14	Hümeyra Köseoğlu				
15	Arda Can Kisakurek				
16	Aslı Türkoğlu				
17	Emrullah Can				
18	Işılay Kombak				
19	Beytullah Baş				
20	Hakan Duyar				
21	Merve Baçan				
22	Enes Uysal				

SUBMIT

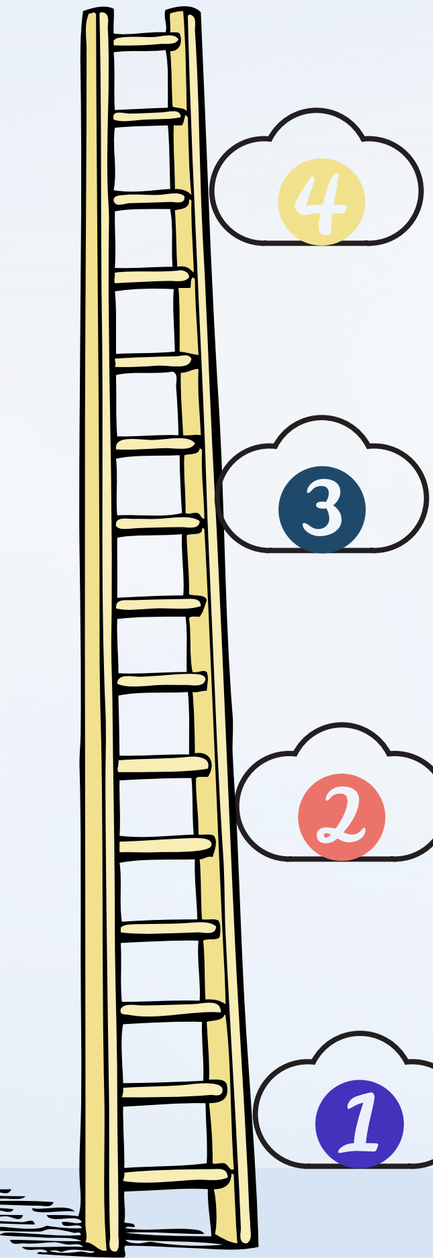


To do image processing, the pillow library was used to divide the image into x and y coordinates, and then the name taken from the table was printed on the coordinated point.

Business Value

- The target audience for this project is all institutions providing education.
- This project can be marketed to startup companies, government agencies or major organizations.
- All organizations, with or without a touch of technology, provide training and most of them offer a certificate after the training. Creating these certificates in the Cloud environment will eliminate a huge workload.
- Certificates are also given in most of the online and face-to-face events. Since time is very valuable for such events, time will be saved with certificates created using cloud technologies.
- This project may not only be considered as a certificate. For example, we can easily create University, High School diplomas in the same way.

Project Planning



4. By typing the codes for the button in the Google Sheets table, I got the project back on its feet by connecting it with the API.

3. By running codes with Function Graph, OBS and APIG trigger were created.

2. OBS was used to store the images.

1. Operations were performed on the image with Python.

Achievements

The steps were carried out by designing a certificate instance for Huawei Practium. As a result of the steps, the first image file and the second image file are as shown.

Startup screen

Result screen

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THANK YOU!