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Cloud-Services

Kwetter-case

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CONTENTS

CH1. INTRODUCTION

In this document I will explore what Cloud services are and I will try and setup a Cloud-service for myself.

CH2. WHAT IS CLOUD COMPUTING/SERVICES?

The cloud now handles storage, application deployment, computer services, and much more. These functions are delivered using cloud computing in a scalable and flexible manner. The most significant benefit of Cloud computing is that users do not have to manage system resources. The computer decides how much money should be spent on a specific task.

On-site data centers are no longer necessary thanks to cloud computing. Companies don't have to pay for gear or software to set up these centers, therefore they save money. They also don't necessitate the use of IT professionals to keep these servers in good working order.

It also has the capability of allowing for variable scale adjustments. It considers how many resources are required and modifies both the quantity and cost of IT resources given. The user does not need to consider the system's capacity as long as it is configured correctly. Storage capacity, computer power, bandwidth, and other scalable resources are examples.

Cloud computing comes in a variety of types. SaaS, FaaS, PaaS, and IaaS are the four categories. SaaS is an acronym for software as a service. Because it provides software as a service, it is considered the application layer of Cloud computing. PaaS is an acronym for Platform as a Service. It guides users through the process of publishing software in a hosted environment. IaaS is an acronym for Infrastructure as a Service. It uses virtualization to give customers with IT hardware and software, among other things. FaaS is an acronym for function as a service. Like the name says, it provides a simple function that can be used as a service.

CH3. FAAS IMPLEMENTATION

3.1 LOCAL IMPLEMENTATION

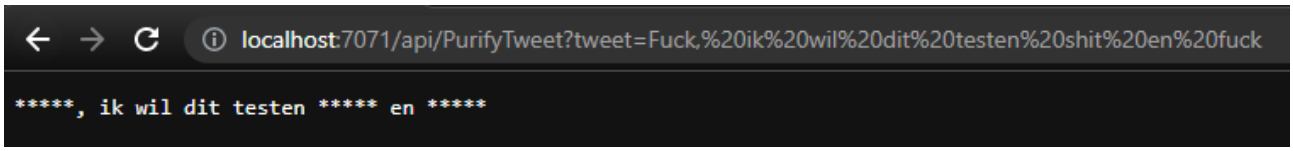
As stated in the PDR, I actually wanted to deploy my complete project in Google Cloud. Unfortanetely I could not make that happen and decided to add a simple Function as a Service to my project. This function will be used to purify tweets from swear words or hate speech. For this I will be using Azure-functions (have azure credits) with C#.

The first thing to add is a new Azure Function project in C#. For this function I will be using Http-Trigger. A standard function will be written and I changed it to the following to make sure the

tweets are purified.

```
0 references
public static class PurifyTweet
{
    [FunctionName("PurifyTweet")]
    0 references
    public static async Task<IActionResult> Run(
        [HttpTrigger(AuthorizationLevel.Function, "get", "post", Route = null)] HttpRequest req,
        ILogger log)
    {
        log.LogInformation("Purifying tweet of swear words");

        string description = req.Query["tweet"];

        string requestBody = await new StreamReader(req.Body).ReadToEndAsync();
        dynamic data = JsonConvert.DeserializeObject(requestBody);


        description ??= data?.Description;

        string cleandString = FilterTweet(description);


        return new OkObjectResult(cleandString);
    }

    1 reference
    private static List<string> FilteredWords()
    {
        List<string> Filter = new List<string>();
        Filter.Add("fuck");
        Filter.Add("shit");
        // Add more here!
        return Filter;
    }

    1 reference
    private static string FilterTweet(string input)
    {
        foreach (string fWord in FilteredWords())
        {
            //  Replace the word with *'s (but keep it the same length)
            string strReplace = "";
            for (int i = 0; i <= fWord.Length; i++)
            {
                strReplace += "*";
            }
            input = Regex.Replace(input.ToString(), fWord, strReplace, RegexOptions.IgnoreCase);
        }
        return input.ToString();
    }
}
```

This code will take the tweet and replace the words ‘fuck’ and ‘shit’ with * signs. To make sure everything runs fine locally I tested multiple times and the result is as in the image below.



3.2 AZURE IMPLEMENTATION

Adding the function in Azure was actually quite simple, as they should be. The documentation of Microsoft was on point and helped me out a lot with setting up the Azure function. I wont be explaining the steps here as it would just be copy and paste. But the results are there.