TEC | Tecnológico de Costa Rica

Instituto Tecnológico de Costa Rica

Computer Engineering School

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Course: Bases de datos

Group 1

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Proyecto II - StraviaTEC

Financial Report

II Semester, 2023

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Introduction

As former engineers is very important to be able to accurately calculate costs and take well-based decisions. This said, in the present document is presented a technical and financial analysis about the monthly cost of a paid deployment of StraviaTEC and also the costs of the project development itself.

Furthermore, there are shown the implementation of the strategies and implemented to achieve the project requirements.

Financial analysis

The presented financial analysis was made taking measures based and focused in two main resources: money and time. The amount of money referred in this analysis refers to the monthly cost of maintaining and hosting the StraviaTEC project, and the time refers to the amount of hours used to develop the entire project and the estimated hours expected to spend maintaining the project monthly.

Project Development estimation:

To get a time estimated about development of the entire project, it was ordered by in 4 parts:

- FrontEnd
- BackEnd
- Mobile App
- External documentation

Using the mentioned categories, and considering the development hours registered in commits and in the activity logs, it was calculated an approximately total of 30 hours. So it required at least 300 hours of pure work, which in this case was covered the 300 hours on a lapse of a month and a week to achieve this. And the estimated time to spend monthly to maintain the application was estimated in a maximum of only 10 hours due to the completion of the project to the deployment date.

Project Estimated Cost

All the development tools used in the project were free, except of course for the hosting in Azzure. However, you get $200 worth of credits for free when you create the your Azzure account and considering that the current cost of the hosting is $4 per month and the predicted maximum usage would be $7, it allows to host the application for free for theoretically like a half of a year, but even if it is pay we paid it would cost an amount of $7 to host the entire applications. You can see the costs and estimation made by Azzure iself.

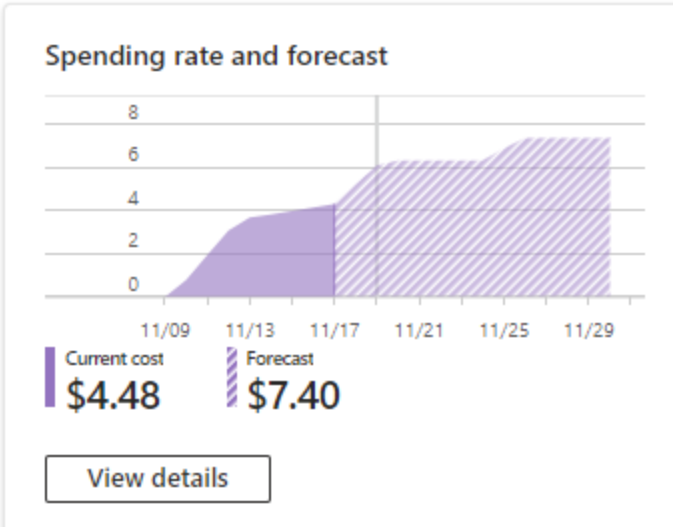

Figure 1. Current and predicted hosting cost

Project support

The project would have an estimated of a maximum total of 10 work hours per month in maintenance thanks to the project's current competition level and functionality.

Continuous Learning

For this section are listed three aspects of the students at the beginning and end of the project:

Current knowledge by the start of the Project:

By the beginning of the project the students already possesess the following knowledge in certain technologies listed bellow:

- Angular: intermediate level of experience in Angular and several of its free frameworks/libraries like Angular Material and Bootstrap
- ASP.NET CORE: intermediate level of knowledge developing and deploying API's from ASP.NET CORE and entity framework
- MongoDB: intermediate experience using MongoDB for and API
- SQL Server: beginner/intermediate level of experience with SQL Server, stored procedures, views, triggers and transactions.

Required knowledges competition for the project:

- Angular dashboard and maps-Angular API to manage GPS and .gpx files
- Azzure deployment knowledge to deploy Database, API and web page globally
- Android maps API knowledge to learn to generate .gpx files

Strategy to get the needed knowledges for the project:

- Research from through reliable methods and resourses
- Take advantage of the resources provided by the professor and its consult schedule

Know there are going to be listed the sabe aspects but at the end of the project:

Current knowledges by the end of the project:

- Angular: there was a considerable improvement on angular knowledge and known frameworks such as new frameworks like NgPrime and the Maps API.
- ASP.NET CORE: ADO.NET and Dapper methodologies to manage database requests and global deploys.
- Android maps API in order to be able to generate routes
- Azzure global deployments management

Required knowledges competition for the project:

At this point the students already possess all the required knowledges for the competition of the project

Strategy to get the needed knowledges for the project:

At this point at the end of the project, the students don’t require any other knowledges for the project. They already got all the needed knowledge in the respective technologies.