

**ÇANKAYA UNIVERSITY FACULTY OF ENGINEERING**

**COMPUTER ENGINEERING DEPARTMENT**

**CENG 407**

**Innovative System Design and Development I**

**BOOTSTRAP BASED THEME MODIFICATION AND CREATING SAMPLE ADMIN PAGE**

**LITERATURE REVIEW**

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# Abstract

In this project Virtual Machine will be controlled and visualization of the machine data will be carried out. Windows operating system will be used to take out the virtual machines data. The data will be taken from virtual machine. Virtual machines data samples can be processor spending, ram spending, how many user are available in the operating system, what are the IP addresses of the users, how many hours has it been open..etc. Data will be visualized by using website. In this website authentication will be carried out. If enough time is available in the project plan, Stationary virtual machine can be started by using a website by sending a message or command to the server. **PHP** or **Python** programming languages will be worked in the project implementation. Moreover, **Bootstrap** framework can be used to implementation.

# Introduction

## Background Definition of Terms

As technology improved, the management of businesses also changed and improved. We are now able to manage a large part of the work from the phone and the computer. We can keep more data for the company and use this data as well.

## Context

Companies use virtual machines to save energy [1]. Managers use admin panels developed for their own companies. The Admin Panel (or admin panel for short) is the primary tool for working with the online company [2]. Admin panels are prepared, implemented and used with the Bootstrap framework [3]. Ready-made admin panel templates can also be purchased [4].

## Purpose of the Report

This report explores the visualization of data from a virtual machine on a website. Virtual machine technology applies the virtualization concept to the whole machine. It eliminates real machine compatibility constraints and hardware constraints. Virtual machine technologies are generally designed to solve problems in combining and using components in a computer system. It plays an important role in many parts of the computer system [5]. Data visualization is one of the effective tools to reveal hidden patterns in data [6]. Data visualization displays abstract and non-physical data with computer-based visuals for better understanding. The main goal here is to make statistical and complex data understandable using graphical interfaces [7]. It aims to show the data obtained from the previous times of the virtual machine on the website with graphics and graphics to this time. The data will be visualized on the bootstrap based website using Python or php [8].

# Website Threads

## Discussion – Identifying the Problems

Since the admin page works online, it is not possible to contact the company in a place without internet access. Since the admin page will be open on a server, its connections must be allowed, otherwise the company cannot be contacted. If it is not allowed by the virtual machine, the Admin panel cannot pull data, cannot visualize it.

## Sentences Introducing Bullet Points

Below are four key items for the admin page:

1. Profile pages of company executives.
2. Chat mechanism for managers to talk to each other.
3. Button to start the virtual machine.
4. Visualization of the company's data from the past to this time.

# Website Implementation

## Website Design

The bootstrap framework will be implemented when making the admin panel. **Vuexy Admin Template** will be modified with Bootstrap framework[9]. Administrators will login to the admin panel with their username and password. Admins will be in communication with each other and will be able to view and change their profile pages if they wish. Admins will be able to see graphs and charts showing the company's data. The virtual machine can be started with the help of a button on the website.

## Website Database

While preparing the website, a database will be developed that will work dynamically with the admin panel. The following four items explain why the database should be developed:

1. Records of usernames and passwords of admins.
2. Records of virtual machine connection times.
3. Records of admins' information on profile pages.
4. Records of data captured from the virtual machine.

# Conclusion

While preparing this report, bootstrap, virtual machine and data visualization technologies were researched and information was obtained about them. Data visualization with PHP or Python languages has been researched and necessary information has been obtained. Admin panel templates were researched and information about the design was taken.

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