**Door Sensors That Help You (Smart Doors)**

*Submitted by-*

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**DEPARTMENT OF ELECTRICAL ENGINEERING**

**LNM INSTITUTE OF INFORMATION TECHNOLOGY, JAIPUR**

**May 2018**

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**DECLARATION**

I hereby certify that,

a) the work contained in this report is original and has been done by me under the guidance of my supervisor(s).

b) the work has not been submitted to any other Institute for any degree or

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c) I have followed the guidelines provided by the Institute in preparing the report.

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Shivam Sharma (15ucs130)

Date:

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**CERTIFICATE**

This is to certify that the Dissertation Report entitled, “Smart Doors” submitted

by Mr “Shivam Sharma” to LNMIIT, Jaipur.

India, is a record of bonafide Project work carried out by him under my/our

supervision and guidance and is worthy of consideration for the award of the degree of Bachelor of Technology in Electrical Engineering of the Institute.

Name of the Supervisor, Name of the Supervisor

(Signature) (Signature)

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LNM Institute of Information Technology

Jaipur

Date:

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**ACKNOWLEDGMENT**

This document is prepared by the inspiration received from Professor “.............”,

Head, and Department of CSE. Many colleagues at LNMIIT have carefully read and improved the document; their contributions are gratefully acknowledged.

Student Name and Roll Number

**Abstract**

The project can be seen here -

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Introduction

Problem Statement

Current State of Art

Proposed Solution

Steps in the process

Usage Software

Software –

Results

Future Work

.

References

Response Time ?

For an uptime check (http check) the response time is calculated as the time it takes to perform a HTTP GET to the specified URL, so the response time is calculated in three parts:

* Time to first byte
* Time to receive headers
* Time to load HTML of the site

Load Time?

what we use to describe how long a specific page took to load in its entirety, this includes all images, scripts, CSS and third party resources (as well as the HTML of course) that might be found on a website.

These reports will combine the load time of each element on the page to give you the total page load time, and this is why the load time of a website often is a lot higher than the response time.

Why measure Response Time ?

Everyone who operates an online business understands the importance of having fast website [response times](https://www.websitepulse.com/kb/response_time). When webpages are simple to perceive, the user will spend more time on your pages, and are much more likely to spend money while they are there.

Fast website response times can also be critical to [influencing buying behavior](http://www.iresearchservices.com/5-common-factors-influencing-consumer-behavior/), as your website performance is often judged as a reflection of the quality and competence of your business skills.

“For example, Amazon calculated that a page load slowdown of just one second could cost it $1.6 billion in sales each year.”

Factors that Affect Response Time ?

**1. COMPLEXITY**

Too often, organizations get wrapped up in adding so much functionality that performance actually suffers. Complexity can be on the client side as well as the application side

### 2. INTERDEPENDENCIES

The top factor impacting website response time is application/infrastructure/endpoint interdependencies. Shifting dynamics across these interdependencies can cause latencies, outages, security breaches and wreak havoc on end user experience.

### 3. CONFIGURATION AND COMMUNICATION OF COMPONENTS

Today's website infrastructure consists of a lot of components. Some of these components aren't even located in the same country. The installation and configuration of these components is the biggest factor of slow website response times.

### 4. LATENCY

A platform approach that unifies monitoring of servers and back-end infrastructure and front-end API and application performance is the key to ensuring speed and responsiveness that meet user expectations.

### 5. DEMAND PEAKS

 When problems rear their ugly head it's typically during peak times. Think Black Friday or Cyber Monday. These may be extreme examples but they illustrate a very good point. Infrastructure must be to be scaled to handle peak rates rather than average rates. Peaks in demand may only last for a short time, sometimes only milliseconds but they have a much longer lasting effect, impacting not only the web server and supporting systems but more importantly user experience.

Industry standard of Response Time ?

Ideally, optimal server response time is about 200ms.

Sub-second (<1000ms) response time is the industry standard, from my experience.     
  
1ms is less than most network latency, outside the local network.  Ping [Google](http://google.com/" \t "_blank)and you will proabably see 4-5ms, but the entire page load of the sparse [Google](http://google.com/) loads in less than 200ms.  However, Google is a bad example because their home page is almost devoid of anything.  
  
A user should see, at the very least, the page structure and layout load with almost all text and some images.  It is acceptable for some images to load after the initial load.  
  
The user should have the perception that something is happening when they take the action of entering a URL or clicking on a link.

Recent Research in this Field –

* **0.1 second** is about the limit for having the user feel that the system is **reacting instantaneously**, meaning that no special feedback is necessary except to display the result.
* **1.0 second** is about the limit for the **user's flow of thought** to stay uninterrupted, even though the user will notice the delay. Normally, no special feedback is necessary during delays of more than 0.1 but less than 1.0 second, but the user does lose the feeling of operating directly on the data.
* **10 seconds** is about the limit for **keeping the user's attention** focused on the dialogue. For longer delays, users will want to perform other tasks while waiting for the computer to finish, so they should be given feedback indicating when the computer expects to be done. Feedback during the delay is especially important if the response time is likely to be highly variable, since users will then not know what to expect.

References - https://stackoverflow.com/questions/164175/what-is-considered-a-good-response-time-for-a-dynamic-personalized-web-applicat