

# Indoor Navigation System

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**Abstract-** proposed project is dedicated towards the designing and developing of an indoor navigation system with the most optimum characteristics. Global Positioning system is suitable for indoor navigation system within contact of building blueprint. The indoor navigation system is purely based on the application of mobile network found abundantly in smart phones. The main goal of proposed work is to minimize the cost and maximize the end user benefits with more efficiency. The system has been provided with two main functions which are to provide localisation and navigation services. Navigation entails the continuous tracking of the user's position and surroundings for the purpose of dynamic planning and following a route to the user's intended destination. Indoor navigation system has wide application in the industry and home automation field. The application has been developed for both iPhone and Android in order to compare the results and see if one operating system is better than the other for the purpose of this application. The proposed navigation system for smartphone is capable of guiding users accurately to their destinations in an unfamiliar indoor environment, without requiring any expensive alterations to the infrastructure or any prior knowledge of the site's layout.

## I. ANDROID - ENVIRONMENT SETUP

Android application development on either of the following operating systems

1. Microsoft Windows XP or later version.
2. Mac OS X 10.5.8 or later version with Intel chip.
3. Linux including GNU C Library 2.7 or later.

## Conversion of Source Files to Byte Codes

The compilation process for Android apps is very different from other Java applications. But it begins in the same way: user Java source code files are compiled into .class files using the javac command.

## II. FEATURES OF HTML

HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets. HTML tags most commonly come in pairs like <h1> and </h1>, although some

tags represent empty elements and so are unpaired, for example <img>. The first tag in a pair is the start tag, and the second tag is the end tag .

A Web browser can read HTML files and compose them into visible or audible Web pages. The browser does not display the HTML tags, but uses them to interpret the content of the page. HTML describes the structure of a Website semantically along with cues for presentation, making it a markup language, rather than a programming language.

## CHARACTERISTICS OF PHP

Five important characteristics make PHP's practical nature possible:

1. Simplicity
2. Efficiency
3. Security
4. Flexibility
5. Familiarity

## III. SYSTEM DESIGN

Once the features to implement decided and the architecture drafted, a system design needed to implement the application. The section depicts the design using the Unified Modeling Language.

## IV. CONCLUSION

The main aim of the project is to provide an easy to use application for indoor navigation. The application has been implemented and tested on various real time devices ranging from API 15 to API 21.

The future work includes the application can be improved in many ways and can be extended to support Windows Mobile and iOS devices. Following are some of possible extensions:

- i. The application can be extended to provide a support to upload or download of information.
- ii. Enabling the feature to upload photo and request ID card.