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Ministry of Education  
Majmaah University  
Department of Computer Science and  
Information



المملكة العربية السعودية  
وزارة التعليم  
جامعة المجمعة  
كلية العلوم  
قسم علوم الحاسب والمعلومات

# **Fix your car**

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## **Project 1**

1439/8/8

## *Acknowledgements*

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thank Dr. Yaser Abdalla for his  
patient to finish this work in  
proper way**

# *Fix your car*

[Year] [Make] [Model]



- [Odometer mileage]
- [Transmission type]
- [Engine size]
- [Gas Mileage]
- [Sound System]
- [General condition]
- [Exterior color]
- [Interior color/fabric]
- [Power locks, windows]
- [Air conditioning]

**Contact Submitted by:  
Thoalfqar Akram Alyaseri**

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# Abstract

## Objective: -

fixer KSA is an online automotive repair service booking software designed for automotive technicians or Auto Mechanics, Auto Repair Chains and small, medium and large vehicle repair shops. The user-friendly designs of Auto Connect, the automotive repair scheduling software will make your business easier to run and more profitable. This allows your customers who face on the road a car issue, to book Online Bookings for Auto repair technician and helps to keep your auto repair or service business on track. Now people use their Smartphone to research everything before becoming a customer.

Having a mobile app for your Auto service business is the simple and powerful way to reach a wider audience. Make your online workshop appointment management at your fingertips with Auto Connect Mobile App become the challenge for nowadays business. The project includes a mobile application that is used to connect to your online auto repair service, to book an emergency service and sending the car location using GPS with the pre-diagnose for car repair.

## **This project contains 3 modules namely :-**

- **User Registration,**
- **Service Charges,**
- **Submission module,**

### **User Creation:-**

In this module we are Registration the username ,password ,phone and vehicle no ,warranty and branch no' are user creations.

### **Service Charges:-**

In this module we are Registered the Customer Name, Vehicle no, Parts and Servicing Charges as well as Paying the money.

### **Submission Module;-**

In this module the dealer is handover to the Customer and before registering the Customer name, Vehicle No. and phone, Maintenance Order Registration.



# Chapter 1

## **INTERODUCTION**

More than two –third of automotive customers indicate that Service Today the maintenance and repair service represents a significant proposal of turnover and in many cases it collects the overall profits of the vehicular maintenance business. In consequence of the on road vehicle services , the competition in maintenance and repair services of motor vehicles has increased dramatically and many strong competitors have entered the maintenance and repair service of motor vehicles business in Arab and gulf area. In order to hold the competitive advantage in the changing market, it is important to develop new service products to ensure profits in the future as well.

### **1.2 The purpose of the project, main research question and sub-questions**

The purpose of this project is to develop a new web service concept for the maintenance and repair of motor vehicles for online emergency service call in Arab and gulf area, to strengthen its competitive advantage, and to serve better the needs of web vehicular maintenance service for business customers. On a larger scale, the aim is that if the developed service concept turns out to be web based, it could be launched through other shops. This report is also one way to indicate to the business customers that really cares about web services and is committed to serve them within the limits of profitability. The main research question in this project is how to develop a web based car maintenance service concept for on the road customers.

## **Problem statement**

Suffers from a lot of basic problem is to search for the nearest repair shop for his car and at the same time cannot distinguish which is the best workshop to provide a distinctive repair service for his car

## **Objectives**

There will be a significant change in the quality of service provided so that the person looking for the lowest prices to repair his car without any effort, and online services for car maintenance using mobile application and web service.

## **Feasibility Study**

Feasibility Analysis is the process of determination of whether or not a project is worth doing. Feasibility studies are undertaken within tight time constraints and normally culminate in a written and oral feasibility report. It helped in taking decisions such as which software to use etc.

- [1] Technical Feasibility
- [2] Economical Feasibility
- [3]Operational Feasibility

### ***Technical Feasibility***

Technical feasibility determines whether the work for the project can be done with the existing equipment, software technology and available personnel. Technical feasibility of proposed project refer to the software and hardware requirements.

The project is developed using android SDK. SQLite is used for DBMS. The proposed project can be implemented on any tablet or mobile phones having android operating system version 4.0 and above.

### ***Economic Feasibility***

Economic feasibility determines whether there are sufficient benefits in creating to make the cost acceptable, or is the cost of the system too high. The software's used to develop the proposed system are cost efficient. Android SDK and SQLite are available for free on Google Market. It is assumed that the user already possesses tablet or mobile phones supporting android OS.

## Operational feasibility

As our system provide various function, it is important to measure the feasibility of each function for measuring overall feasibility of our system. Mapping , navigating , notifications , etc. are easily operated using proposed project.

# Feasibility Study questioner

The image shows two screenshots of a mobile questionnaire titled "Fix your car" from the website smartsurvey.co.uk. The left screenshot shows the start of the survey with a 0% progress bar and a question in Arabic: "1. نبذه عن المشروع" (1. Briefly describe the project). Below the question is a green button labeled "الصفحة التالية" (Next page). The right screenshot shows a question in Arabic: "1. ما رأيك في فكرة المشروع؟" (1. What do you think of the project idea?). It has four radio button options: "ممتازة" (Excellent), "جيدة" (Good), "سيئة" (Poor), and "البيهي" (Very poor). Below this is another question: "2. هل تؤيد تطبيق الفكرة؟" (2. Do you support the application of the idea?) with two radio button options: "نعم" (Yes) and "لا" (No). The progress bar on the right screenshot is at 50%.

Figure 1-1 questioner for the project idea

# Feasibility Study questioner

3. في رأيك هل الفكرة تخدم المجتمع؟

نعم

لا

4. في حال تطبيق الفكرة هل تستخدم البرنامج؟

نعم

لا

5. في حال نجاح البرنامج هل تؤيد تطبيقه على جميع مناطق المملكة؟

نعم

لا

6. هل تتوقع ان البرنامج يوفر عليك الوقت والجهد؟

نعم

لا

7. برأيك هل الفكرة قابلة للتطوير؟

نعم

لا

8. اذا كان هناك اي ملاحظه يرجى كتابتها بالاسفل

Figure 1-2 questioner for the project suggestions

# Result Feasibility Study

46% 6:04 4G THANK YOU KSA...  
app.smartsurvey.co.uk

## Fix your car

1. نبيذ عن المشروع

2. Page 2



46% 6:04 4G THANK YOU KSA...  
app.smartsurvey.co.uk



Figure 1-3 results for project feasibility study

# Project Scheduling

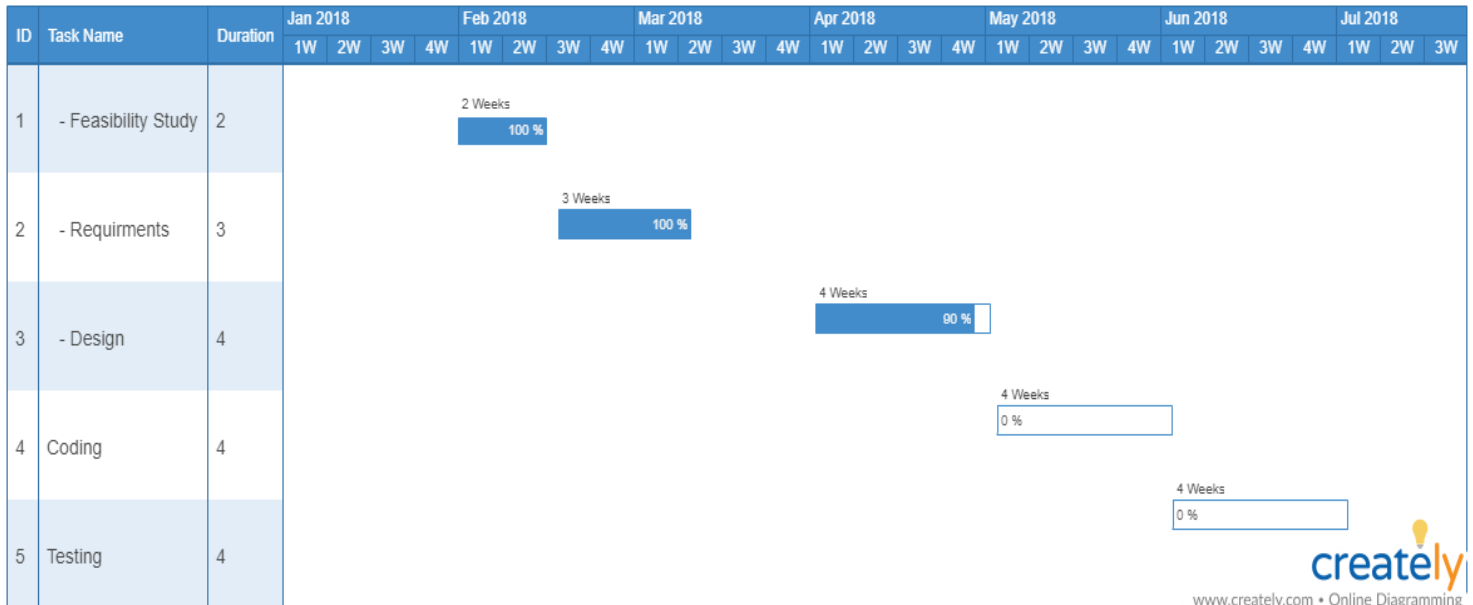


Figure 1-4 results for project Scheduling study

## SYSTEM ANALYSIS:

### 1. Existing System

Existing systems are ether the towing service for just take the car to the nearest workshop that may be unprofessional or suffering from a lake of spare parts.

The following are the disadvantages of the existing system

- It is difficult to grantee the efficiency of the night late workshops.
- More manual hours need to generate required spare parts.
- It is tedious to scroll with your broken car around tell find a spare parts

- When you are not alone in a broken car it is difficult to control the expenses of car repair

## **2. Proposed System**

The DISTRIBUTORS MANAGEMENT TOOL is a software application which avoids more manual hours that need to spend in record keeping and generating reports. This application keeps the data in a centralized way which is available to all the users simultaneously. It is very easy to manage historical data in database. No specific training is required for the distributors to use this application. They can easily use the tool that decreases manual hours spending for normal things and hence increases the performance. It is very easy to record the information of online sales and purchases in the databases.

## **3. Objective of the System**

The objective of the Vehicle Services is to provide better information for the users of this system for better results for their maintenance in the product details that is sales, purchases and stock.

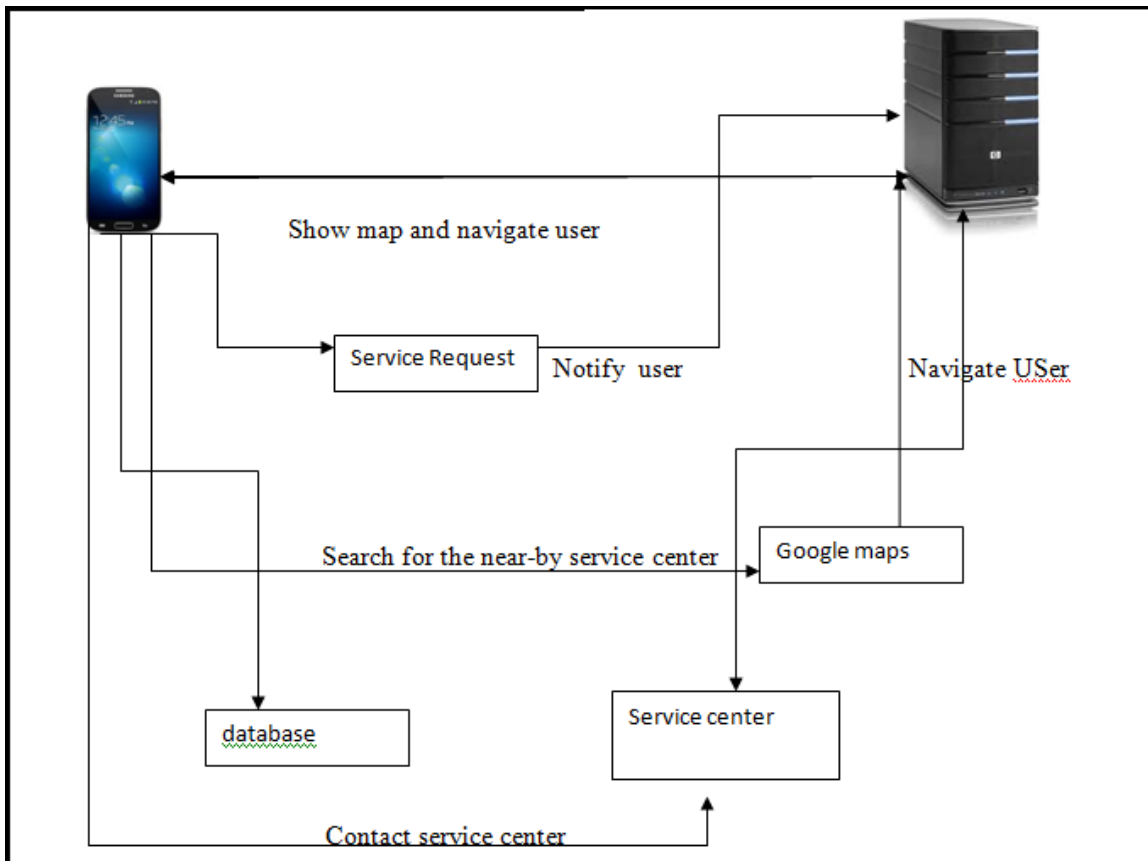


Figure 1-5 Architecture Automobile Service Center Management System



# Chapter 2

## INTRODUCTION

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

## **Purpose**

Create new system without needs to more of papers and the complicated system for fixing and the client must going to the warehouse to fix his car but in our system we removed many of steps because with only on click you can ask the service and the specialist will going to your location or you can going to the warehouse.

## **Scope**

Client will sign up or login to the system throw the mobile interface Will find the button for request service Click fix my car show for him the options for inter his car specifications Like model, category, damage status, mileage .....etc.

## **Overview of Document**

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

## **Overall description**

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of stakeholders that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

## **Product perspective**

This system will consist of two parts: one on website that will show the information about the services like prices and description for the service. The second part will be for android app will be for client to ask service and get his location by GPS in case he request that the specialist going to his location.

## **Product functions**

With the proposed website, the users will be able to view the services. The result will be based on the criteria the user inputs. There are several search criteria and it will be possible for the administrator of the system to manage the options for those criteria that have that. The result of the search will be viewed either in a list view, depending on what criteria included in the search.

The list view will have one list item for each service matching the search criteria and show a small part of the service information so the user can identify the service. The user will choose the service and click the book now in next screen the system will store his location in case he asks the specialist going to him so the location will show in admin page control on Google map and point to the location for user.

### **User characteristics**

There are two types of users that interact with the system: users of the website and administrators. Each of these two types of users has different use of the system so each of them has their own requirements. The website users can use the website and mobile app to find the service and booked on so he will choose the service and click book now, so he will navigate to it to enter his information and get his appointment.

### **Constraints**

The Internet connection is also a constraint for the website. Since the website fetches data from the database over the Internet, it is crucial that there is an Internet connection for the website to function. The web portal will be constrained by the capacity of the database.

### **Assumptions and dependencies**

One assumption about the product is that it will always be used on computer or mobile phones that have enough performance. If the computer or phone does not have enough hardware resources available and software for the website. For example, the users might have allocated them with website, must be the Google-map site work and Browser supports JavaScript, flash player to display allocation user location using GPS Tools.

### **Apportioning of requirements**

In the case that the project is delayed, there are some requirements that could be transferred to the next version of the website and mobile app. Those requirements are to be developed in the next release.

### **Specific requirements**

This section contains all of the functional and quality requirements of the system. It gives a detailed description of the system and all its features.

# CHAPTER 3

## UML Diagrams:

### Use Case Diagram:

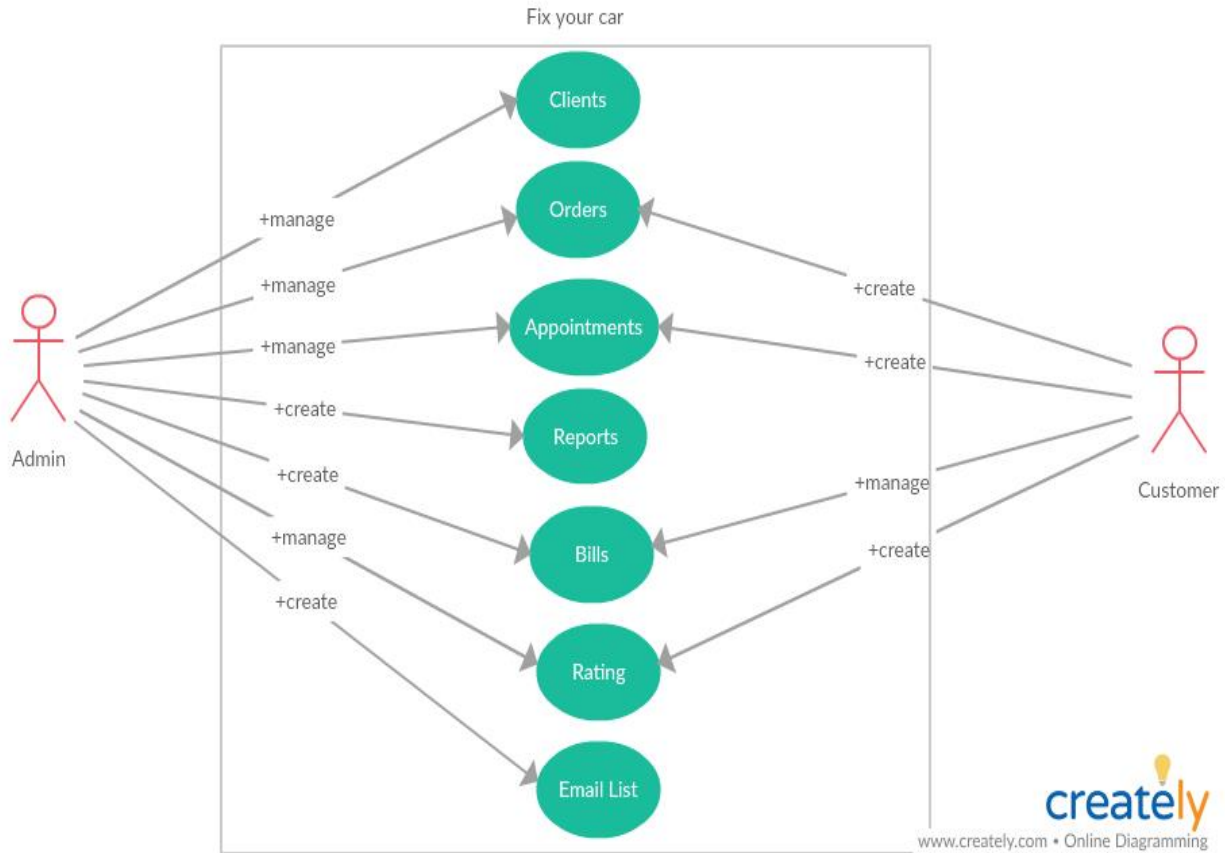


Figure 3-1 Use Case Diagram

## SEQUENCE DIAGRAM:

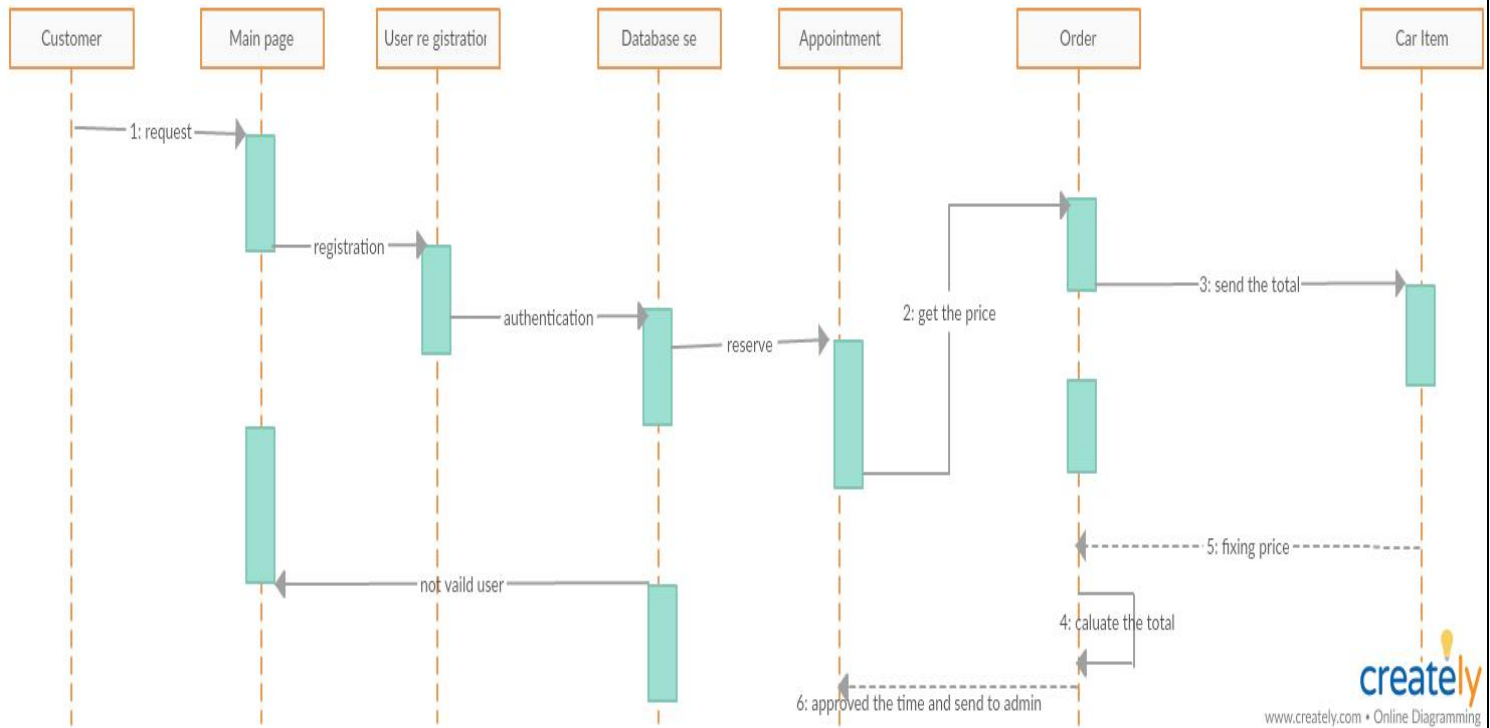


Figure 3-2 Sequence Diagram

## CLASS DIAGRAM:

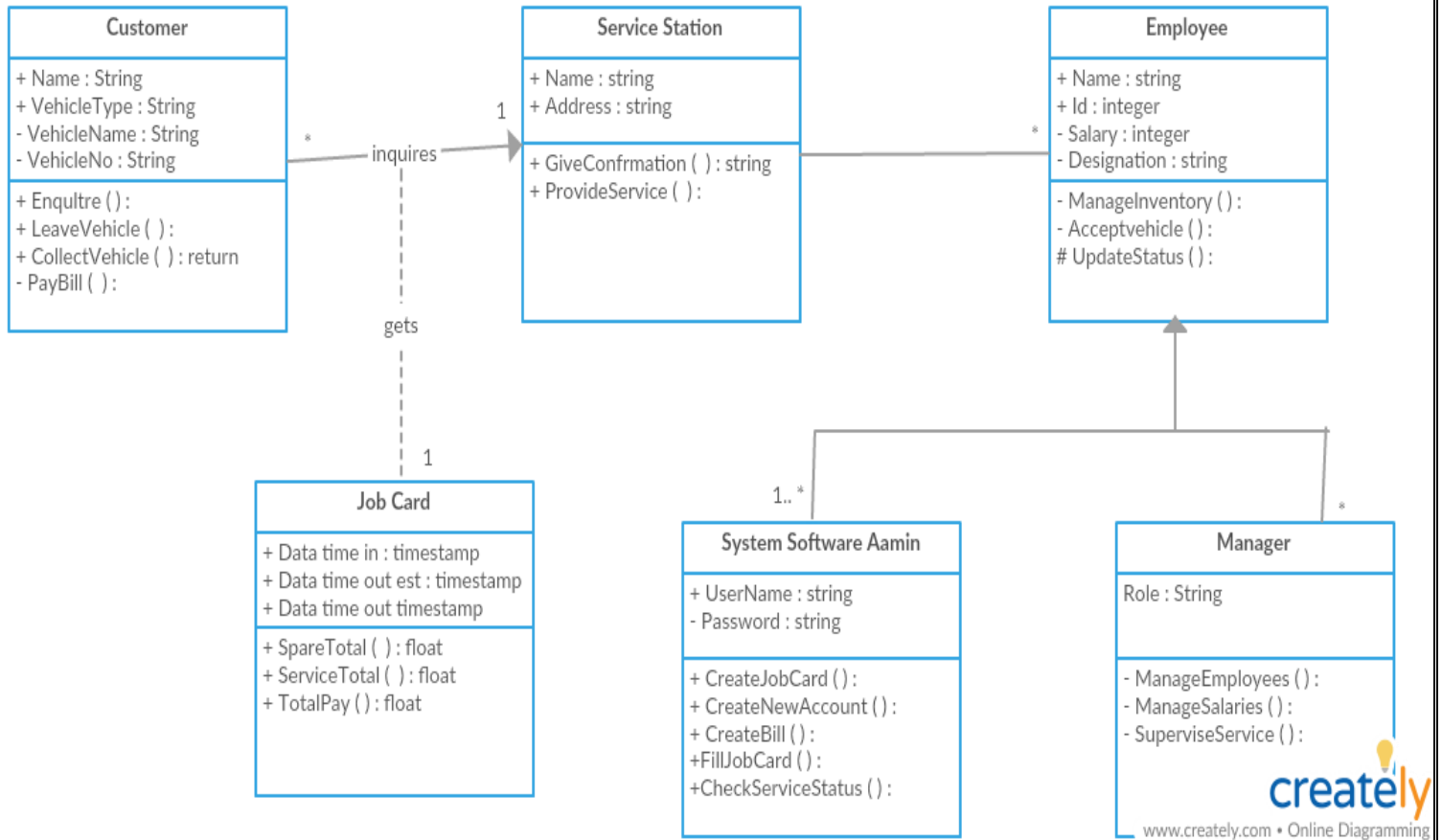


Figure 3-3 Class Diagram

## Object Diagram

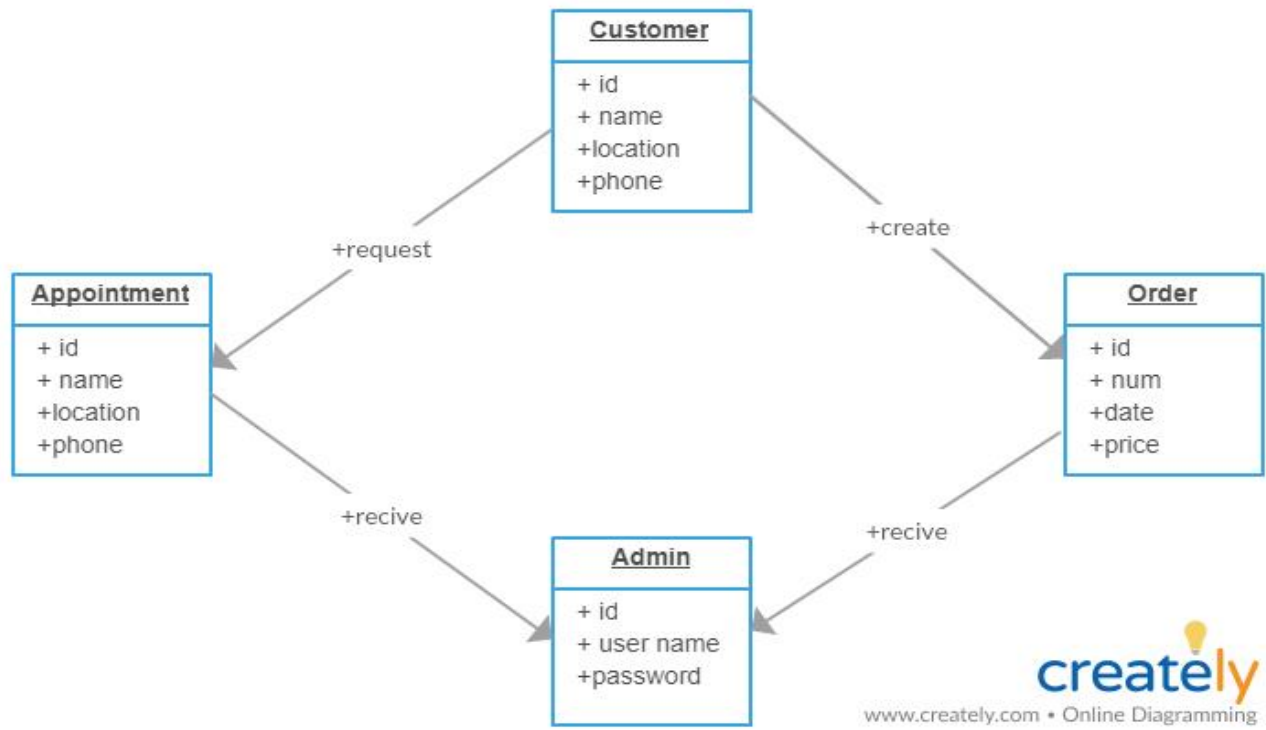


Figure 3-4 Object Diagram

## Activity Diagram

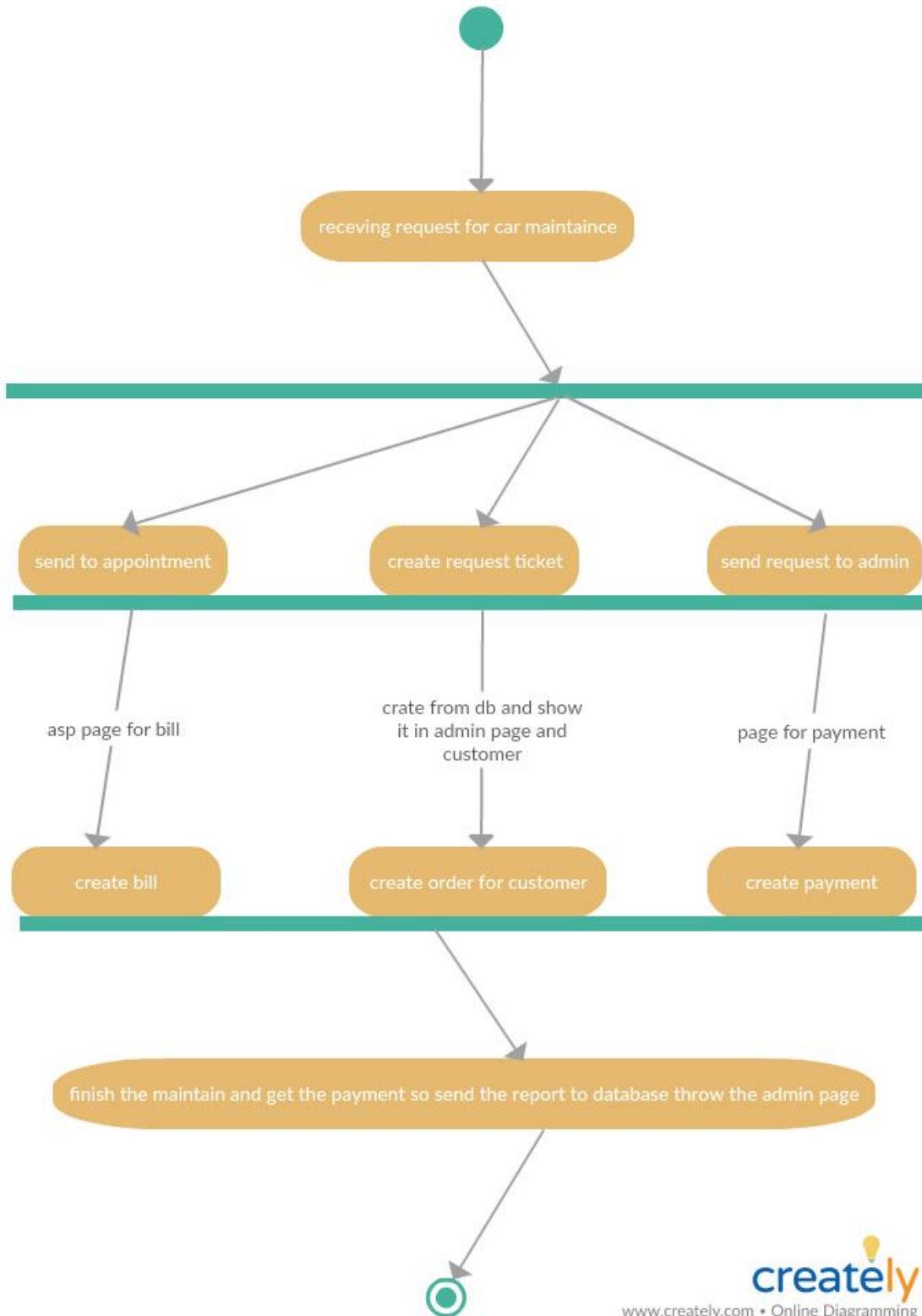


Figure 3-5 Activity Diagram



## State Chart Diagram

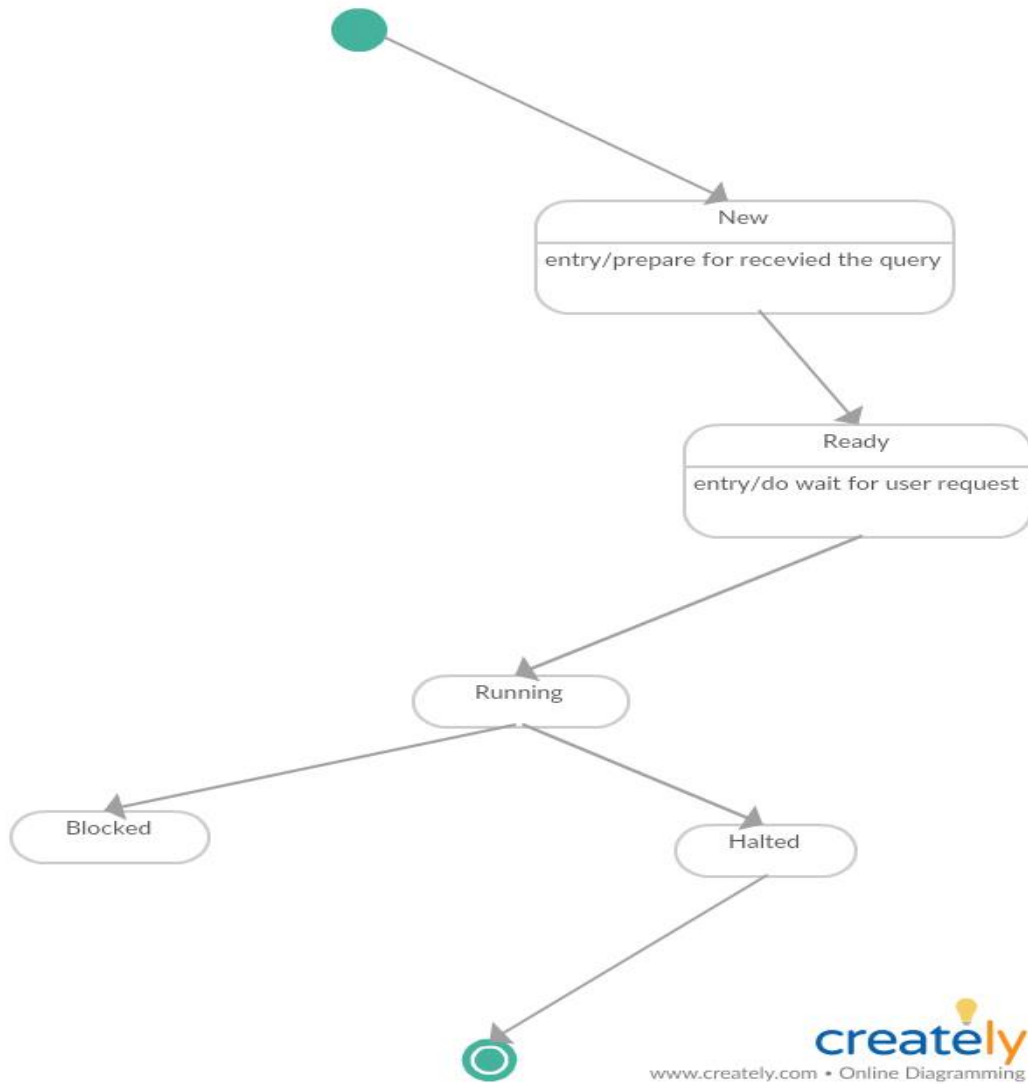


Figure 3-6 State chart Diagram

## E-R Diagrams:

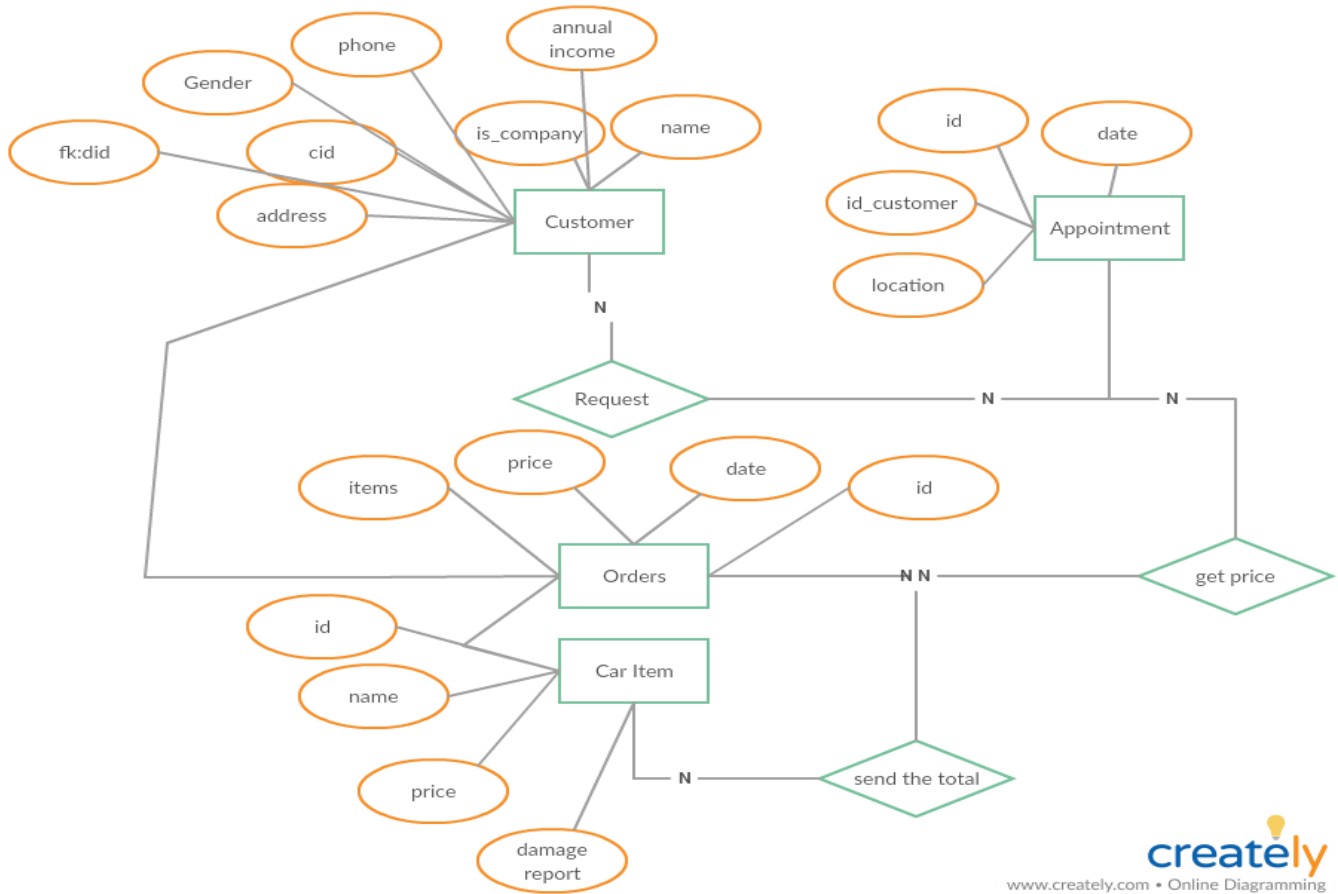


Figure 3-7 ER Diagram

## **Modules**

**This project contains 3 modules namely :-**

- **User Registration,**
- **Service Charges,**
- **Submission module,**

### **User Creation:-**

In this module we are Registration the username ,password ,phone and vehicle no ,warranty and branch no' are user creations.

### **Service Charges:-**

In this module we are Registered the Customer Name, Vehicle no, Parts and Servicing Charges as well as Paying the money.

### **Submission Module;-**

In this module the dealer is handover to the Customer and before registering the Customer name, Vehicle No. and phone. Maintenance Order Registration and Warranties

# CHAPTER 4

## FUTURE ENHANCEMENTS:

This application avoids the manual work and the problems concern with it. It is an easy way to obtain the information regarding the various products information that are present in the Super markets.

Well I and my team members have worked hard in order to present an improved website better than the existing one's regarding the information about the various activities. Still ,we found out that the project can be done in a better way. Primarily, when we request information about a particular product it just shows the company, product id, product name and no. of quantities available. So, after getting the information we can get access to the product company website just by a click on the product name .

The next enhancement that we can add the searching option. We can directly search to the particular product company from this site .These are the two enhancements that we could think of at present.

# System Specifications

## Hardware Requirements:-

- Quad core 2GHz+ CPU.
- 6GB Ram.
- Hard disk 500 GB .
- Minimum database space: 10GB.

## Software Requirements: -

- **Operating System :** Windows
- **Web-Technology:** php
- **Front-End:** html5,php
- **Back-End:** mysql
- **Web Server:** apache
- Mobile app: android studio with java language

Web service : php

### **Introduction of PHP: -**

Is a server-side scripting language designed for web development but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym.

### **Introduction of MySQL: -**

Is an open-source relational database management system(RDBMS). Its name is a combination of "My", the name of co-founder Wideness's daughter, and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

### **Introduction of Android Studio: -**

Is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, macOS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as primary IDE for native Android application development.

# CHAPTER 5

## Interfaces

### Prototype Layouts



Figure 4-1 Prototype Layouts



## مرحبا بكم فى موقعنا

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**5000**

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**6000**

تغيير الزيت



**1200**

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حقوق الطبع محفوظة

Figure 4-2 Prototype Layouts



...الاسم

...البريد الإلكتروني

...الموقع

...رسالة

ارسل رسالة

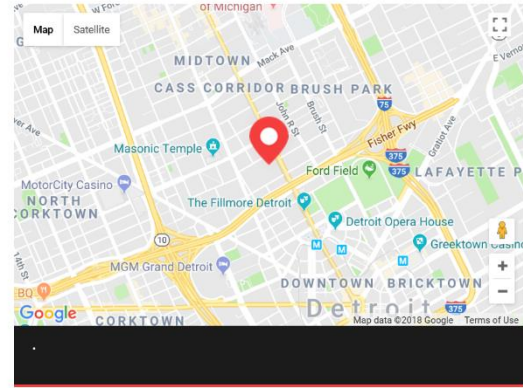


Figure 4-3 Prototype Layouts

# BIBLIOGRAPHY

The following books were referred during the analysis and execution phase of the project:

1. The Joy of PHP Programming: A Beginner's Guide – by Alan Forbes
2. Head First PHP & MySQL – by Lynn Beighley & Michael Morrison
3. Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites – by Robin Nixon
4. PHP & MySQL Web Development – by Luke Welling & Laura Thompson
5. PHP & MySQL: The Missing Manual – by Brett McLaughlin
6. PHP: A Beginner's Guide – by Vikram Vaswani
7. [PHP Overview](#) - Overview of all things PHP  
[PHP IDE 1](#) - looks at what Eclipse and Zend have brewed together  
[PHP IDE 2](#)- Dreamweaver CS4 beta adds LiveView and some other PHP features  
[PHP IDE 3](#) - Borland/CodeGear's Delphi for PHP has the most complete PHP IDE  
[PHP Meetup](#)- new an example of the community support that makes PHP so popular  
[GUI Revolution](#)- could PHP, JSP and all the rest be replaced by multi-touch RAIA ?  
[PHP Basics](#) - the basic design of the PHP language, how it works in general  
[Php News](#) - Events, calendar and news in the world of PHP  
[PHP Links](#) - Links and references to other PHP tutorials sites and software vendors  
[PHP5](#) - the new PHP 5 adds a whole new OO re-engined design, SQLite, XML-processing, command line ....  
[PHP Arrays](#) - tips about php array processing and functions  
[PHP Associative Arrays](#) - all about associative arrays and functions which preserve associative keys  
[PHP Array Examples](#) - examples of arrays used to fill Form drop down lists/select boxes  
[PHP Array Sorting](#) - you have to careful with associative array, here are some safe sorting methods  
[PHP Content Management](#) - PHP has a very rich set of free content management systems  
[PHP Colors](#) - show how to display all the Web safe colors using nested loops and concatenation

[PHP CLI](#) - > PHP as Command Line Interpreter is a big benefit in PHP 5 => easier testing, adhoc utilities

[PHP compared to JavaScript](#) - compares syntax and architectures of PHP and JavaScript

[PHP Logic & Bitwise Operations](#) - PHP has a robust set of logic and bitwise operators

[PHP Loop Syntax](#) - PHP 5 adds to the foreach clause as we summarize flow & looping syntax

### **WEBSITES:**

1. [www.google.com](http://www.google.com)
2. [PHP.NET](#) - the starting place for news, views, events, and links to all things PHP
3. [Hotscripts](#) - over 11,000 PHP scripts, most free, and very well classified and rated
4. [PHPBuilder](#) - the digested news and articles here mix well with scripts and tips.
5. <http://www.barmaje.com/topics/56>
6. [https://en.wikipedia.org/wiki/Unified\\_Modeling\\_Language](https://en.wikipedia.org/wiki/Unified_Modeling_Language)
7. <https://creatly.com/>
8. <https://www.smartsurvey.co.uk/>