**Vehicle Bite (VB)**

CS261- Algorithm Detail Document



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# Project Details

## Project Title

After a detailed discussion, we titled this project with a combination of two words called **Vehicle Bite.**

## Project Statement

Today, we are having an enormous number of varieties in our daily life products like, in case of mobile phones and cars different brands are introducing different series of products depending upon their attributes. It is hard for a buyer to select the product and optimize it, for his need. Everyone wants to make his/her work smoother and easier. Everyone is trying to save more time. We are trying to solve their problem by getting data from different sites and make user friendly software.

This software is designed to help a customer in purchasing the automobile car that is suitable for him/her. User can easily search for a car that perfectly matches his/her desire.

## Description

After an observation of this problem, our team is designing software, named as **Vehicle Bite,** to solve this problem. The major approach to make this software is to save the time of every person who is willing to buy a vehicle. Many people visit different sites on internet or visit different places to buy a vehicle, which consumes a large amount of time. Now it’s our major goal to scrap data from different famous sites and then apply some sorting and searching algorithms and also we can check its time complexity.

Using this technique we will try to get millions of data on the basis of international criteria. After getting the data from website we use different algorithms to manipulate all data. User can arrange data in many orders like ascending or descending order. You can also check different types of data in different manners. User can also check the speed of sorting by implementing different algorithms on different types of data.

The data of the vehicles is too much large. So, it is difficult to enter data by single person or a couple of persons. It requires a couple weeks to enter data. On the basis of cost and time we decided to get this data from different websites. For this purpose, we are using a technique called Web-Scrapping.

Searching is also a feature of this software. User can search according to different criteria line country name, price, or model of vehicle and can choose desired vehicle. User can also check the time taken by search using different algorithms. The algorithms are of insertions sort, merge sort, selection sort and bubble sort. The user will select any one algorithm and data will be sorted according to that algorithm. Then after selecting algorithm user will enter option of run and the data will be show in the table with the attributes.

It will:

* Scrape data of multiple vehicles of different brands and series from many websites.
* Show the time taken by data scrapping including the stop and play functionality
* Provide an option to sort lists depending upon different attributes like engine power, passenger capacity, etc.
* Provide the functionality of searching a particular vehicle.
* Allows selection of algorithms for sorting and searching and accordingly shows time taken.

## Audience

### Problem Overview

It’s an era of Internet and Communication Technologies. Everyone is buying products from different **Online Platforms.** It’s our target to approach those persons who are willing to buy a vehicle. If a person is buying a car, he/she will check some websites and then contact the seller. The 2nd approach is to visit physically that place where the people sell their vehicles. Time is much important and these solutions are time consuming. 1st one is contains time on visiting different and trustable websites and 2nd is physical visit which also more time consuming than 1st one. Now, our team is trying to find the maximum possible solutions and then we will implement in possible best solution.

### Possible Solutions

1. Visit different websites
2. Physical visit of market
3. Buy a vehicle from a relative
4. Get data from a single source

### How can we solve this using Computers

In our Possible Solutions, two of them (i.e. a. and d.) are solving this using computer. We are selecting 4th solution (i.e. d), in which we will get data from different websites, combine it and then load it in our software.

### Audience Motivation

Life became too fast that we are travelling from one place another in minutes and hours instead of days and months. In past, if we cover a distance in some days, now we cover same distance in hours. All of us want vehicles according to our daily routine. Some are using multiple vehicles for different purposes (i.e. for personal use, for business etc).

## Requirements

|  |  |
| --- | --- |
| Programming language | Python 3 |
| Version | 3.9.7 |
| IDE for Python 3 | There are many IDE’s of Python. Some of them are given below:   * PyCharm * Spyder * Jupyter(Anaconda) * VS Code   From all these IDEs, we choose VS Code for Python 3. |

# Technical Details

## Approach

## Attributes

## Scrapping

Insert detail

# Business Details

## Overview

## For Audience

## For Developers

## Motivation

# Project Planning

## Developer Details

## UI Sample

## Task Division

## Collaboration

# Algorithms

# Final Application

## UI Model

### Components

## Remaining

## Integration