**CAR BUYING SITE(KIA MOTORS)**

**A**

**minor project report**

**submitted in the partial fulfilment for**

**the course**

**MCA2106L: Programming Lab – II**

**(RDBMS and Minor Project)**

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Revision History

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

## Purpose

The purpose of the car buying website is to provide a user-friendly platform facilitating the process of purchasing new and used vehicles online. This involves enabling seamless vehicle search with a comprehensive database of vehicles, detailed information on specifications, features, condition, pricing, and seller details, as well as communication channels between buyers and sellers. The website prioritizes user security and privacy, ensuring safe transactions and compliance with data protection regulations. It aims to enhance user experience through intuitive navigation, responsive design, and personalized recommendations. Additionally, the website may offer supplementary services such as financing options, insurance quotes, and maintenance information. Transparency in pricing, vehicle history, and seller credibility is emphasized to build trust among users. Overall, the website aims to become a trusted and convenient platform for individuals seeking to purchase vehicles online.

## Document Conventions

The "Document Convention" section of the SRS for the car buying website adopts common standards, utilizing digital formats like Word or Google Docs, often converted to PDF for distribution. It's organized with clear sections including Introduction, Purpose, Scope, etc., and employs text formatting tools such as headings, bullet points, and bold text for emphasis. Naming conventions ensure consistency, with entities in singular form and attributes in lowercase with underscores. References to relevant sources and standards are provided, and version control, often through version numbers or dates, is implemented to track revisions. Furthermore, the document undergoes a comprehensive review and approval process by stakeholders, gathering feedback to maintain accuracy and alignment with project goals.

## Intended Audience and Reading Suggestions

The SRS document is intended for various stakeholders involved in the development, implementation, and maintenance of the car buying site. This includes, but is not limited to:

1. **Project Managers:** To gain an understanding of the project requirements, scope, and deliverables to effectively plan and manage the project lifecycle.

2. **Developers:** To comprehend the functional and non-functional requirements necessary for system design, development, and testing.

3. **Designers:** To understand the user interface requirements and design specifications for creating a visually appealing and user-friendly website.

4. **Testers:** To derive test cases and scenarios from the specified requirements for comprehensive testing and validation of the system.

5. Clients/Stakeholders: To review and approve the documented requirements, ensuring alignment with business objectives and user needs.

To effectively navigate through the SRS document and comprehend its contents, readers are advised to follow these suggestions:

1. **Start with the Executive Summary:** Begin by reading the Executive Summary section to gain a high-level overview of the project goals, scope, and major functionalities.

2. **Review the Introduction:** Read the Introduction section to understand the background, purpose, and scope of the car buying site project.

3. **Focus on Specific Sections:** Depending on your role and area of responsibility, focus on relevant sections such as Functional Requirements, Non-Functional Requirements, User Interface Design, and System Architecture.

4. **Refer to Glossary:** In case of unfamiliar terminology, refer to the Glossary section which provides definitions of key terms used throughout the document.

5. **Seek Clarifications:** If any ambiguities or questions arise while reading the document, do not hesitate to seek clarifications from the project manager or the document author.

## Product Scope

The product scope of the car buying site encompasses the features, functionalities, and constraints that define the boundaries of the project. It outlines the key objectives and deliverables aimed to be achieved through the development of the website.

**Objectives**

The primary objectives of the car buying site include:

1. **Vehicle Listing and Search:** Enable users to browse, search, and view listings for new and used vehicles based on various criteria such as make, model, year, price range, and location.

2. **Detailed Vehicle Information:** Provide comprehensive details for each vehicle listing including specifications, features, photos, pricing, seller information, and vehicle history reports where available.

3. **User Registration and Authentication:** Allow users to create accounts, log in securely, and manage their profiles to save searches, favorite listings, and receive personalized recommendations.

4. **Communication Channels:** Facilitate communication between buyers and sellers through messaging systems, inquiry forms, and contact information provided within listings.

5. **Transaction Management:** Support the process of purchasing vehicles online, including options for negotiating prices, scheduling test drives, making offers, and completing transactions securely.

6. **User Reviews and Ratings:** Implement a system for users to leave reviews and ratings for sellers, providing feedback and enhancing transparency and trust within the platform.

**Out of Scope**

While the car buying site aims to provide a comprehensive platform for purchasing vehicles online, certain functionalities are considered out of scope for this project. These may include:

1. **Financing and Insurance:** While the site may provide information about financing options and insurance providers, the actual process of arranging financing or insurance policies is not within the scope of this project.

2. **Vehicle Inspection and Maintenance:** Although users may arrange test drives or inspections with sellers, the site does not handle vehicle inspections or maintenance services directly.

3. **Shipping and Delivery:** While users may coordinate pickup or delivery arrangements with sellers, the logistics of vehicle shipping and delivery are not managed by the website.

4. **Legal Documentation:** The site does not provide legal documentation services such as drafting contracts or processing vehicle registration paperwork.

By defining the product scope, the car buying site project aims to ensure clarity and alignment among stakeholders regarding the objectives, features, and limitations of the website. This enables effective planning, development, and management of the project to deliver a successful and functional online platform for purchasing vehicles.

## Bibliography

1**. Kia Motors India Official Website:** (<https://www.kia.com/in/>): The official website of Kia Motors India provides valuable insights into the company's products, services, and brand identity, aiding in understanding Kia's specific offerings and requirements.

2. **Automotive News India:** (<https://www.autonews.com/india>): Automotive News India offers comprehensive coverage of the Indian automotive industry, including market trends, regulatory updates, and industry developments relevant to Kia Motors India.

3. **Society of Indian Automobile Manufacturers (SIAM):** (<https://www.siamindia.com/>): SIAM provides data and insights into the Indian automotive industry, including sales statistics, regulatory updates, and industry reports that may influence the requirements and functionalities of the car buying site.

4. **National Highway Traffic Safety Administration (NHTSA) - India:** The Indian equivalent of NHTSA provides safety ratings, vehicle recalls, and other safety-related information specific to the Indian automotive market, influencing safety-related requirements within the SRS document.

5. **Government of India Ministry of Road Transport and Highways (MoRTH):** (<https://morth.nic.in/>): MoRTH provides regulatory updates, road safety guidelines, and other pertinent information related to the automotive industry in India, guiding compliance requirements for the car buying site.

6. **Consumer Reports India:** (<https://www.consumerreports.org/cro/index.htm>): Consumer Reports India offers product reviews, ratings, and buying guides relevant to the Indian consumer market, informing user experience and usability considerations within the SRS document.

7. **Internal Documentation:** Any internal documents, project plans, or technical specifications provided by Kia Motors India that are relevant to the development of the car buying site.

# Overall Descrip1tion

## Product Perspective

<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful.>

## Product Functions

<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary (such as a bullet list) is needed here. Organize the functions to make them understandable to any reader of the SRS. A picsture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, is often effective.>

## User Classes and Characteristics

<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the most important user classes for this product from those who are less important to satisfy.>

## Operating Environment

<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

## Design and Implementation Constraints

<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer’s organization will be responsible for maintaining the delivered software).>

## User Documentation

<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.>

## Assumptions and Dependencies

<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>

# External Interface Requirements

## User Interfaces

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>

## Hardware Interfaces

<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>

## Software Interfaces

<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>

## Communications Interfaces

<Describe the requirements associated with any communications functions required by this product, including e-mail, web browser, network server communications protocols, electronic forms, and so on. Define any pertinent message formatting. Identify any communication standards that will be used, such as FTP or HTTP. Specify any communication security or encryption issues, data transfer rates, and synchronization mechanisms.>

# System Features

<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

## System Feature 1

<Don’t really say “System Feature 1.” State the feature name in just a few words.>

4.1.1 Description and Priority

<Provide a short description of the feature and indicate whether it is of High, Medium, or Low priority. You could also include specific priority component ratings, such as benefit, penalty, cost, and risk (each rated on a relative scale from a low of 1 to a high of 9).>

4.1.2 Stimulus/Response Sequences

<List the sequences of user actions and system responses that stimulate the behavior defined for this feature. These will correspond to the dialog elements associated with use cases.>

4.1.3 Functional Requirements

<Itemize the detailed functional requirements associated with this feature. These are the software capabilities that must be present in order for the user to carry out the services provided by the feature, or to execute the use case. Include how the product should respond to anticipated error conditions or invalid inputs. Requirements should be concise, complete, unambiguous, verifiable, and necessary. Use “TBD” as a placeholder to indicate when necessary information is not yet available.>

<Each requirement should be uniquely identified with a sequence number or a meaningful tag of some kind.>

REQ-1:

REQ-2:

## System Feature 2 (and so on)

# Other Nonfunctional Requirements

## Performance Requirements

<If there are performance requirements for the product under various circumstances, state them here and explain their rationale, to help the developers understand the intent and make suitable design choices. Specify the timing relationships for real time systems. Make such requirements as specific as possible. You may need to state performance requirements for individual functional requirements or features.>

## Safety Requirements

<Specify those requirements that are concerned with possible loss, damage, or harm that could result from the use of the product. Define any safeguards or actions that must be taken, as well as actions that must be prevented. Refer to any external policies or regulations that state safety issues that affect the product’s design or use. Define any safety certifications that must be satisfied.>

## Security Requirements

<Specify any requirements regarding security or privacy issues surrounding use of the product or protection of the data used or created by the product. Define any user identity authentication requirements. Refer to any external policies or regulations containing security issues that affect the product. Define any security or privacy certifications that must be satisfied.>

## Software Quality Attributes

<Specify any additional quality characteristics for the product that will be important to either the customers or the developers. Some to consider are: adaptability, availability, correctness, flexibility, interoperability, maintainability, portability, reliability, reusability, robustness, testability, and usability. Write these to be specific, quantitative, and verifiable when possible. At the least, clarify the relative preferences for various attributes, such as ease of use over ease of learning.>

## Business Rules

<List any operating principles about the product, such as which individuals or roles can perform which functions under specific circumstances. These are not functional requirements in themselves, but they may imply certain functional requirements to enforce the rules.>

# Other Requirements

<Define any other requirements not covered elsewhere in the SRS. This might include database requirements, internationalization requirements, legal requirements, reuse objectives for the project, and so on. Add any new sections that are pertinent to the project.>

Appendix A: Glossary

<Define all the terms necessary to properly interpret the SRS, including acronyms and abbreviations. You may wish to build a separate glossary that spans multiple projects or the entire organization, and just include terms specific to a single project in each SRS.>

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>

Appendix C: To Be Determined List

<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>