**Project Management Plan**

# **Project Objective:**

The objective of this project is to develop a user-friendly and efficient web application that facilitates the process of buying and selling cars. The platform will provide a comprehensive database of cars for sellers to advertise their vehicles and for buyers to search for and reserve their desired cars.

# **Project Scope:**

## **In scope:**

The car purchasing web application will provide the following functionalities:

**User Registration and Login:** Users will be able to register for an account and log in. After logging in, users will be directed to the car listing page, where they can view available cars.

**Car Search:** Users will have the ability to search for cars based on model.

**Car Reservation:** Users will be able to reserve a car from the available listings.

## **Out of scope:**

1. Unit testing
2. Integration testing
3. Test automation
4. Performance testing
5. Non-functional testing

## **Constraints:**

**Unique User IDs:** Each user will be assigned a unique phone number upon registration

**Web-Based System/PC-Based:** The application will be developed as a web-based system accessible through standard web browsers on desktop and laptop computers.

**Admin Features:** Admins will have the ability to delete user accounts, delete car advertisement to ensure smooth operation of the platform.

**User Categories:**

The project will have the following user categories:

**Users:** Individuals interested in buying or selling cars who will utilise the platform's features for car browsing, searching, and reservation.

**Admins:** Authorised personnel responsible for managing and overseeing the operation of the web application, including user accounts, car advertisement, and system administration tasks.

# **Roles and Responsibilities:**

* **Project Manager**: Bassant Samir
* **Developers**: Amira Bahaa, Alzahraa Mahmoud, Angelous Adel
* **Testers**: Muhammed Magdy, Ashraqat Elbidwehy

# **Problem Resolution Management:**

The following Table will be used to document and track reported problems

| ID | Description | Reporter | Date | Status | Action | Action Status |
| --- | --- | --- | --- | --- | --- | --- |
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## **Problem Identification:**

* Team members are encouraged to report any issues or challenges encountered during the projects
* Problems will be identified using the 5W2H technique

## **Problem Analysis:**

* For each reported issue, the team will conduct a root cause analysis to identify the underlying factors contributing to the problem
* Problems will be analysed using techniques “5 Whys” and “Fishbone Diagram” to explore the root causes of the problem
* A detailed analysis will be performed for complex and severe problems.

## **Problem Resolution:**

* The project manager will assign the problem to the appropriate team member
* The assignee will work to develop and implement appropriate action plans and solutions to address identified problems.
* Stakeholders will be consulted to ensure effectiveness of the action plans.

## **Managing and controlling action plans:**

* The status of reported problems will be tracked and monitored.
* Progress on problem resolution will be monitored regularly to ensure timely resolution and minimise project delays.

## **Problem Trends Analysis:**

* Periodically analyse the problem tracking and resolution activities to identify repetitive patterns or trends in reported problems.
* Conduct trend analysis to identify common root causes, recurring issues, and opportunities for preventive action.

# **Change Request Management:**

## **Change Request Form:**

* Changes will be requested by the customer or other stakeholders
* The Change Request Form will capture essential information about the changes requested
* It will be accessible to all project members and stakeholders for them to submit change requests
* Internal changes will not be included in the Change Request Form

| ID | Initiator | Change Description | Impact | Request Date | Action | Status |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

## **Change Management Process:**

* Change requests will be submitted using the Change Request Form
* All change requests will be reviewed to assess their potential impact on project scope, schedule, and quality.
* Changes will be implemented following the defined change implementation plan
* Change information will be communicated to project stakeholders through regular project status updates, change management reports.

## **Change Implementation Plan:**

* Approved Changes will be implemented, tested and validated, and documentation will be updated to reflect those changes.
* Changes will be implemented in a controlled manner to minimise disruption and ensure project integrity.

# **Stakeholders Involvement Plan:**

## **Communication Plan:**

* Communication channels: emails, online meetings, and face-to-face interactions.
* Communication frequency: at least once a week.
* Communication content: Project updates, progress reports, problems and risk discussion, and feedback sessions.

## **Stakeholder Engagement Activities:**

* Regular Updates: Providing stakeholders with regular updates on project progress, milestones achieved, and upcoming deliverables.
* Feedback Sessions: Conducting feedback sessions or surveys to gather input from stakeholders on project requirements, design decisions, and user preferences.
* Demonstrations: Organising product demonstrations or walkthroughs to explore key features and functionalities of the web application.

# **Risk Management Plan**

## **Risk Management Approach:**

* Our approach will be proactive and iterative, involving regular risk identification, assessment, and mitigation activities throughout the project lifecycle.
* Risks will be identified, documented, analysed, and monitored to ensure timely response and mitigation.

## **Risk Identification:**

* Risks will be identified through team meetings, brainstorming sessions, and monitoring of project progress. Each team member is encouraged to report any potential risks.

## **Risk Assessment:**

* Risks will be assessed based on their impact on project objectives and likelihood of occurrence.
* Risks will be categorised as low, medium, or high severity based on their potential impact on project scope and schedule.

## **Risk Response Planning:**

* For each identified risk, a response plan will be developed to mitigate its impact on the project.
* Response strategies will include:
* risk avoidance: when the risk weight is high
* risk acceptance: when the risk weight is low
* risk mitigation: to reduce impact or probability
* Response strategy is chosen depending on the nature and impact of the risk and available resources.

## **Contingency Planning:**

* Contingency plans will be developed for high-impact risks that cannot be fully mitigated.
* These plans will outline specific actions to be taken in the event that the risk occurs, allowing the project to continue with minimal disruption.

## **Risk Monitoring and Control:**

* Risks will be regularly monitored throughout the project lifecycle using the risk log.
* The project manager will track the status of identified risks, assess the effectiveness of risk responses, and implement corrective actions as needed.

## **Risk Documentation:**

All project risks will be documented in the risk log

| ID | Risk Description | Impact | Probability | Priority | Status | Response Strategy |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

# **Review Process**

## **Planning Phase:**

* + Defining the objectives and scope of the review.
  + Defining the work product to be reviewed
  + Identifying the review participants and stakeholders.
  + Scheduling the review meeting

## **Preparation Phase:**

* + Making sure every participant has access to the work product to be reviewed.
  + Prepare review materials, like checklists to facilitate the review process.
  + Assign roles and responsibilities to review participants, such as moderator, recorder, and reviewers.

**Individual Review:**

* + Reviewers independently examine the review work product and documentation, then log all their identified anomalies, recommendations, and questions
  + Use checklists, guidelines, and review criteria to evaluate the quality of the work product

## **Group Review Meeting:**

* + Conducting a review meeting with all participants to discuss findings, anomalies, and recommendations identified during the individual review.
  + Document all identified issues, comments, and decisions made during the review meeting.

**Issue Resolution:**

* + Assign actions to resolve identified issues and defects.
  + Follow up on action items to ensure resolution and closure.
  + Update the documentation based on the outcomes of the review and issue resolution activities.

## **Follow-Up Activities:**

* + Conduct follow-up activities, such as re-reviews or verification checks, to validate the effectiveness of action plans and issue resolution activities.

# **Configuration Management Process**

## **Configuration Identification**

* Identify configuration items (CIs) including software and documentation.
* Establish baselines for each CI at key milestones.

## **Configuration Control**

* Document change requests and their impact on project baselines.
* Establish a configuration control board (CCB) responsible for reviewing and approving changes.

## **Roles and Responsibilities**

* Project Manager: Overall responsibility for configuration management within the project.
* Configuration manager:Managing the configuration management system/tool used in the project.
* Development Team: Responsible for adhering to configuration management procedures,
* Configuration Control Board (CCB): Reviews and approves proposed changes to configuration items.

## **Tools and Techniques**

* Version Control System (VCS): Git will be used as the primary version control tool for managing source code and documentation.
* Document Management System: Google docs will be used for storing and managing project documentation.

## **Documentation**

* Configuration Management Plan
* Configuration Item List

## **Branching strategy**

* **Main Branch (Master)** The primary branch always reflects the production-ready state, changes made through pull/merge requests.
* **Development Branch (Develop):** All ongoing development work merged here; developers create feature branches from here.
* **Feature Branches:** Dedicated to specific features or tasks, changes merged back into the development branch.
* **Release Branches:** Created for stabilising and preparing code for deployment, merged into the main and development branches when ready.

## **Baseline Strategy:**

## Baselines are established at key milestones in the development process.

## Baselines ensure that configurations at specific points in time are identifiable and retrievable.

## Baselines are used as reference points for comparison and to track changes over time.

in our project the baseline would be every:

* sprint
* release

**Baseline naming convention**

* Project name
* Milestone or phase of development schedule
* Date created

**ex:Car\_Purchasing\_sprint1\_30-3-2024**

## **Documents naming conventions**

There are three key features of document naming conventions:

1. Using the file name.
2. Using underscore special character to separate words in the file name
3. Using a consistent suffix to indicate the version number of the file ( v1, v2, and v1.1 if there were fixes)

**ex:PMP\_v1**