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| **BURGER BOX CAR WASH SYSTEM** |
| BUSINESS ANALYSIS 3 – FINAL YEAR PROJECT |
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| **GROUP NAME: Team ABC(always be closing)** |

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| --- | --- | --- | --- |
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| Our project concerns the implementation of a system for Burger box car wash. This project will help the stakeholder to better manage his company. |

**Final Submission**

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| **document revision history** | | | |
| **revision** | **date** | **section** | **description of changes** |
| 1.Cover page  2. Table of content  3. The mission  4. All text  5.Font  6. Grammar  7.Gantt chart | 05/09/2017 | 1 | 1. The cover page needed a submission date and a section number.  2. The headings were aligned and sub-headings were numbered properly.  3. The mission was in point form, but in a paragraph.  4. All the paragraphs have to be aligned.  5. The font size and type needs to be the same for the entire text.  6. Grammar in all text has been checked.  7. The Gantt chart needed to be in a landscape format. |
| 1.Cover page  2. Table of content  3.PIECES analysis  4.Problem statement matrix  5. Use-case  6.Use-case glossary | 12/09/2017 | 2 | 1. The cover page needed submission date. 2. Table of content was supposed to include all sections. 3. It needed more elaboration and consistency. 4. Problem matrix needed a glossary to explain the different abbreviations and the statement of problem needed more explanations. 5. Use-cases needed appropriate description and actors involved were not linked accordingly. 6. Glossary needed to have same names as in the use-case diagram. |

1. **Initial Investigation**

**1.1.** **Business Background**

Burger Box Car Wash was established in 1960 in Boksburg and has now two other branches in Vereeniging and Johannesburg. It started as a restaurant but they then realised that there is a market beyond only a restaurant, so an arcade game was built then a gambling site and lastly a car wash. The buildings and facilities were designed for car washing, arcade Burger Box Car Wash was established in 1960 in Boksburg and has now two other branches in Vereeniging and Johannesburg. It started as a restaurant but they then realised that there is a market beyond only a restaurant, so an arcade game was built then a gambling site and games, restaurant and gambling. These extra facilities enable the company to keep the customers entertained while they wait for their cars to be washed, children and adults will be at a restaurant or at arcade games, and only adults are allowed to enter the gambling site.

* + 1. **Mission**

The mission is to continually improve our efficiency and competitiveness by improving our facilities and premises, constantly investigate new procedures and chemicals, developing staff efficiency and training initiatives.

* + 1. **Vision**

Our vision is to be the most respected entertainment centre and Carwash business in Gauteng and we want to provide our customer’s vehicles an excellent service, keeping their cars in an excellent condition while also giving them proper hospitality. Our reputation lies in the fact that we aim to look after our customer’s vehicles in all aspects to ensure that it looks immaculate every time it leaves our premises and our customer’s entertainment needs is fulfilled.

* + 1. **Business Activities**

The business is currently operating their day-to-day business using the file processing system. It is the use of paper work to record all business activities that take place all day. When the customer comes, the receptionist or cashier will then ask what kind of car wash service the customer wants to have from the list of all services they provide in their business and after the customer has stated what he/she wants the cashier categorises the car to be washed and issue out a hand written receipt. The customer then puts the receipt in the car so that the washing team will know what service to do in the car. After completion of the cleaning, the car is ready to go to the customer. The customer then pays the amount due and leaves. The payment information is then recorded manually in a transaction journal. The car wash business is using basic bookkeeping to perform all financial auditing of the business’s finances. The Car Wash trading hours is from 08:00am to 05:00pm on weekdays and 08:00am to 03:00pm on weekends.

* + 1. **Business Rules**

The Burger Box car wash will allow an employee to enter customer information to register first time customers. Customer information includes the customer identification number, the street name, the house number, the city, and the zip code, the first name, the last name and contact number. A customer can own many cars with different registration numbers. An employee also need to record car details, which are the car registration number, description and model in order to keep track of which car frequently come to the car wash.

A customer need to make an arrangement of which service is to be rendered to his/her car. The services offered include full wash, dash and vacuum, valet, wash and dry, wash and go and engine wash, which comes at different prices. After the required service has been rendered, the cashier will issue a receipt to the customer. Cash only can make the payments. Employees are responsible for washing different cars and may be assigned to do different services. The cashier is only involved with the payments.

**1.2. Purpose of the Project**

* To develop a management information system for a car wash business that currently uses a bookkeeping system which lacks information integrity and does not clearly provide reports for management decision making, hence this project will bring about a database approach to better meet the needs of user input and output of information and querying so that managers can make informed decisions.
* To draft a formal documentation for the above mentioned information system.
  1. **1.3. Project Scope**
     1. **General Information**

|  |  |  |  |
| --- | --- | --- | --- |
| Project Title: | Car Wash Management System | | |
| Brief Project Description: | Drafting a formal documentation for a system that will keep track of all sales and will perform registration of customer information for management audit and decision making purposes. | | |
| Prepared By: | Team ABC(Always Be Closing) | | |
| Date: | 21 August 2017 | Version: | 1.1 |

* + 1. Project Objective

|  |
| --- |
| The purpose of the project is to develop car wash management information system for an existing business that is currently operating on bookkeeping system. To have a system that will keep record of daily business activities regarding the car wash, to produce reports of daily/monthly business activities and for auditing and decision making purposes. Having a system in place will help executive members to acquire processed information, in terms of knowing what are the business expenses (car wash), how much profit are they making and if they have reached their profit margins so that they can know what to do to improve the quality of their service and customer relationship towards the car wash. The project will help the managers to exploit business opportunities that arise for them to increase their competitive advantage from the business information provided by the system. The system should be delivered on time and the system should be acceptable to the customer. |

* + 1. Assumptions

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| * This project will take two months and one week to be documented. |

* + 1. Project Scope

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| To develop a system for the car wash, that will keep track of daily business transactions, register customer information, and provide detailed business reports within a period of 3 months. |

Excluded from the scope:

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| * A system for the restaurant. * A system for the arcade game. * A system for the gambling operations |

* + 1. Impact Statement

|  |  |
| --- | --- |
| **Potential Impact** | **Systems / Units Impacted** |
| The generated reports produced by the system will allow the owners to make good decisions for the car wash. | Managerial department |
| The system will reduce time spent when recording a service done. | Finance Department |
| The system will give the owners better understanding of the average of products used per month. | Finance/Managerial Department |

* + 1. **Roles and Responsibilities**

|  |  |
| --- | --- |
| Sponsor: | |
| Name | **Email / Phone** |
| Mr Patrick Mabadie | [mabadiep@gmail.com](mailto:pmabadie@gmail.com) |
|  | |
| Project Manager: | |
| Name | **Email / Phone** |
| Thabang Senokwane | [Thabangsenokwane.ts@gmail.com](mailto:Thabangsenokwane.ts@gmail.com) |
|  | |
| Team Member: | |
| Name | **Email / Phone** |
| Edna Ombenontori Ognongo | [ednagareth@gmail.com](mailto:ednagareth@gmail.com) |
| Vongiwe Mchavi | [vongiemchavi@gmail.com](mailto:vongiemchavi@gmail.com) |

|  |  |
| --- | --- |
| **Customer (Point of Contact in Business):** | |
| **Name** | **Email / Phone** |
| Burger Box Car Wash | 083 520 6268 |
|  | |
| **Subject Matter Expert:** | |
| **Name** | **Email / Phone** |
| Lebo | 073 629 3434 |

* + 1. Resources

|  |  |
| --- | --- |
| Resource | Constraints |
| Project Budget | R |
| Site visits transport costs | 300 |
| Documentation Printing costs | 100 |
| Documentation file cost | 30 |

* + 1. Project Risks

|  |  |
| --- | --- |
| Risk | Mitigation Strategy |
| Budget overspending | Ensure that money is not overspent. |
| Time | Complete all tasks and activities at predefined times. |
| Information | Ask relevant questions that will meet the system and user requirements. |

* + 1. Success Measurements

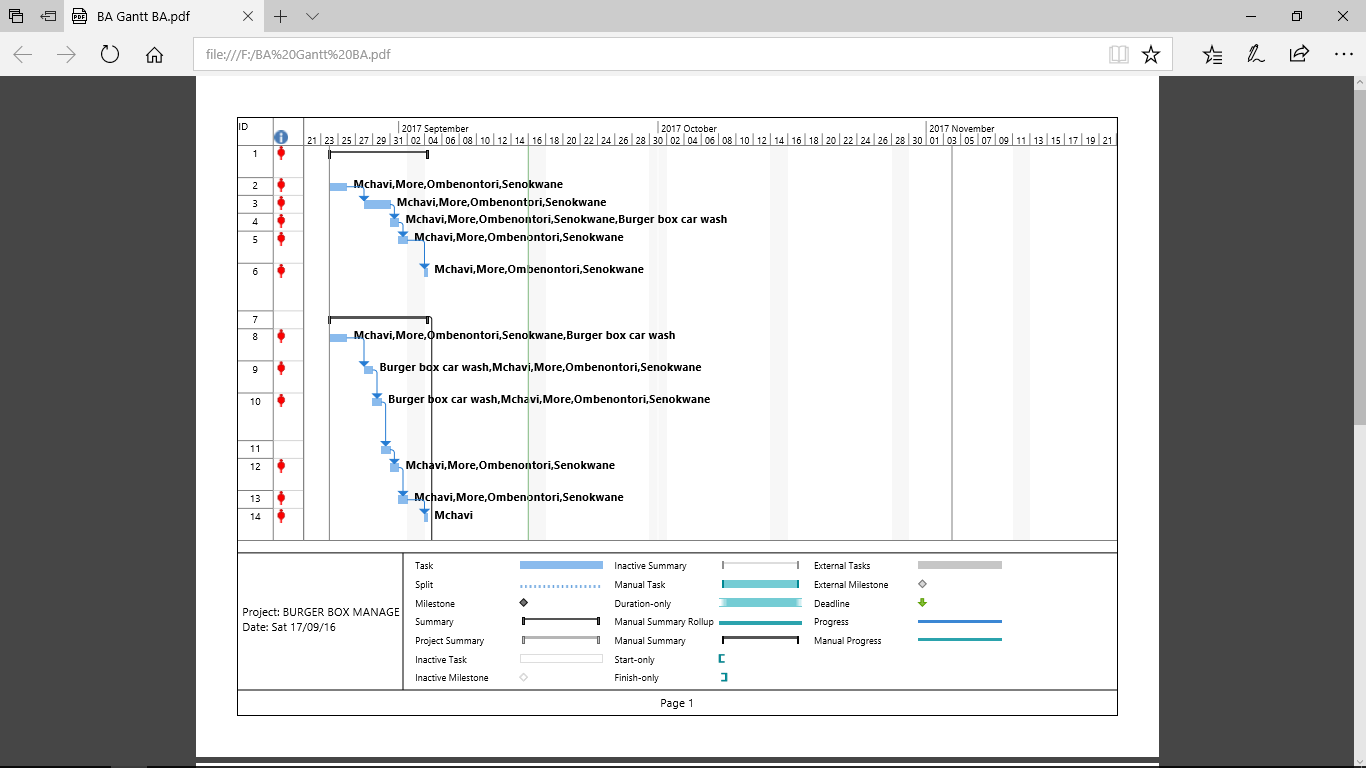
|  |
| --- |
| 1. Finished on specified time.  2. Project completed within the allocated budget.  3. Met all the business requirements |

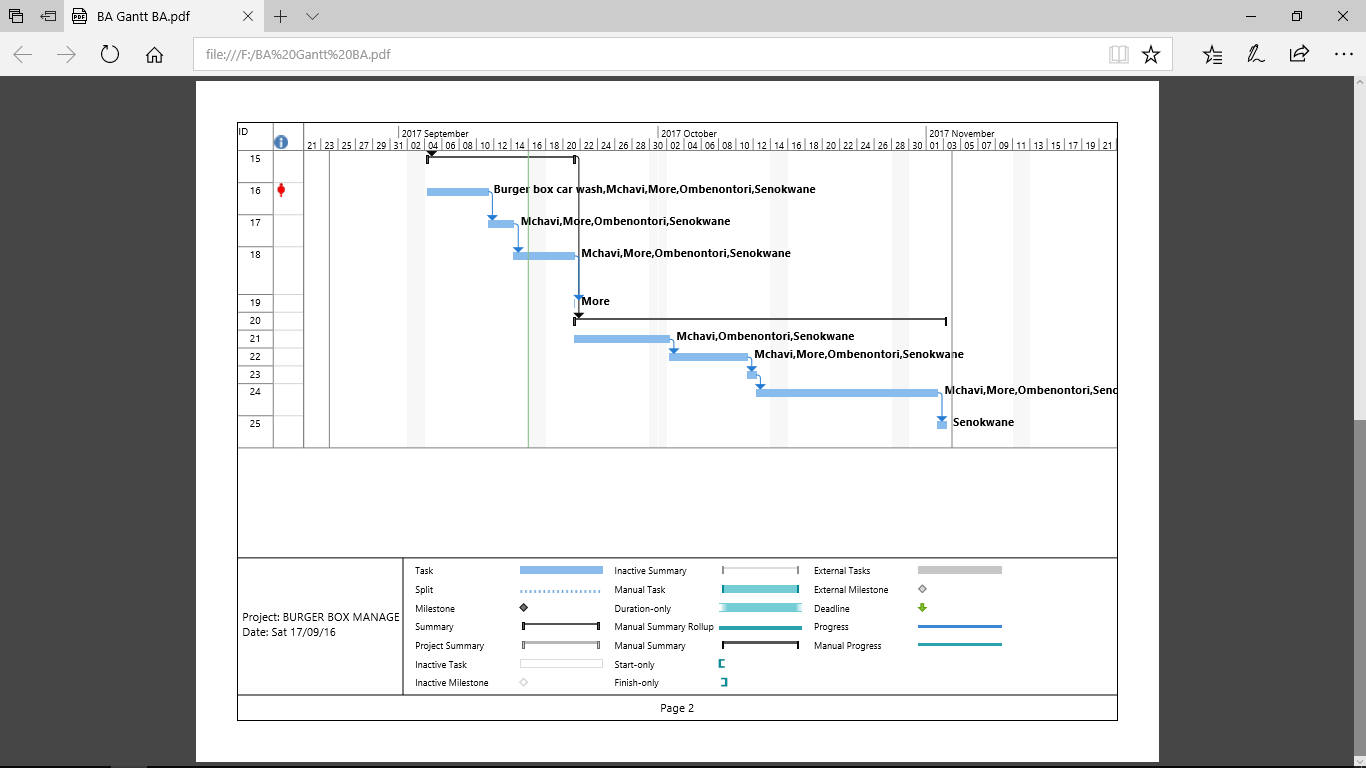
* + 1. Signatures

|  |  |  |
| --- | --- | --- |
| **Customer (Point of Contact):** |  |  |
| **Name** | **Signature** | **Date** |
| Burger Car Wash |  |  |
|  | | |
| **Project Sponsors:** |  |  |
| **Name** | **Signature** | **Date** |
| Mr. Patrick Mabadie |  |  |
|  | | |
| **Project Manager:** |  |  |
| **Name** | **Signature** | **Date** |
| Thabang Senokwane |  |  |

**1.4 Forecasted Scheduling of the Project**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Task Name | Duration | Start | Finish | Predecessors | Resource Names |
| **1 Initial investigation** | **7,01 days** | **Thu 17/08/24** | **Mon 17/09/04** |  | **Mchavi;More;Ombenontori;Senokwane** |
| 1.1 Brain storming | 2 days | Thu 17/08/24 | Fri 17/08/25 |  | Mchavi;More;Ombenontori;Senokwane |
| 1.2 Find user | 3 days | Mon 17/08/28 | Wed 17/08/30 | 2 | Mchavi;More;Ombenontori;Senokwane |
| 1.3 Meet user | 1 day | Thu 17/08/31 | Thu 17/08/31 | 3 | Mchavi;More;Ombenontori;Senokwane;Burger box car wash |
| 1.4 Team members meeting | 1 day | Fri 17/09/01 | Fri 17/09/01 | 4 | Mchavi;More;Ombenontori;Senokwane |
| First submission and team meeting to discuss part 2 | 5 mins | Mon 17/09/04 | Mon 17/09/04 | 5 | Mchavi;More;Ombenontori;Senokwane |
| **2 Problem analysis** | **7, 01 days?** | **Thu 17/08/24** | **Mon 17/09/04** |  |  |
| 2.1 current system analysis | 2 days | Thu 17/08/24 | Fri 17/08/25 |  | Mchavi;More;Ombenontori;Senokwane;Burger box car wash |
| 2.2scheduled team meeting+ user | 1 day | Mon 17/08/28 | Mon 17/08/28 | 8 | Burger box car wash;Mchavi;More;Ombenontori;Senokwane |
| 2.3 Change management strategy | 1 day | Tue 17/08/29 | Tue 17/08/29 | 9 | Burger box car wash;Mchavi;More;Ombenontori;Senokwane |
| 2.4 Pieces analysis | 1 day? | Wed 17/08/30 | Wed 17/08/30 | 10 |  |
| 2.5 Create problem statement matrix | 1 day | Thu 17/08/31 | Thu 17/08/31 | 11 | Mchavi;More;Ombenontori;Senokwane |
| 2.6 Use case | 1 day | Fri 17/09/01 | Fri 17/09/01 | 12 | Mchavi;More;Ombenontori;Senokwane |
| 2.7 Second submission | 5 mins | Mon 17/09/04 | Mon 17/09/04 | 13 | Mchavi |
| **3 Requirements specifications** | **13,01 days** | **Mon 17/09/04** | **Thu 17/09/21** | **7** |  |
| 3.1 Define requirement | 5 days | Mon 17/09/04 | Mon 17/09/11 |  | Burger box car wash;Mchavi;More;Ombenontori;Senokwane |
| 3.2 Requirement master list | 3 days | Mon 17/09/11 | Thu 17/09/14 | 16 | Mchavi;More;Ombenontori;Senokwane |
| 3.3 Full requirements specification | 5 days | Thu 17/09/14 | Thu 17/09/21 | 17 | Mchavi;More;Ombenontori;Senokwane |
| 3.4 Third submission | 5 mins | Thu 17/09/21 | Thu 17/09/21 | 18 | More |
| **4 Design models** | **31 days?** | **Thu 17/09/21** | **Fri 17/11/03** | **15** |  |
| 4.1 ERD | 7 days | Thu 17/09/21 | Mon 17/10/02 |  | Mchavi;Ombenontori;Senokwane |
| 4.2 DFD | 7 days | Mon 17/10/02 | Wed 17/10/11 | 21 | Mchavi;More;Ombenontori;Senokwane |
| 5. Final project | 1 day? | Wed 17/10/11 | Thu 17/10/12 | 22 |  |
| 5.1 Prepare final project | 3 wks | Thu 17/10/12 | Thu 17/11/02 | 23 | Mchavi;More;Ombenontori;Senokwane |
| 5.2 Fourth submission | 1 day | Thu 17/11/02 | Fri 17/11/03 | 24 | Senokwane |





1. **Problem Analysis**

**2.1 Overview of the Current System**

Burger Box Car Wash is currently using a manual book keeping system to record information of customers and the required services. The manager assists the customer to fill in their valid details on a book. The book can be full after a week or a month, meaning the information might get lost and be duplicated because data is scattered in various books. The book keeping system limit the manager to produce accurate reports.

Customers make a reservation for a service face to face. The manager allocates a quote as per the customer’s requested service. Once the service is booked, the schedule time is allocated to the customer. The customer then makes cash payment depending on the given quote. Unauthorized users are currently able to access the customer data.

**2.2 PIECES Analysis**

|  |  |
| --- | --- |
| **Performance** | * **Throughput**:   The amount of work is performed over a long period to retrieve information.   * **Response time**:   The current system makes the information retrieval very difficult and slow.   * **Solution:**   The proposed system will be able to process and retrieve the customer information much faster by prompting the system for a specific record. |
| **Information** | * **Inputs:**   Data is captured in different books and it is not accurate.   * **Outputs:**   Information retrieved are not in a useful format and are not timely and inaccurate in generation reports.   * **Stored data:**   Data is stored redundantly and not well organized. Added to that, in a case of vandalism or accidents data is not secure.   * **Solution:**   The proposed system will ensure of the accuracy of the data captured and stored in a database to avoid redundancy. |
| **Economics** | * The quantity of paper used over the time makes the cost too high for the car wash. * After some time, the car wash cannot tell how much has been spent on paper to register customer. * **Solution:**   The proposed system will reduce the quantity of paper used by creating a database that will run for many years. |
| **Control and security** | * Input is not edited in an adequate manner. * Ethics are breached on information (data can be accessed by unauthorized people). * Data is processed regularly, thus reports are also generated redundantly. * **Solution:**   The proposed system will ensure that data is stored in a secured database where data not being vulnerable in terms of being accessed by unauthorized personnel. |
| **Efficiency** | * The car wash management waste a lot of time to process previous records. * Papers required to file customers are excessive and it is a waste of supplies. * Effort to retrieve a customer is very excessive. * **Solution:**   The proposed system will retrieve information faster because the database respond immediately |
| **Service** | * The bookkeeping used by the car wash produces inconsistent information about the services offered because the information is being retrieved from different files. * The bookkeeping is incompatible with other systems and it restricts the customers to pay only in cash. * **Solution:**   The proposed system will help the employee select required service and automatically generate the prices and total prices. |

**2.3. PROBLEM STATEMENT MATRIX**

|  |  |
| --- | --- |
| **PROJECT NAME: Team ABC(Always be Closing)** | **PROJECT MANAGER: T.P Senokwane** |
| **FIRST CREATED BY: K.S More** | **LAST UPDATED BY: EG Ombenontori** |
| **DATE CREATED: 28 August 2017** | **DATE LAST UPDATED: 15 September 2017** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Brief Statements of Problem, Opportunity, or Directive** | **Urgency** | **Visibility** | **Annual Benefits** | **Priority or Rank** | **Proposed Solution** |
| 1. There is currently no backup recovery plan. If the book is lost, stolen or damaged, all the data (customer records) will be forfeited and the current system does not store customer’s information, the customer’s information is recorded on a card, which is kept by the customer for discount purposes, and this becomes a problem when the customer loses the card. | ASAP | Medium | A decrease in theft(money) since the system will be recording every transaction made | 2 | Implement a system that can backup records at certain intervals (Back up monthly) |
| 1. On the current system, data is recorded on paper (book) and only on paper. There are no technologies used to record the data. This will result in an increase instance of data inconsistency, for example a record of a customer already exist in the previous pages of the book and a cashier adds that customer again with new information instead of updating the record of the customer. | ASAP | Medium | Improved consistency, integrity and accuracy of data stored | 1 | Build a system that can keep customer records |
| 1. The current system cannot perform simple calculations for example calculating discounts. | ASAP | High | Increased time to serve other customers | 3 | Build a system that can automatically generate calculations |

**Problem matrix glossary**

|  |  |
| --- | --- |
| Visibility | How many users will be directly impacted by the proposed solution |
| ASAP | As soon as possible |
| Visibility(High) | Many users will be directly impacted by the proposed solution |
| Visibility(Medium) | Moderate number of users will be directly impacted by the proposed solution |
| Visibility(Low) | A few users will be directly impacted by the proposed solution |

**2.4 Use Case Diagram**



**Use-case glossary**

|  |  |  |  |
| --- | --- | --- | --- |
| Use-case name | Use-case description | Primary actors | Participating actors |
| Validate cashier | This use-case describes the cashier accessing the system. | * cashier |  |
| Register customer | This use-case describes the cashier entering the customer details and checking if he already exists. | * cashier | * customer |
| Request service | This use-case describes a customer asking for a specific service. | * customer | * cashier |
| Record service | This use-case describes the cashier recording the services the customer asked for. | * Cashier | * customer |
| Pay service | This use-case describes the customer paying for the services he required. | * customer | * cashier |
| Issue receipt | This use-case will allow the cashier to give a proof to the customer about the payment that he made. | * cashier | * customer |
| Generate reports | This use-case helps the manager to assess the daily or monthly in incomes of the car wash | * manager |  |

**2.5 Change Management**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Affected Department(s)** | **Affected Role(s)** | **Impact Level** | **Impact On Day-To-Day Activities** | **Change Management Activities** |
| Finance | Cashier | High | It will be easier for the cashier to calculate daily amounts received | The system will automatically calculate |

**3. SPECIFICATION**

**Definitions**

* A **requirement** is “a condition or capability that must be met or possessed by a system, product, service, result, or component to satisfy a contract, standard, specification, or other formal document”.
* **Functional requirements** are requirements associated with the main functionality of the system (what the system must do).

**E.g.,** the system should register new customers.

* **Non-Functional requirements** are the requirements that specify the criteria that can be used to judge the operation of the system (a property or quality the system must have).

**E.g.,** the system must load pages in a timely manner (approximately 5 seconds).

* **User-Interface requirements** are requirements that describes all the interfaces used to interact with the user.

**E.g.,** the login page should have text fields that accept user inputs and buttons to allow a customer to register or login.

* **Database requirements** are the specifications, quality, rules, constraints and data structure the database must have and functions it must perform.
* **Security requirements** describe functional and non-functional requirements that need to be satisfied and implemented to achieve the security attributes of the system.
  1. **Requirements Master List**

Req 1: The system should record or search vehicle either for a new or an existing customer.

Req 2: The system must be able to display all available services.

Req 3: The system should allow the customer to request for one or more services.

Req 4: The system should allow the manager to update customer account details.

Req 5: The system should allow the manager to view different reports.

Req 6: The system should allow the manager to add new employees (Cashier/washers)

Req 7: The system should generate reports.

* 1. **Full Requirements Specification**

**Req 1: The system should record or search vehicle either for a new or an existing customer**

**Input**

The customer provides the cashier with personal details including the Customer Identification Number (13 characters long), Car Registration Number (10 character long), City, Street Name, Zip Code, House Number (60 character long), Type of Car (20 character); and first name and last name (30 characters), Contact Number (10 characters).

**Processing**

When the user presses the “save” button, then the system determines whether the user has input the correct information. If the user has skipped any field, the system will pop up a message box to show which fields were skipped. After the information is taken by the system, then the system will save the customer details information into the customer table in the database and creates a random generated customer number.

**Output**

The system will then show a message box saying “Customer Successfully Registered” then the Home screen will be displayed.

**Req 2**: **The system must be able to display all available services.**

**Input**

The employee number and password (Manager or Cashier)

**Processing**

The system will allow the cashier or manager to log in and then the employee will click on the “Show Services” button.

**Output**

The system will show all the available services at that current time.

**Req 3: The system should allow the customer to request for one or more services.**

**Input**

The system will require the cashier/manger’s credentials than the customer will inquire if the service(s) are available.

**Processing**

After acquiring information of services available, the cashier will then select the required request(s) made by the customer, and then the system will add the request to the list of services required.

**Output**

The system will show the requested services and prices.

**Req 4: The system should allow the manager to view different reports.**

**Input**

The system will require the manger’s/Cashier’s credentials to log in, then he/she will press the reports button and then the buttons to different reports will be displayed where he/she will choose from.

**Processing**

The system will allow the manager to press the button to which report he want to view.

**Output**

The system will show reports depending on what report the Cashier/manager want.

**Req 5: The system should allow the cashier/manger to update customer account details.**

**Input**

The system will require the manger’s/cashier’s credentials to log in, then he/she will insert the customer number that he/she wishes to update the record

**Processing**

The employee (Cashier/manager) will click on “Update customer” button then edit the fields (except for customer number) that he/she wishes to update.

**Output**

The system will then show a message box saying, “Customer updated successfully!”

**Req 6: The system should allow the administrator to add new employees (cashier/cleaners)**

**Input**

The employee provides the administrator with personal details including the Employee Identification Number (13 characters long), City, Street Name, Zip Code, House Number (60 character long), and first name and last name (30 characters), Contact Number (10 characters).

**Processing**

When the administrator presses the “save” button, then the system determines whether the administrator has inserted the correct information. If the Cashier has skipped any field, the system will pop up a message box to show which fields were skipped. After the information is taken by the system, then the system will save the employee details information into the employee table in the database and creates a random generated employee number.

**Output**

The system will then show a message box saying “Employee Successfully Registered” then the Home screen will be displayed

**Req 7: The system should generate reports.**

**Input**

The manager/cashier will click on “Show Reports”.

**Processing**

The system will then display a window where an employee (manager/cashier) can select what kind of report does he/she wants to view (Profit Made, Regular Customers, and Total Number of registered Customers)

**Output**

A requested report will then show on a new window.

**Reports**

**Exception report**

The system will produce reports of estimates regarding profit the carwash will expect to make at the end of the month.

**Detail report**

The system will produce reports on customers such as details of the customer, total number of registered customers.

**Summary report**

The system will produce reports on the most required service.

4.1 Data Flow Diagram (DFD)



4.2 Entity Relationship Diagram (ERD)



**PROJECT CHANGE REQUEST FORM**

|  |  |  |  |
| --- | --- | --- | --- |
| Project Information | | | |
| Project Title: Burger Box Car Wash | | Project Number: | |
| Project Manager: VA MCHAVI | | | |
| Section 1: Change Request | | | |
| Requestor Name:  Contents  [Project Change Request Form……..1](#_Toc498623893)  TP SENOKWANE  Requestor Phone:0783465571 | Date of Request: | | Change Request Number: |
| Item to be Changed:   * User credentials validations * User interface * Searching a customer or vehicle * Disabling customer records * Attributes for entities. | | | Priority:   * High * Medium * High * High * High |
| Description of Change:   * Addition of credential validations to the login form, checking if the user entered valid data to respective fields. This includes username, password. * The interface has changed. * The system now allows the user to search exiting vehicle or customer. * The system now does not allow the cashier or manager to disable the customer’s record. * Requested attributes for some entities have changed. | | | |

|  |  |
| --- | --- |
| Section 2: Change Evaluation | |
| Evaluated by: TP SENOKWANE | Work Required:   * The java script and jQuery validations are used to verify the entered data on each field. * The interface was changed in a way that makes the system easy to use. * This require the cashier or manager to click on the “search vehicle/ search customer” in order to display the required record. * The cashier or manager can decide to delete customer record. * Elimination of unnecessary attributes , making the system more simple to work with. |
| What is Affect:   * The credentials validations check whether the entered input are correct. * The interface is a way of making the system catchy and attractive. * We made it so the Cashier or manager can search an existing vehicle or customer for faster processing. * Disabling customer record will consume space in the database so it is better to delete it. * Some attributes were not necessary and some were not relevant to an entity as we developed the system so there are changes on the attribute. |
| Impact to Cost, Schedule, Scope, Quality, and Risk:   * Changes regarding the validations improve the quality and reduces the risk, have no impact on the cost and have not taken much time to work on it. * Interface improve the quality and saves time and has no impact on costs. * Searching for a vehicle or customer saves time and improve the quality, and has no impact on cost and risk. * Not Disabling customer records reduces costs. It has no impact on scope, schedule, and risk. * Attributes elimination, improves the quality, has no impact on cost, schedule, scope or risk. | |

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| Section 3: Change Resolution | | |  |
| Accepted | Approved by (Print):  EG OMBENONTORI | Signature: | Date: |
| Comments:  The changes made to the system makes more sense and will definitely help to better the system to perform at its most ability and fulfil its purpose. | | | |
| Section 4: Change Tracking | | |  |
| Completion Date | Completed by(Print):  VA MCHAVI | Signature: | Date: |
| My signature above indicates that the project documentation has been updated to accurately and comprehensively reflect the approved changes. | | | |

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| Project Information | | | | | | | |
| Project Title: Burger Box Car Wash | | | | | Project Number: | | |
| Project Manager: | | | | | | | |
| Change Number | Description of  Change | Priority | Date  Requested | Requested By | | Status | Date Resolved |
| 1. | User credentials validations | High | 02/04/2018 | EG OMBENONTORI | | Approved | 04/04/2018 |
| 2. | User interface | Medium | 25/05/2018 | VA MCHAVI | | Approved | 31/05/2018 |
| 3. | Searching a customer or vehicle | High | 25/04/2018 | VA MCHAVI | | Approved | 09/05/2018 |
| 4. | Disabling customer record | High | 02/05/2017 | TP SENOKWANE | | Approved | 02/05/2018 |
| 6. | Attributes for entities. | High | 13/09/2017 | EG OMBENONTORI | | Approved | 10/04/2018 |

# System Test Case for the Burger Box Car Wash System: recording and managing customer vehicles

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| --- | --- |
| **Purpose:**  Verify the function of the Burger Box Car Wash management system. | |
| **Test Run Information:**  **Tester Name:** team ABC  **Date(s) of Test:**  11/04/2018, 13/04/2018, 17/04/2018, 20/04/2018, 23/04/2018, 2/05/2018, 07/05/2018, 10/05/2018, 14/05/2018,  17/05/2018, 21/05/2018, 29/052018, 31/052018, 02/06/2018, 04/06/2018, 05/06/2018,06/06/2018 | **Prerequisites for this test:** None |
| **Software Versions:**  Application: Burger Box Car Wash system  Database: MySQL  Operating System: Windows 10 |
| **Required Configuration:** Xampp, NetBeans 8.2 or higher, MySQL connector, jasper report plugins, fontawesomefx, jphoenix, scene builder |

| **STEP** | **TEST STEP/INPUT** | **EXPECTED RESULTS** | **ACTUAL RESULTS** | **PASS/FAIL** |
| --- | --- | --- | --- | --- |
|  | Enter Employee Username and password in the login page. | Able to enter text | The text box was able to enter text | Pass |
|  | Press the login button | The dashboard should appear | Dashboard did not appear | Fail |
|  | Enter Vehicle information to register the vehicle in the database | Able to register a new vehicle in the database | We could not select the vehicle type | Fail |
|  | Press register Vehicle button | Confirmation message that the vehicle is registered | Errors were popping up every time we tried to save | Fail |
|  | Enter customer information to register a customer in the database | Able to register a new customer | Contact number and gender were both giving us problems every time we pressed the save button | Fail |
|  | Press register customer button | Confirmation message that the customer is registered | If all information is correct, the button would save those information | Pass |
|  | Select the ownership type | Vehicle registration number and customer name must appear and the user should be able to select the ownership type for that specific customer | Information displayed are not correct and the different type of ownership are not showing | Fail |
|  | Assign employee name | Select the employee that will be the team leader for performing the chosen services | Employee is selected | Pass |
|  | Select services | Check boxes of the chosen services | User is able to select the services | Pass |
|  | Click total amount | ‘Total amount’ button must display the sum of the chosen services | The displayed sum is not correct | Fail |
|  | Enter description for services | User must be able to enter a description | User enter the description | Pass |
|  | ‘Save record’ button | Message box must appear to confirm that the services have been saved | Services are successfully saved | Pass |
|  | Press the login button | The dashboard should appear | Dashboard did not appear | Fail |
|  | Enter Vehicle information to register the vehicle in the database | Able to register a new vehicle in the database | All information are successfully edited | Pass |
|  | Press register Vehicle button | Confirmation message that the vehicle is registered | Button is not working. Nothing is happening when we click | Fail |
|  | Enter customer information to register a customer in the database | Able to register a new customer | Customer is not successfully added to the database | Fail |
|  | Press register customer button | Confirmation message that the customer is registered | Button is not working anymore | Fail |
|  | Select the ownership type | Vehicle registration number and customer name must appear and the user should be able to select the ownership type for that specific customer | Information displayed are not correct but now the different type of ownership are showing | Fail |
|  | Assign employee name | Select the employee that will be the team leader for performing the chosen services | Employee is selected | Pass |
|  | Select services | Check boxes of the chosen services | User is able to select the services | Pass |
|  | Click total amount | ‘Total amount’ button must display the sum of the chosen services | The displayed sum is correct only when one service is selected | Fail |
|  | Enter description for services | User must be able to enter a description | User enter the description | Pass |
|  | ‘Save record’ button | Message box must appear to confirm that the services have been saved | Services are successfully saved | Pass |
|  | Press the login button | The dashboard should appear | Dashboard appears as requested | Pass |
|  | Enter Vehicle information to register the vehicle in the database | Able to register a new vehicle in the database | All information are successfully edited | Pass |
|  | Press register Vehicle button | Confirmation message that the vehicle is registered | Confirmation message appears as requested | Pass |
|  | Enter customer information to register a customer in the database | Able to register a new customer | Customer is successfully added to the database | Pass |
|  | Press register customer button | Confirmation message that the customer is registered | Button is working | Pass |
|  | Select the ownership type | Vehicle registration number and customer name must appear and the user should be able to select the ownership type for that specific customer | User is able to select the ownership type and proceed | Pass |
|  | Assign employee name | Select the employee that will be the team leader for performing the chosen services | Employee is selected | Pass |
|  | Select services | Check boxes of the chosen services | User is able to select the services | Pass |
|  | Click total amount | ‘Total amount’ button must display the sum of the chosen services | The displayed sum is correct | Pass |
|  | Enter description for services | User must be able to enter a description | User enter the description | Pass |
|  | ‘Save record’ button | Message box must appear to confirm that the services have been saved | Services are successfully saved | Pass |
|  | Enter the amount received in the textbox | User must be able to key in the amount the customer is giving him | User is able to able to enter the amount received | Pass |
|  | Click ‘make payment’ | Message box should appear displaying payment success | We got an error message | Fail |
|  | Press the login button | The dashboard should appear | Dashboard appears as requested | Pass |
|  | Enter Vehicle information to register the vehicle in the database | Able to register a new vehicle in the database | All information are successfully edited | Pass |
|  | Press register Vehicle button | Confirmation message that the vehicle is registered | Confirmation message appears as requested | Pass |
|  | Enter customer information to register a customer in the database | Able to register a new customer | Customer is successfully added to the database | Pass |
|  | Press register customer button | Confirmation message that the customer is registered | Button is working | Pass |
|  | Select the ownership type | Vehicle registration number and customer name must appear and the user should be able to select the ownership type for that specific customer | User is able to select the ownership type and proceed | Pass |
|  | Assign employee name | Select the employee that will be the team leader for performing the chosen services | Employee is selected | Pass |
|  | Select services | Check boxes of the chosen services | User is able to select the services | Pass |
|  | Click total amount | ‘Total amount’ button must display the sum of the chosen services | The displayed sum is correct | Pass |
|  | Enter description for services | User must be able to enter a description | User enter the description | Pass |
|  | ‘Save record’ button | Message box must appear to confirm that the services have been saved | Services are successfully saved | Pass |
|  | Enter the amount received in the textbox | User must be able to key in the amount the customer is giving him | User is able to  enter the amount received | Pass |
|  | Click ‘make payment’ | Message box should appear displaying payment success and receipt | Payment is successfully executed but no receipt appears | Fail |
|  | Click ‘make payment’ | Message box should appear displaying payment success and receipt | Payment is successfully executed but no receipt appears | Fail |
|  | Click ‘make payment’ | Message box should appear displaying payment success and receipt | Payment is successfully executed but no receipt appears | Fail |
|  | Click ‘make payment’ | Message box should appear displaying payment success and receipt | Payment is successfully executed. Receipt appears blank | Fail |
|  | Click ‘make payment’ | Message box should appear displaying payment success and receipt | Payment is successfully executed and receipt appears as requested | Pass |
|  | Enter equipment type and description | User should be able to enter the type and description in the provided textboxes | All inputs are accepted | Pass |
|  | Click ‘save equipment’ | Equipment must be saved to the database | Equipment is successfully saved to the database | Pass |
|  | Click ‘refresh record’ | Equipment list must appear with the performed updates | New updates do not appear | Fail |
|  | Click ‘refresh record’ | Equipment list must appear with the performed updates | New updates do not appear | Fail |
|  | Click ‘refresh record’ | Equipment list must appear with the performed updates | Equipment list appear with all changes | Pass |
|  | Select equipment | Equipment id of the selected equipment must appear on the equipment textbox | Equipment is selected but the wrong id is displayed | Fail |
|  | Select service | Service id of the selected service must appear on the service textbox | Service is selected and its id is displayed | Pass |
|  | Enter description | User must be able to type the description of the allocation | User is able to enter the description | Pass |
|  | Select equipment | Equipment id of the selected equipment must appear on the equipment textbox | Equipment is selected and its id is displayed | Pass |
|  | Select service | Service id of the selected service must appear on the service textbox | Service is selected and its id is displayed | Pass |
|  | Enter description | User must be able to type the description of the allocation | User is able to enter the description | Pass |
|  | Click ‘save record’ | Message box must appear showing the allocation has been successful | Message box appears as requested | pass |