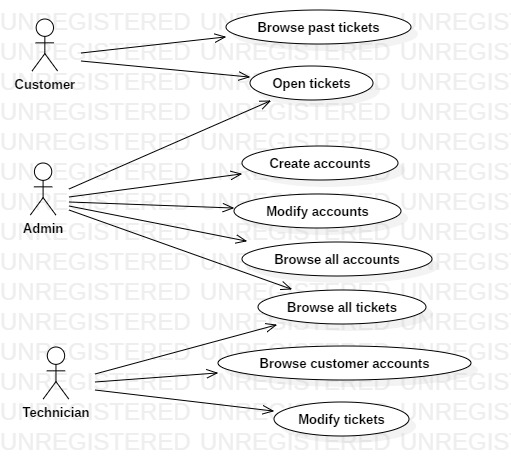
# SRS document for “PC Repair Ticket System”

**Team members:**

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GitHub link: <https://github.com/FarrenB939/CS425-SWE>

1. **Use case diagram**

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1. **Use case description (partial)**

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| --- | --- | --- |
| **Use Case Number: 1** | | |
| Name: Ticket creation | | |
| Brief description: This use case allows the customer to open a ticket. | | |
| Actors: Customer | | |
|  | | |
| **Preconditions:** | | |
| The customer must have an account and be logged in to the system. | | |
| **Flow of Events:** | | |
| **1. Basic Flows** | | |
| **1.1.0 Open a ticket** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The customer clicks the open ticket button. | The system displays the form with the fields for date, device name, device brand, problem description, delivery method (pick up or drop off), and other comments. |
| 2 | The customer fills out the form and confirms the details of their ticket. | The system verifies that the customer does not have more than 5 open tickets and returns a success message when the ticket is saved or a failure message if the process fails. |
| **Postconditions:** | | |
| The customer's ticket is persisted in the system. | | |
|  | | |
| **Business rules:** | | |
| No more than 5 open tickets per customer. The date field can not be modified. | | |
|  | | |
| **1.1.1 Read/view opened tickets:** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The customer selects the view tickets option. | The system returns a list of all of the customer's open tickets. |
| 2 | The customer selects one of their currently open tickets. | The system returns the details of the chosen ticket. |
| **Postconditions:** | | |
| None | | |
|  | | |
| **Business rules:** | | |
| The customer can not modify their tickets. | | |
| **Use Case Number: 2** | | |
| Name: Ticket modification | | |
| Brief description: This use case allows the technician to modify tickets. | | |
| Actors: Technician | | |
|  | | |
| **Preconditions:** | | |
| The technician must have an account and be logged in to the system. | | |
| **Flow of Events:** | | |
| **1. Basic Flows** | | |
| **1.1.0 View a ticket** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The technician clicks the tickets button. | The system displays a choice of either currently open tickets or past tickets. |
| 2 | The technician chooses to view either current or past tickets. | The system displays a list of tickets depending on what option was chosen. |
| 3 | The technician chooses a ticket to open. | The system displays the details of ticket. Currently open tickets have fields that can be modified, such as technician comments. |
| **Postconditions:** | | |
| None | | |
|  | | |
| **Business rules:** | | |
| None. | | |
|  | | |
| **1.1.1 Modify an open ticket** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The technician clicks the tickets button. | The system displays a choice of either currently open tickets or past tickets. |
| 2 | The technician chooses to view current tickets. | The system displays a list of currently open tickets. |
| 3 | The technician chooses a ticket to open. | The system displays the details of ticket along with fields that can be modified, such as technician comments or the status of a ticket (open/closed/etc.). |
| 4 | The technician updates parts of the ticket and tells the system to apply the changes. | The system updates the ticket and returns a success message or a failure message on exception. |
| **Postconditions:** | | |
| The ticket is updated. | | |
|  | | |
| **Business rules:** | | |
| The technician can not modify closed tickets. | | |
|  | | |
| **Use Case Number: 3** | | |
| Name: Create, update, delete accounts | | |
| Brief description: This use case allows the admin to change and delete accounts. | | |
| Actors: Admin | | |
|  | | |
| **Preconditions:** | | |
| The admin must have an account and be logged in to the system. | | |
| **Flow of Events:** | | |
| **1. Basic Flows** | | |
| **1.1.0 Create a technician account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The admin selects the create new account button. | The system displays three options for a new account type: administrator, technician, and customer. |
| 2 | The admin chooses the technician option. | The system displays the technician profile form with the fields for user name, first name, last name, password, and email. |
| 3 | The admin fills out the form and confirms the details of the account. | The system verifies that there are no other accounts with the same user name as the new account and returns a success message when the ticket is saved or a failure message if the process fails. |
| **Postconditions:** | | |
| The new account is persisted in the system. | | |
|  | | |
| **Business rules:** | | |
| No duplicate technician profiles. Technician accounts are identified by user name. | | |
|  | | |
| **1.1.1. View technician profile** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of technician profiles. | The system displays a list of technician profiles. |
| 2 | The admin selects to view a technician profile from the list. | The system displays the details of the chosen account, including first name, last name, email address, current tickets, and past tickets. |
| **Postconditions:** | | |
| None | | |
|  | | |
| **Business rules:** | | |
| None. | | |
|  | | |
| **1.1.2. Update technician account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of technician profiles. | The system displays a list of technician profiles. |
| 2 | The admin selects to view a technician profile from the list. | The system displays an editable form with the details of the chosen account, including first name, last name, email address, current tickets, and past tickets. |
| 3 | The admin updates the fields they want and requests the system to save the details. | The system updates the record and returns a success message or failure message on exception. |
| **Postconditions:** | | |
| The technician profile is updated. | | |
|  | | |
| **Business rules:** | | |
| The email field and past tickets should be unwritable. | | |
|  | | |
| **1.1.3. Delete technician account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of technician profiles. | The system displays a list of technician profiles. |
| 2 | The admin selects to view a technician profile from the list. | The system displays an editable form with the details of the chosen account, including first name, last name, email address, current tickets, and past tickets, as well as a delete account option. |
| 3 | The admin chooses the delete account option. | The system confirms the technician is not assigned to any open tickets and deletes the account. The system returns a success message or a failure message on exception. The system should return a message indicating the account could not be deleted due to being assigned to an open ticket. |
| **Postconditions:** | | |
| The technician profile is deleted. | | |
|  | | |
| **Business rules:** | | |
| Only an account not assigned to any open tickets can be deleted. | | |
|  | | |
| **1.2.0 Create an admin account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The admin selects the create new account button. | The system displays three options for a new account type: administrator, technician, and customer. |
| 2 | The admin chooses the administrator option. | The system displays the admin profile form with the fields for user name, first name, last name, password, and email. |
| 3 | The admin fills out the form and confirms the details of the account. | The system verifies that there are no other accounts with the same user name as the new account and returns a success message when the ticket is saved or a failure message if the process fails. |
| **Postconditions:** | | |
| The new account is persisted in the system. | | |
|  | | |
| **Business rules:** | | |
| No duplicate admin profiles. Admin accounts are identified by user name. | | |
|  | | |
| **1.2.1. View admin profile** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of admin profiles. | The system displays a list of admin profiles. |
| 2 | The admin selects to view an admin profile from the list. | The system displays the details of the chosen account, including first name, last name, and email address. |
| **Postconditions:** | | |
| None | | |
|  | | |
| **Business rules:** | | |
| None. | | |
|  | | |
| **1.2.2. Update admin account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of admin profiles. | The system displays a list of admin profiles. |
| 2 | The admin selects to view an admin profile from the list. | The system displays the details of the chosen account, including first name, last name, and email address. |
| 3 | The admin updates the fields they want and requests the system to save the details. | The system updates the record and returns a success message or failure message on exception. |
| **Postconditions:** | | |
| The admin profile is updated. | | |
|  | | |
| **Business rules:** | | |
| The email field should be unwritable. | | |
|  | | |
| **1.2.3. Delete admin account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of admin profiles. | The system displays a list of admin profiles. |
| 2 | The admin selects to view an admin profile from the list. | The system displays the details of the chosen account, including first name, last name, and email address. |
| 3 | The admin chooses the delete account option and then confirms their choice. | The system returns a success message or a failure message on exception. |
| **Postconditions:** | | |
| The admin profile is deleted. | | |
|  | | |
| **Business rules:** | | |
| An administrator account may not delete itself. | | |
|  | | |
| **1.3.0 Create a customer account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The admin selects the create new account button. | The system displays three options for a new account type: administrator, technician, and customer. |
| 2 | The admin chooses the customer option. | The system displays the admin profile form with the fields for email, first name, last name, password, address, and phone number. |
| 3 | The admin fills out the form and confirms the details of the account. | The system verifies that there are no other customer accounts with the same user name as the new account and returns a success message when the ticket is saved or a failure message if the process fails. |
| **Postconditions:** | | |
| The new account is persisted in the system. | | |
|  | | |
| **Business rules:** | | |
| No duplicate customer accounts. Customer accounts are identified by email. | | |
|  | | |
| **1.3.1. View customer profile** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of customer profiles. | The system displays a list of customer profiles. |
| 2 | The admin selects to view a customer profile from the list. | The system displays the details of the chosen account, including email address, first name, last name, physical address, phone number, and tickets. |
| **Postconditions:** | | |
| None | | |
|  | | |
| **Business rules:** | | |
| None. | | |
|  | | |
| **1.3.2. Update customer account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of customer profiles. | The system displays a list of customer profiles. |
| 2 | The admin selects to view a customer profile from the list. | The system displays the details of the chosen account, including email address, first name, last name, physical address, phone number, and tickets. |
| 3 | The admin updates the fields they want and requests the system to save the details. | The system updates the record and returns a success message or failure message on exception. |
| **Postconditions:** | | |
| The customer profile is updated. | | |
|  | | |
| **Business rules:** | | |
| None. | | |
|  | | |
| **1.3.3. Delete customer account** | | |
| **Step** | **User Actions** | **System Actions** |
| 1 | The administrator selects to view a list of customer profiles. | The system displays a list of customer profiles. |
| 2 | The admin selects to view a customer profile from the list. | The system displays the details of the chosen account, including email address, first name, last name, physical address, phone number, and tickets. |
| 3 | The admin chooses the delete account option and then confirms their choice. | The system returns a success message or a failure message on exception. |
| **Postconditions:** | | |
| The customer profile is deleted. | | |
|  | | |
| **Business rules:** | | |
| A customer account with open tickets cannot be deleted. | | |

1. **Supplementary specifications**

**Reliability**

The system should be running at least 90% of the time.

**Performance**

The system should support at least 20 simultaneous users at any given time.

**Security**

Account passwords should be encrypted.

**Design constraints**

The system makes use of its own database to store accounts and tickets.

1. **Glossary**
2. **Introduction**

This part of the document defines terms relevant to the PC Repair Ticket System.

1. **Definitions**

**2.1. Ticket**

A compilation of information regarding a device that needs to be examined by a technician. Can be opened by customers and administrators and closed by technicians.

**2.2. Customer**

Person who opens tickets to have their device(s) examined by a technician.

**2.3. Administrator**

Person who creates new technician and administrator accounts and manages all other accounts in the system. The administrator can also create a new account for a customer that does not have one yet, and then open a ticket for that account.

**2.4. Technician**

Person who examines and repairs devices and closes tickets.