Software Requirements Specification

for

Digitization and Modernization of PDHelpdesk Ticketing System

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Revision History

Name	Date	Reason For Changes	Version
First Draft	9/8/2022	Initial Draft of Document	1.0
Second Draft	12/1/2022	Made revisions based on feedback	1.1

1.   Introduction

This document will provide an overview of the product requirements and the constraints of building the product.

1.1   Purpose

The purpose of this document is to identify the requirements for the PDHelpdesk Ticketing System version 1.0. This document will cover all aspects of the software, including information about the project's purpose.

1.2   Intended Audience and Reading Suggestions

The intended audience for this document are the product developers, project managers, and users.

1.3   Product Scope

1.3.1 Product Technology

The PDHelpdesk Ticketing System will be implemented using only Microsoft Power Apps, along with the use of API's, and an SBPD knowledge base.

1.3.2 Product Purpose

The Ticketing Systems' purpose is to help SBPD employees to manage,create, and store tickets through an easy to use software. Minimizing the amount of repetitive tasks, such as manual data inputs. The software will be compatible with both mobile and handheld devices.

As for the software, the user / clients will be able to create their own tickets and submit them for review (not limited to the clients). The software will process these tickets into the knowledge base and have them bucketed into separate categories. That way the tickets can be assigned to the proper person for review. Thus, allowing the IT Staff to focus more on high priority tickets.

Both Clients and IT staff will be able to view their tickets such as: number of tickets, current status, date of creation, etc. But the IT Staff will be able to see all tickets along with the ability to assign tickets to themselves or other IT staff members.

Moving onto the life-cycle of the ticket. Users will be able to communicate with the IT staff along with the ability to view the timeline of their ticket.

Lastly, the software will ensure that all accounts exist in the Santa Barbara Active Directory. Additionally, it will incorporate a 'Notification System' that informs the users of important announcements or updates on their tickets.

1.3.3 Product Implementation

The software in the backend will be able to verify the users between being a Client / IT staff. Based on the result, you will be redirected to the proper dashboard. IT staff will be given an administration dashboard, whereas Users/Clients will be given a self-service portal dashboard for creating and viewing tickets.

1.4   Definitions, Acronyms, and Abbreviations

Can be found in Glossary A portion of this document.

1.5   References

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2.   Overall Description

2.1   System Analysis

The goal we aim to solve with the PDHelpdesk Ticketing system is to provide software where IT technicians can easily receive tickets from customers, respond, and close tickets efficiently. As of now, SBPD technicians use an email based ticketing system which they find extremely inefficient. The goal is to automate the ticketing system as much as possible to give the technicians the least amount of manual work. PDHelpdesk will also have an archive where technicians can view a history of all the submitted tickets which will include solutions to popular problems. Customers should be pointed to the knowledge base first. If time permits, we will look into implementing a chat bot. This software should be robust enough to support desktop and mobile use. The major technical hurdles are the amount of work, and the lack of experience of technologies being used. The amount of work is being overcome by distributing tasks and holding weekly meetings so everyone is on the same page of what tasks need to be completed. The inexperience of technologies is being solved by watching YouTube tutorials and making mock apps.

2.2   Product Perspective

The PDHelpdesk Ticketing System was created using Microsoft PowerApps, and the backend was programmed using Microsoft Power Apps API called Microsoft Power Fx. This software is similar to other types of ticketing systems such as ServiceNow and ZenDesk but is not identical to any other despite similarities. We created the PDHelpdesk Ticketing System to provide a software where users can easily track customer tickets, assign tickets, complete tickets, and automate as much in between to save time and resources for technicians. This component will be part of the Santa Barbara Public Defenders official website where SBPD attorneys and employees can use this component.

2.3   Product Functions

Note: Administrators and technicians will be able to perform a few more functions than regular users.

2.3.1 Create Ticket Function

> 2.3.1.1 Allows registered users to create a ticket.

> 2.3.1.1 Allows admin and technician users to create special request tickets.

2.3.2 My Tickets/All Tickets Function

> 2.3.2.1 Allows registered users to reply, close, and cancel an open ticket.

2.3.2.2 Allows all users to sort/filter through tickets.

2.3.2.2.1 Allows admin and technician users to sort/filter through all tickets in the system with an extra filter.

2.3.2.3 Allows admin and technician users to edit, reply, close, set priority on open tickets.

2.3.3 Assigning of Tickets Function

2.3.3.1 Allows admin and technician users to assign/unassign a ticket to a technician.

2.3.3.2 Allows admin and technician users to merge and group very similar tickets.

2.3.3.3 Allows admin users to set priorities for tickets.

2.3.3.4 Allows admin and technician users to tag tickets based on categories.

2.3.4 Login Function

2.3.4.1 Allows users to login to PDHelpdesk using SBPD credentials.

2.3.4.2 Users will use Microsoft 365 login feature rather than an implemented version a login page

2.3.5 Reports Function

2.3.5.1 Allows admin and technician users to view global metrics.

2.3.5.2 Allows admin and technician users to view their own activity.

2.3.5.3 Allows admin and technician users to view general ticket activity.

2.3.6 Directory Function

2.3.6.1 Allows admin and technician users to view user information.

2.3.6.2 Allows admin and technician users to view network information.

2.3.6.3 Allows admin and technician users to control devices/assets.

2.3.7 Alerts Function

2.3.7.1 Allows all users to view global alerts/announcements.

2.3.7.2 Allows all users to view the status of all services.

2.3.7.3 Allows admin users to compose an alert message.

2.3.8 Knowledge Base Function

2.3.8.1 Allows all users to search through the knowledge base.

2.3.8.2 Allows all users to view articles and tutorials in the knowledge base.

2.3.8.3 Allows admin users to manage and create tags.

2.4   User Classes and Characteristics

There are three different user classes for PDHelpdesk. The three different user classes include administrators, IT technicians, and attorneys who act as the typical ticketing system user. Attorneys can create tickets, view alerts and messages, access the knowledge base, and view the history of all their tickets. IT technicians have the same privileges as attorneys with an addition of viewing reports and metrics, viewing the active directory, setting priorities on tickets, assigning and unassigning tickets, grouping tickets, and tagging tickets. Administrators have the same privileges as IT technicians with the addition of creating and sending alerts, and managing tags. All user classes require SBPD credentials and basic knowledge of using a computer and mobile app.

2.5   Operating Environment

2.5.1 The software will run on a computer or laptop.

2.5.2 The software will run on a mobile phone via PowerApps application.

2.5.3 The software will need an internet connection.

2.5.4 Any browser for the web application can be used.

2.6   Design and Implementation Constraints

2.6.1 Weak/Unstable Network Connectivity - May cause issues in retrieving data from the database.

2.6.2 Database needed to store all data inputted by users and store information of the users.

2.6.3 SBPD email needed to access PowerApps PdHelpdesk.

2.6.4 User must be in SBPD Microsoft 365 Office organization.

2.6.5 Device Performance - Need adequate performance from the device to render computer-generated objects.

2.7   User Documentation

Documents will include slides, code, system requirements document, and system design document. Users can use these documents to get a better idea of how the PdHelpdesk

web/mobile application works. These documents will be completed and provided upon completion of the project.

2.8   Assumptions and Dependencies

2.8.1 User is expected to have a stable internet connection to perform functions of PDHelpdesk.
2.8.2 User is expected to have an internet browser installed or have PowerApps mobile installed.
2.8.3 User is expected to have appropriate PowerApps license.

2.9   Apportioning of Requirements

PDHelpdesk - functioning website

3. External Interface Requirements

This section of the document is for users who would like to use the PDHelpdesk Ticketing System Software. This section will provide descriptions for users looking to interact with the software. There are 3 classifications of users; User, Technician, and Admin. Non-Technical users should be directed to this section of the documentation. A dash will denote which user can see a particular page or element, blank would be all.

3.1 User Interfaces

3.1.1 User interface will initialize when users navigate to the application, through icon on mobile device, URL to application, or selected from PowerApps in the SBPD Organization.

3.1.2 The application will prompt the user to sign in if not already logged in.

3.1.3 The User Interface will display different dashboards depending on user type.

3.1.4 The User Interface will display a search bar for the knowledge base that will redirect them with a results page.

3.1.5 User Dashboard

> 3.1.5.1 Users will see buttons and navbar links that they can only navigate to.
>
> 3.1.5.2 Users will see a create ticket button and navbar link that redirect them to the create ticket- user page.
>
> 3.1.5.3 Users will see a my tickets button and navbar link that will redirect them to my tickets- user page where they have additional options for seeing open tickets and their ticket history.
>
> 3.1.5.4 Users will see a faq button and navbar link that will redirect them to the faq- user page.
>
> 3.1.5.5 Users will see a tutorials button and navbar link that will redirect them to the tutorials- user page.
>
> 3.1.5.6 Users will see an articles navbar link that will redirect them to the articles- user page.
>
> 3.1.5.7 Users will see the popular articles at the bottom of the page which when clicked on will redirect to that article's page.
>
> 3.1.5.8 Users will see the small user icon with a drop down that will contain nav links to the profile page and alerts- user and technician page.

3.1.6 Technician and Admin Dashboard

3.1.6.1 Users will see many of the same items listed in 3.1.5 with some differences.

3.1.6.2 The create tickets page will redirect to create tickets - technician and admin.

3.1.6.3 The my tickets page will redirect to my tickets - technician and admin, with more options than a standard user.

3.1.6.4 Users will see a reports button and navbar link that will redirect them to the reports - technician and admin page.

3.1.6.5 Users will see a directory button and navbar link that will redirect them to the directory- admin page.

3.1.6.6 Users will see an alerts manager button and navbar link that will redirect them to the alerts manager- technician and admin page.

3.1.6.7 Users will see a knowledge base button and navbar link that will redirect them to the knowledge base- technician and admin page.

3.1.7 Create Tickets - User

3.1.7.1 Users will see a basic form that will be the basis for ticket creation.

3.1.7.2 Users will see a submit button on the bottom that will submit their ticket and then redirect them to the my tickets- user page.

3.1.7.3 Users will see a back button that will redirect them to the page visited before this one.

3.1.8 Create Tickets - Technician and Admin

3.1.8.1 Users will see a drop down box that will contain many different form templates with exclusive fields.

3.1.8.2 Users will see a submit button that will redirect to the my tickets- technician and admin page.

3.1.8.3 Users will see a back button that will redirect to the page visited before this one.

3.1.9 My Tickets - User

3.1.9.1 Users will see an open tickets button and navbar link that will redirect them to the open tickets- user page.

3.1.9.2 Users will see a all my tickets button and navbar link that will redirect them to the all my tickets- user page.

3.1.9.3 Users will see a create ticket button and navbar link that will redirect them to the create ticket - user page.

3.1.9.4 Users will see a back button that will redirect to the page visited before this one.

3.1.10 My Tickets- Technician and Admin

    3.1.10.1 Users will see an assigned tickets button and navbar link that will redirect to assigned tickets- technician and admin page.

    3.1.10.2 Users will see a all tickets button and navbar link that will redirect to all tickets-technician and admin page.

    3.1.10.3 Users will see a back button that will redirect to the page visited before this one.

3.1.11 Alerts - User and Technician

    3.1.11.1 Users will see a page that contains current undismissed alerts.

    3.1.11.2 Users will see a services button and navbar that will redirect them to the services- user and technician page.

    3.1.11.3 Users will see an alerts history button and navbar that will redirect them to the alerts history- user and technician page.

    3.1.11.4 Users will see a back button that will redirect them to the page visited before this one.

3.1.12 Alerts Manager - Admin

    3.1.12.1 Users will see items similar in 3.1.11.

    3.1.12.2 Users will see a create new alert button and navbar link that will redirect them to the create new alert- admin page.

3.1.13 Knowledge base - Technician

    3.1.13.1 Users will see a search bar that will redirect to a results page- all users.

    3.1.13.2 Users will see an articles button and navbar link that will redirect to articles-technician admin page.

    3.1.13.3 Users will see a tutorials button and navbar link that will redirect to tutorials-technician page.

    3.1.13.4 Users will see a back button that will redirect to the page visited before this one.

3.1.14 Knowledge base - Admin

    3.1.14.1 Users will see items similar in 3.1.13, admins will have access to the technician pages.

    3.1.14.1 Users will see a tag manager button and link that will redirect to the tag manager- admin page.

3.1.15 Directory - Technician and Admin

3.1.15.1 Users will see a user info button and navbar link that will redirect to the user info- technician and admin page.

3.1.15.2 Users will see a network info button and navbar link that will redirect to the network info- technician and admin page.

3.1.15.3 Users will see a devices/assets button and navbar link that will redirect to the devices/assets- technician and admin page.

3.1.15.3 Users will see a back button that will redirect to the page visited before this one.

3.1.16 Profile - User

3.1.16.1 Users will see a page containing their user information.

3.1.16.2 Users will see a network info button and navbar link that will redirect to network info- user page.

3.1.16.3 Users will see a my devices button and navbar link that will redirect to my devices- user page.

3.1.16.3 Users will see a back button that will display the last page visited before this one.

3.1.17 Open Tickets - User

3.1.17.1 Users will see a list of their current open tickets, selecting a ticket will redirect to ticket information- user page.

3.1.17.2 Users will see a back button that will redirect to the page visited before this one.

3.1.18 All My Tickets - User

3.1.18.1 Users will see a list of all the tickets associated with the user, selecting one will redirect to the ticket information - user page.

3.1.18.2 Users will see text entry boxes to filter tickets.

3.1.18.3 Users will see a back button that will redirect to the page visited before this one.

3.1.19 All My Tickets- Technician

3.1.19.1 Users will see items similar in 3.1.18.

3.1.19.2 Users upon selecting a ticket will be redirected to the ticket information page- technician and admin.

3.1.20 Assignments Page- Technician and Admin

3.1.20.1 Users will see a list of tickets, with the added fields of: assigned to, merged/grouped, priority, and tag.

3.1.20.2 Users selecting any ticket, will be redirected to the assigned ticket information page.

3.1.20.3 Users will see a back button that will redirect to the page visited before this one.

3.1.21 Ticket Information Page- User

3.1.21.1 Users will see the contents of the ticket they have selected.

3.1.21.2 Users will see a text area, where they can input some text followed by a reply button that will submit the information and update the ticket.

3.1.21.3 Users will see a close button that will close the ticket, updating it.

3.1.21.4 Users will see a cancel button that will cancel the ticket, updating it.

3.1.21.5 Users will see a back button that will redirect to the page visited before this one.

3.1.22 Ticket Information Page -Technician and Admin

3.1.22.1 Users will see similar items in 3.1.21.

3.1.22.2 Users will see an edit ticket button that will redirect to the edit ticket- technician and admin page.

3.1.22.3 Users will see a set priority dropdown menu that will have the options: none, low, medium, high, and urgent. There will also be a set priority button that will update the ticket.

3.1.22.4 Users will see a create ticket button that will redirect to the create ticket-technician and admin page.

3.1.23 Assigned Ticket Information Page- Technician and Admin

3.1.23.1 Users will see the contents of the ticket selected, including information if it is a parent or child ticket.

3.1.23.2 Users will see a text bar to search for a technician or admin to assign a ticket to, with an assign button, that will update the ticket.

3.1.23.3 Users will see an unassign button that will clear the assigned to field, this will update the ticket.

3.1.23.4 Users will see a merge/group button that will redirect to the merge/group-technician and admin page.

3.1.23.5 Users will see a set priority dropdown menu that will have options: none, low, medium, high, and urgent. If the ticket is a parent, then the children grouped with this ticket will change the priority based on the parent ticket. There will also be a set priority button that will update the ticket.

3.1.23.6 Users will see a main category dropdown, this will cause another dropdown relevant to the first item selected. Upon selecting the second dropdown option, an add tag button will appear that will update the tags for the ticket.

3.1.23.7 Users will see a back button that will redirect to the page visited before this one.

3.1.24 Reports Page - Technician and Admin

3.1.24.1 Users will see a my activity button and navbar link that will redirect to my activity metrics- technician and admin page.

3.1.24.2 Users will see a ticket log button and navbar link that will redirect to the ticket log- technician and admin page.

3.1.24.3 Users will see a global metrics button that will redirect to the global metrics- technician and admin page.

3.1.24.4 Users will see a back button that will redirect to the page visited before this one.

3.2   Hardware Interfaces

3.2.1 Computers and Laptops

3.2.1.1 Desktops and Laptops with a Network Integrated Card are required.

3.2.1.2 Desktops with standard input, being mouse and keyboard at the minimum are required.

3.2.1.3 Desktops with a monitor for video output are required.

3.2.1.4 Stable internet connection.

3.2.2 Mobile Devices

3.2.2.1 Devices with internet accessibility required.

3.2.2.2 Devices with at least 4GB of RAM are required.

3.3   Software Interfaces

3.3.1 Desktop and Laptops

3.3.1.1 Windows Users must have Windows 10 or later installed.

3.3.1.2 MacOS Users must have version 10.13 or later installed.

3.3.2 Mobile Devices

3.3.2.1 Android Users must have version 10 or later installed.

3.3.2.2 IOS Users must have IOS 13 or later installed.

3.3.2.3 Windows Users must have Windows 10 version 17763.0 or later installed.

3.3.3 Browsers

3.3.3.1 Google Chrome browser with the latest release or within the most recent 3 releases installed.

3.3.3.2 Apple Safari browser version 13 or later installed.

3.3.3.3 Microsoft Edge browser with the latest release or within the most recent 3 releases installed.

3.3.3.4 Mozilla Firefox browser with the latest release or within the most recent 3 releases installed.

3.3.4 Microsoft Azure SQL used to pass data to Microsoft PowerApps through a connector.

3.4   Communications Interfaces

3.4.1 Hypertext Transfer Protocol Secure (HTTPS) to handle GET and Response requests.

3.4.2 Secure Mail Transfer Protocol (SMTP) to notify parties involved in ticket operations.

4. Requirements Specification

4.1 Functional Requirements

4.1.1 PDHelpdesk Ticketing System Requirements

    4.1.1.1 User must be logged in and authenticated through Microsoft 365.

    4.1.1.2 User must be a valid user in the share point list.

    4.1.1.3 All users must have an assigned role (client, tech, admin).

4.1.2 Create Ticket Requirements

    4.1.2.1 Should be a form.

    4.1.2.2 Form fields should include: title, category, description, and upload media link.

    4.1.2.3 Submit button should send a POST request to update the database with this data.

    4.1.2.4 Successful submission message should display.

    4.1.2.5 The user should be able to navigate back to the dashboard.

4.1.3 Ticket View Requirements

    4.1.3.1 User should be able to select a ticket to view.

    4.1.3.2 User should be able to view all details about that ticket.

        4.1.3.2.1 Title, category, description, ticket status, date created, any media that were added, and comments.

        4.1.3.2.2 A history activity underneath all the displayed data.

4.1.4 Report Requirements

    4.1.4.1 Shall have statistics about the tickets that have been created.

    4.1.4.2 Ranked by which category is being submitted the most.

    4.1.4.3 More stats on number of submitted tickets by week/month.

4.1.5 Assignment Requirements

    4.1.5.1 Certain categories of tickets will be automatically assigned to the correct tech.

        41.5.1.1 If there is no assigned tech for a category, the ticket will be left to manually assign.

    4.1.5.2 Both Admin and Tech are allowed to assign a ticket to themselves.

    4.1.5.3 Both Admin and tech are allowed to assign the ticket to other techs.

    4.1.5.4 All activity shall be stored in the ticket history section.

4.1.6 Alert Requirements

    4.1.6.1. Admin and Tech are allowed to create an alert.

        4.1.6.1.1 Alert form shall have: alert message, date of expiration, and a submit button.

        4.1.6.1.2 Alerts can be viewed in a list.

        4.1.6.1.3 Alerts can be updated by admin and techs.

        4.1.6.1.4 Alerts expiration date can be pushed to a later time or expired in a pass date to close out the alert.

4.1.6.2 The Alert form shall show when the user opens the app if the expired date is still in the future.

4.1.7 Knowledge Base Requirements

    4.1.7.1 The Knowledge Base form shall have a search bar.

    4.1.7.2 The Knowledge Base form shall show articles and guidance videos.

    4.1.7.3 Search results should display related links.

4.1.8 Directory Requirements

    4.1.8.1 The software shall have an internet connection to be accessible in devices: computer, laptop, and mobile phone.

4.2   External Interface Requirements

4.2.1 User interfaces

    4.2.1.1 User will be directed to the landing page.

    4.2.1.2 User will type name, email, Subject, and description of its current issue and submit.

    4.2.1.3 User shall receive an email with an IT support ticket and links to resources and a description that a representative will work on the user's report.

        4.2.1.3.1 The resource link shall take the user to a web page of ways to solve common issues.

4.2.2 Hardware Interfaces

    4.2.2.1 Personal Computer.

        4.2.4.1.1 Monitor Display.

    4.2.2.2 IOS Devices.

    4.2.2.3 Android Devices.

    4.2.2.4 Laptop.

4.2.3 Software Interfaces

    4.2.3.1 Software also uses Azure SQL Database.

    4.2.3.2 Android

        4.2.3.2.1 Devices with API level 28 and up.

    4.2.3.3 IOS

        4.2.3.3.1 Devices with Safari IOS, Firefox IOS, or Chrome IOS.

    4.2.3.4 Windows or macOS computers.

4.2.4 Cloud Services

    4.2.4.1 Microsoft Power Platform

4.2.1.1 Power Apps

4.2.4.2 Microsoft Azure Cloud Services

    4.2.4.2.1 Azure SQL

4.2.4.3 SBPD

    4.2.4.3.1 Virtual PC

    4.2.4.3.2 Microsoft share point list

4.3   Logical Database Requirements

4.3.1 Types of information

    4.3.1.1 Ticket

        4.3.1.1.1 title (varchar)

        4.3.1.1.2 description (varchar)

        4.3.1.1.3 tag (varchar)

        4.3.1.1.4 status (varchar)

        4.3.1.1.5 createdDate (date)

        4.3.1.1.6 creatorId (unique user id)

        4.3.1.1.7 assignedTo (unique user id)

        4.3.1.1.8 parentId (unique ticket id)

    4.3.1.2 Media

        4.3.1.2.1 ticketId (unique ticket id)

        4.3.1.2.2 creatorId (unique user id)

        4.3.1.2.3 createdDate (date)

        4.3.1.2.4 name (varchar)

        4.3.1.2.5 contentType (varchar)

        4.3.1.2.6 content (varbinary)

        4.3.1.2.7 size (bigInt)

    4.3.1.3 Comments

        4.3.1.3.1 ticketId (unique ticket id)

        4.3.1.3.2 creatorId (unique user id)

        4.3.1.3.3 createdDate (date)

        4.3.1.3.4 lastUpdated (date)

        4.3.1.3.5 message (varchar)

        4.3.1.3.6 updatedBy (unique user id)

    4.3.1.4 Alerts

        4.3.1.4.1 message (varchar)

        4.3.1.4.2 creatorId (unique user id)

4.3.1.4.3 createdDate (date)

4.3.1.4.4 lastUpdated (date)

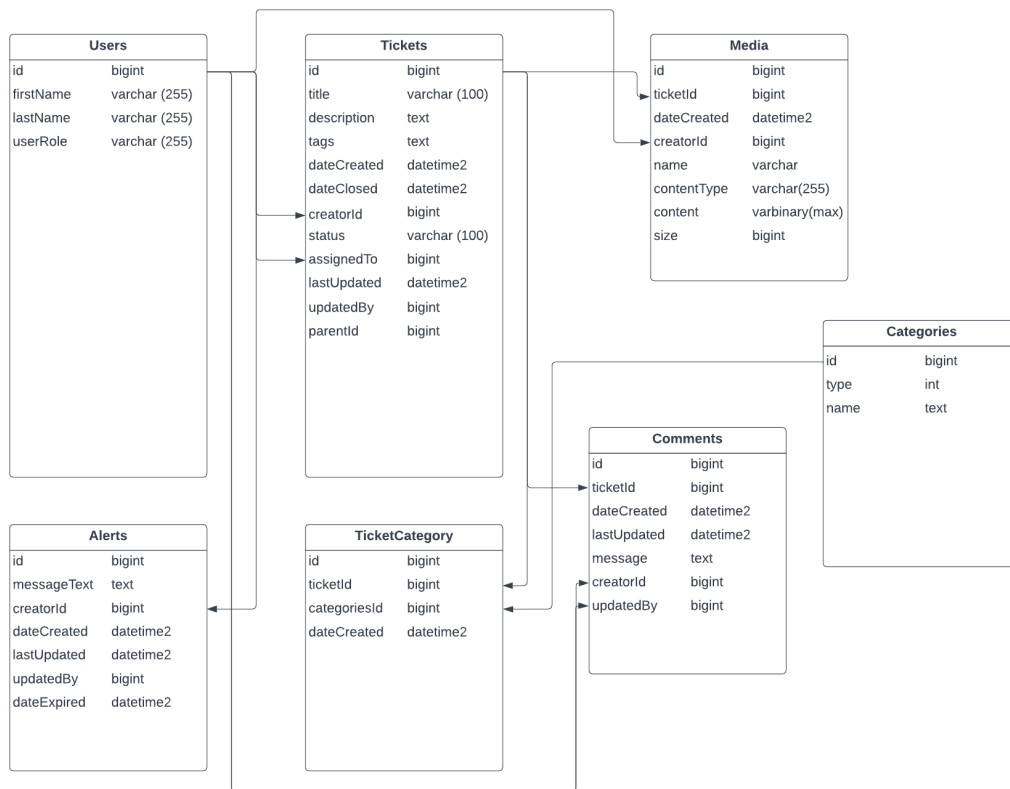4.3.1.4.5 updatedBy (unique user id)

4.3.1.4.6 dateExpired (date)

4.3.2 One To Many Relations

4.3.2.1 Ticket - Media

4.3.2.1.1 One to many

4.3.2.1.2 One Ticket record, possible many media records

4.3.2.1 Ticket - Comments

4.3.2.1.1 One to many

4.3.2.1.2 One Ticket record, possible many comment records

4.3.2 Frequency of use

4.3.2.1 All get requests will pull from the database.

4.3.2.2. All data storage will be put in the appropriate table.

4.3.2.3 Any time a user access powerapps all their data will be pulled.

4.3.2.4 Frequency on inserts

    4.3.2.4.1 When a user submits a ticket.

    4.3.2.4.2 When a user updates a ticket.

    4.3.2.4.2 When a comment is submitted.

4.3.3 Accessing capabilities

4.3.3.1 Admin will have access to

    4.3.3.1.1 All tickets created.

    4.3.3.1.2 Assign tickets.

    4.3.3.1.3 Update existing tickets.

    4.3.3.1.4 Add comments

    4.3.3.1.5 Create Alerts to notify all users.

4.3.3.1 Tech will have access to

    4.3.3.1.1 All tickets created.

    4.3.3.1.2 Assign tickets.

    4.3.3.1.3 Update existing tickets.

    4.3.3.1.4 Add comments

4.3.3.2 Client will have access to

    4.3.3.2.1 All tickets created by that client.

    4.3.3.2.2 Update their own existing tickets.

    4.3.3.2.3 Add comments to their tickets.

4.4   Design Constraints

4.4.1 All hardware and software is ran and maintained by Microsoft Azure cloud and Microsoft PowerPlatform.

4.4.2. Users need to connect via the internet using any web browser to connect to the application.

4.4.3 Microsoft Azure cloud being down can restrict our clients access to the data being stored in Azure SQL Database.

4.4.4 Microsoft Power Platform being down can restrict our clients access to the application itself.

5.   Other Nonfunctional Requirements

5.1   Performance Requirements

5.1.1 This application is expected to perform smoothly, taking at most 3 seconds to load.

5.1.2 This application is expected to handle 80% of the PD's users simultaneously.

5.1.3 Data processing is expected to take no more than 5 seconds after submission.

5.1.4 This application is expected to handle 90% of transactions without error.

5.2   Safety Requirements

5.2.1 Users are expected to be aware of their surroundings.

5.2.2 Users are expected to use their own account unless explicit permission is given.

5.2.3 User is expected to follow onscreen instructions or warnings, if any.

5.3   Security Requirements

5.3.1 Users must have credentials for access to the PDHelpdesk Ticketing System Power App.

    5.3.1.1 Only users within the SBPD organization can access this application.

5.4   Software Quality Attributes

5.4.1 Product should be easy to learn and use for novice and experienced users.

    5.4.1.1 Users should spend no more than 10 minutes submitting their tickets.

5.4.2 Product should be available for 95% of its runtime as long as PowerApps access is available and the SBPD site is available.

5.4.3 All product functionalities should be testable throughout the development cycle of this product.

5.4.4 Product should be designed to be easily adaptable for future modifications or features.

5.5   Business Rules

5.5.1 Administrators and Technicians can perform any functions within this product as long as they have proper authorization.

5.5.2 Users can only access their tickets and view their profile, alerts, and knowledge base.

      5.5.2.1 Users can only reply, cancel, or close their tickets.

6.   Legal and Ethical Considerations

6.1.1 Privacy is a crucial legal aspect that must be taken into account.Depending on how much information you collect and how sensitive it is, security precautions may be necessary.

6.1.1.1 Make sure the product has a thorough, understandable, and accessible privacy policy.

6.1.1.2 If the product gathers personal information, a privacy policy that truthfully describes how this information is handled, used, disclosed to, and stored.

6.1.1.3 Using MFA(Multi factor authentication) to make sure only authenticated users can access private information

6.1.1.4 Describe how users can control their data and their general rights

6.1.2 We shall take into consideration End-user License Agreement (EULA)

6.1.2.1 A legal agreement between the app's owner and its users where we specify the conditions under which the app will be used by the end user and lists all permitted and prohibited uses.

6.1.2.2 EULA will make sure the user isn't exploiting the software in a detrimental way. Your EULA must be enforceable, which requires that the app user accept it.

6.1.2.3 Clarify what the client should and should not do with the software,

6.1.2.4 Explain the terms of the agreement, outline liability, provide details about violation,

6.1.2.5 provide disclaimers, and discuss how and when the user's right to use the application may be terminated.

Appendix A: Glossary

- **Application Programming Interface API**: Method for when two or more programs communicate with each other
- **ChatBot**: Program where a A.I can make automated responses to the user
- **Hypertext Transfer Protocol Secure (HTTPS)**: A type of request made by a web browser in order to load a webpage. HTTPS is a secure version of Hypertext Transfer Protocol (HTTP) and is commonly used when transferring private data like logging into an email or bank account.

- **Microsoft Azure**: Cloud computing platform that interacts with other microsoft products/software like PowerApps.
- **MySQL**: An open source relational database management system (RDMS) used to store and access data.
- **OffBoarding**: Process of removing an employee/member from a system. Also involves revoking/freezing employees access to system database
- **Onboarding**: Process of integrating a new employee/member into a system
- **Open source**: Software where the creator allows other users direct access to the source code so the user can alter and distribute the software for their own purpose
- **Power Apps**: Program used to develop ticketing system app for mobile and desktop platforms
- **SBPD**: Santa Barbara Public Defenders
- **Secure Mail Transfer Protocol (SMTP)**: A type of request that is made when on an email from one account to another

- **Ticketing system**: Software program used by a support team for the purpose of keeping track of problems/requests submitted by users/customers.

Appendix B: Analysis Models

N/A

Appendix C: To Be Determined List

N/A