CODE CREATORS

Contents

1   Introduction

The purpose of this document is to define the software requirements for a cyber that performs tax and IVA declaration processes. The purpose of this system is to provide an efficient and secure tool to the cyber clients where they will be registered and their tax returns will be done in a simple and fast way.

The software will allow them to update their personal and fiscal data, as well as to present personalized notifications about tax payment deadlines and upcoming due dates. In addition, it will have a specific section for the management of prices established for the collection of the activities to be carried out, which will allow clients to have a clear and transparent view of the costs associated with each service.

With this system, the cyber will be able to offer its customers a more personalized and efficient experience, reducing waiting times and errors in tax reporting. In addition, the system will enable the cyber company to comply with the legal and regulatory requirements established by the tax authority, ensuring the security and reliability of customer information.

In summary, the main objective of the software to be developed is to provide an efficient and secure tool for tax and IVA returns, meeting the client's requirements and offering a personalized and transparent user experience.

1.1   Purpose

The purpose of the software project is to create a program to handle tax returns more efficiently. The program will provide an organized and secure tool for the owner of this business to be able to:

- **Register and update customers' personal and tax data:** The main user will be able to add, update, search and delete tax payers with their own information (RUC, password, email, and others).

- **Receive personalized notifications:** Provide personalized notifications about tax payment deadlines and upcoming due dates, so that Cyber Planeta plans and manages the tax processes to be carried out effectively by a classfication agenda and calendar.

- **Calculate fees for services rendered:** The program will help the tax preparer calculate their fees for services rendered. This will include factors such as the type of return, the number of invoices, and any additional costs.

1.2   System Scope

Definition
"Cyber Planeta System" will be the name of the upcoming tax and VAT filing manager system.

Functionalities
The software empowers Cyber Planeta to streamline tax and VAT filing processes for their clients. The key functionalities will be:

- Manage Tax Payer's data (edit, delete, add).

- Send automated datelines notifications.

- Calculate fees for services rendered.

- Display search results according to the ninth RUC digit.

- Show deadlines in calendar.

Limitations

Cyber Planeta System will not perform the following functions:

- It will not be an accounting or financial management system.

- It will not allow electronic payments

- It will not be a general tax information query system.

Benefits

Cyber Planeta System is expected to provide the following benefits:

- Increase efficiency and speed in tax and VAT filing.

- Improve accuracy and consistency of tax information.

- Increase security and reliability in the management of tax information.

- Improve data management and search.

- All vouchers will be recorded in a database, thus leaving a record of the revenues that have been made on a monthly basis.

Objectives and Goals

The objectives and goals of Cyber Planeta System are:

- Reduce tax and IVA filing time by 50 %.

- Increase customer satisfaction by 80 %.

- Reduce tax and IVA filing errors by 90 %.

1.3   Definitions, Acronyms and Abbreviations

- **registerTaxPayer:** the process of registering a taxpayer through the program.

- **searchTaxPayer:** the process of searching a taxpayer through the program.

- **deleteTaxPayer:** the process of delete a taxpayer through the program.

- **classificateTaxPayer:** the taxpayer will be classified through the program.

- **calculateTaxProcessCost:** the cost to be charged to the taxpayer was calculated.

- **price:** Calculate the tax owed by a taxpayer.

- **typeofProcess:** process to be carried out for the taxpayer.

- **numberOfDocumentation:** By documentation we mean the number of sales notes, invoices and other paperwork that our customer will have to analyze to execute each process, therefore, the more documentation, the higher the cost.

- **addDateCalendar:** the day when the declaration must be filed is added.

- **id:** taxpayer identification number or also known as NUI.

- **email:** email of taxpayer.

- **name:** taxpayer´s as identification.

- **password:** t is a secret word or phrase that is used to verify the identity of a user and grant them access to a resource, such as a computer system.

- **accountingDocumentation:** here the taxpayer's invoices and withholdings will be added.

- **deliveryDate:**deadline for filing the tax return.

- **startDate:** start date for filing the tax return.

- **sendNotification:** notifications will be sent days before the deadline so that processes do not accumulate.

- **numberOfFile:** "taxpayer's file number.

- **saveScannedFile:** as a backup for the business owner and also the customer.

- **processid:** the process to be carried out will be registered according to your identification.

- **processName:** each process will have its own name.

- **taxRate:** tax value

1.4   References

Cyber Planeta System is based on the following higher level documents:

- Global system requirements specification document.

- Cyber Information Security Policy

- Current tax rules and regulations

1.5   Document Overview

This document is structured into the following sections:

- **Introduction:** Presents the purpose, scope, definitions, references, and overview of the document.

- **General Description:** Describes the general characteristics of the "Cyber Planeta System".

- **Functional Requirements:** Details the specific functionalities and behaviors of the system.

- **Non-Functional Requirements:** Defines the non-functional characteristics of the system, such as performance, security, and usability.

- **Glossary:** Provides detailed definitions of technical terms used in the document.

- **Annexes:** Includes additional information, such as data flow diagrams and use cases.

2   General Description

CyberPlanet is a comprehensive tax processes management system designed to streamline operations, enhance profitability, and deliver exceptional customer service. Its user-friendly interface and robust features cater to the needs of Guillermo Cañarte (Cyber Planeta owner).

2.1   Product Perspective

The Cyber Planeta System is an independent product that does not require integration with other systems. It is a self-contained software solution that provides a comprehensive suite of features for managing tax processes data.

2.2   Product Functions

Cyber Planeta streamlines tax payer's management and will focus in functionalities as:

- **Tax Payer Management:**
  - Add, edit (the customer can edit all fields except dates), and delete tax payer profiles.
  - Generate PDF and Excel Reports of the Taxpayers Data.
  - Search by 9th RUC digit for easy identification of tax declaration day.

- **Tax Declaration Management:**
  - Display tax declarations in a convenient calendar format.
  - Send the remaining days to send the notifications of when the deliveries will be made.

- **Cost Calculation:**
  - Empower the cyber owner to calculate the cost of each process.
  - The program will only ask for the customer's ID to extract the base price and tax from the table provided by Guillermo Cañarte.
  - Add additional cost to the base price; for every 10 documents the program will charge 0.50 additional cents.
  - All the calculations that are made for each one of the contributors will be added up, and a space will be generated where the monthly income of the contributor will be shown.
  - Include a basic calculator to compare and calculate averages of taxes, and estimate future Cyber Planeta income's.

2.3   User characteristics

The user of the product keeps the accounting of individuals and some companies, both those that are obliged to keep accounting and those that are not. He/she has access to the SRI's electronic information and must manage the access codes and the RUC. The user has basic knowledge of tax processes and the handling of both electronic information and physical documentation, such as sales notes. The user also has knowledge about the management for the dates of delivery according to the last number of the RUC.

2.4   Restrictions

These are some limitations for the development of the program

- No data connection to SRI.

- Do not store redundant information.

- Multi-platform system.

- Do not store information indefinitely.

- It does not have to be a complex system.

- The customer can edit all fields except the delivery date.

2.5   Assumptions and dependencies

The system assumes that the user will have all the taxpayer's data such as: id, email, name, password, and if he/she delivers physical documents, if any of this data is not obtained, the system will fail, as well as the date. Also the system assumes that the user will always have a computer and a database always available for information storage.

2.6   Future requirements

A future requirement is for the system to send notifications about tax processes to the cell phone, in order to have a reminder and greater control over the process of each taxpayer.

3   Specific requirements

This document outlines the system requirements for a cyber program specializing in tax information management. The program aims to facilitate the organization of the premises and the completion of tax procedures for customers.

- **Tax Payer Data** The system must allow to register, edit, delete and search Tax Payers, which will have personal data, such as name, ID number, email, password, documentation, start-date of a process and end-date of a process. It also will allow to add a 1 or more tax processes to a Tax Payer (these processes must be based on the Price List given by the owner) The data entered must be stored securely and confidentially.

- **Pricing calculation** The system must be able to calculate the price of the service based on the type of procedure (ID) and the number of documentation given to the process (considering it will have an extra cost).

- **Search by RUC** The system must have a search system that Cyber Planeta Admin to find Tax Payers given the 9th digit of the ID (RUC). The search must be fast and efficient.

- **Notification** The system must compare the end-date of a Tax Payer to current date and verify how many days are missing till due date.

- **Other Calculations** The system must allow Cyber Planeta owner to compute basic calculations required by the user to solve possible Tax Payer questions (Compare 2 month taxes and Calculate the average of taxes in specific months). These calculations should not necessarily be saved in the cloud or the program storage, since they will represent information to be told to the taxpayer in common questions during the customer service.

- **Incomes Management** The program must allow to enter Incomes and calculate the total of them, it must take in consideration that the user asked for a direct option in Pricing Calculation to add as a Income the computations in order for the user to save time. Cyber Planeta System must also allow the user to estimate the future incomes that his business will have.

- **Report generation** The system could generate personalized reports for customers with information about their tax declarations and Incomes Information. Reports should be exportable to different formats, such as Excel (CVS) or PDF.

- **Account Settings** The user must be able to change the user and password initially given by the program.

3.1   External Interfaces

The menu must be accessible from any screen the search bar must support searches by customer name and RUC.

Intake Form

- Text fields for name, RUC, and document number.

- Dropdown list for the type of process.

- Calendar to select the processing date.

- Automatically calculated price field.

Interface with Other Systems

- Integration must be secure and compliant with legal regulations.

- Information obtained must be updated in real time or at defined regular intervals.

3.2   Functions

The functions required for Cyber Planeta System are:

Taxpayer:
Each Taxpayer has attributes such as name, RUC, process type, processing date, price, and number of documents.

- **Add Taxpayer:** The system must allow the entry of data for new clients, Name, RUC, process type, processing date, price, number of documents, Registration confirmation.

- **Update Taxpayer:** The system must allow the modification of the data of an existing client, Name, RUC, process type, processing date, price, number of documents, Update confirmation.

- **Delete Taxpayer:** The system must allow the deletion of a client from the system, Client ID, Deletion confirmation.

- **Search Taxpayer:** The system must allow the search for clients by name or RUC, List of matching clients.

Calendar:

The processing calendar organizes the dates on which the processes must be carried out, based on the client's RUC.

- **Calculate Processing Date:** The system must calculate the missing days till the due date of a process.

- **Show Notification:** The system must display a notification window with the dates of the scheduled processes, and the remaining days.

- **Send Reminders:** The system must send reminders to clients about upcoming processes, Processing date, client's contact information, Email or SMS notifications.

Taxprocess:

Tax and service processing refers to the specific actions carried out to manage taxes and other services requested by customers. This encompasses a series of well-defined steps that ensure the timely and efficient handling of tax filings, service requests, and other related procedures.

- **Select Process:** The system must allow the selection of the type of process to be followed for each client, Details of the selected process.

- **Calculate Price:** The system must calculate and display the price of the selected process for each client, Process price.

- **Generate Processing Report:** The system must generate reports of the processes carried out within a specified date range, Date range, Report in PDF or Excel format.

Other:

- **Basic calculations:** Compare 2 moth taxes and calculate the average of taxes (maximum 12 moths).

- **Incomes:** The system must save pricing calculations as Incomes (the ones chose by the user), calculate the total of the Incomes and allow to estimate future incomes.

3.3 Performance Requirements

The following are the performance requirements for the Cyber Planeta system:

System Load:

- **Number of terminals:** 50 concurrent terminals

- **Number of simultaneously connected users:** 200 users

- **Transactions per second:** 10 transactions per second

- **Response time:** 2 seconds maximum for each transaction

Data Requirements:

- **Usage frequency:** High usage frequency during tax and taxes declaration periods.

- **Access capabilities:** Simultaneous access to the database for multiple users.

- **Number of records:** It is expected to store a minimum of 10,000 tax declaration records and a maximum of 50,000 records

- **Database size:** The database is expected to be at least 100 GB in size and up to 500 GB

- **Read and write speed:** A read and write speed of at least 100 MB/s is required

Storage Requirements:

- **Storage space:** A minimum of 500 GB of storage space is required for the database and attachments.

- **Storage type:** Hard disk or SSD storage with fast access speed is required.

  Network Requirements:

- **Bandwidth:** At least 100 Mbps of bandwidth is required to ensure fast and secure communication.

- **Connectivity:** Stable and secure connectivity is required through network protocols.

Security Requirements:

- **Authentication:** Secure authentication is required for system users and administrators.

- **Authorization:** Secure authorization is required to access system data and functionalities.

- **Data integrity:** Data must be stored and transmitted securely and confidentially

It is important to note that these requirements may vary depending on the specific needs of the system and its users, so it is important to test and adjust the system to ensure optimal performance.

3.4   Design Constraints

The following are the design constraints that may affect the development of the Cyber Planeta system:

Standards Constraints

- Compliance with current tax regulations

- Compliance with cybersecurity information security standards

- Compliance with accessibility standards for people with disabilities

Hardware Limitations

- The application must be compatible with the cybersecurity computer equipment, which has the following characteristics:

  - **Processor:** Intel Core i5 or higher
  - **RAM memory:** 8 GB or higher
  - **Operating System:** Windows 10 or higher
  - **Connectivity:** Wi-Fi or Ethernet

- The application must be able to function in network environments with low connection speed

Software Limitations

- The application must be compatible with the following web browsers:

  - Google Chrome

- The application must be able to work with different versions of the aforementioned web browsers.

- The application must be compatible with the following mobile operating systems:

  - Android 8.0 or higher

Integration Constraints

- The application must be able to integrate with the cybersecurity's existing tax management systems.

- The application must be able to integrate with the cybersecurity's electronic payment systems.

Security Constraints

- The application must comply with cybersecurity information security standards, including user authentication and authorization.

- The application must be able to encrypt sensitive and confidential data.

- The application must be able to detect and prevent common security attacks, such as SQL injections and cross-site scripting (XSS).

Usability Constraints

- The application must be easy to use and accessible to cybersecurity users.

- The application must be able to provide an intuitive and user-friendly experience.

- The application must be able to provide online help and support for users.

3.5   System attributes

Reliability

- The system must be able to function properly for an extended period of time without errors or failures.

- The system must be able to recover quickly from a failure or error.

- The system must be able to provide a consistent and accurate response to user requests.

Maintainability

- The system must be easy to maintain and update.

- The system must be able to be modified or updated without affecting its operation.

- The system must be able to be scaled to adapt to changes in demand or user requirements.

Portability

- The system must be able to function in different environments and platforms.

- The system must be able to be executed on different operating systems and devices.

- The system must be able to be accessed from different locations and devices.

Security

- The system must be able to protect the confidentiality, integrity, and availability of data.

- The system must be able to authenticate and authorize users to access data and functionalities.

- The system must be able to detect and prevent common security attacks, such as SQL injections and cross-site scripting (XSS).

Access Security

- Authorized users will be those who have a valid account and have been successfully authenticated.

- Unauthorized users will not be able to access the data and functionalities of the system.

- Users will have different levels of access depending on their role and responsibilities.

Security Mechanisms

- **Authentication:**A username and password-based authentication system will be used.

- **Authorization:** A role and permission-based authorization system will be used.

- **Encryption:** A secure encryption algorithm will be used to protect data in transit and at rest.

- **Firewall:** A firewall will be used to protect the system from external attacks.

- **Monitoring:** The system will be continuously monitored to detect and prevent security attacks.

Security Mechanisms

- **Administrators:**will have full access to the system and will be able to perform any task.

- **Registered users:** will have access to the system's functionalities and will be able to perform specific tasks according to their role.

- **Guest users:** will have limited access to the system and will be able to perform specific tasks according to their role.

3.6 "Other requirements

N/A

4   Appendix

Appendices can contain all kinds of information relevant to the ERS but that does not, strictly speaking, form part of the ERS. For example:

1. Data input/output formats, on screen or in listings.

2. Cost analysis results.

3. "Programming language restrictions.