

Specification Requirement Document

Invoice Manager

Document Information and Approvals:**Version History**

Version #	Date	Author	Project Role
3.3			
3.2			
3.1			
3.0			
2.2			
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1.0			

Document Approval

Approver Name	Project Role	Signature/Electronic Approval	Date

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Introduction

Overview of this Document

The Objective of this document is to provide the detailed description of the requirements for the “Invoice Manager” web application. The document will explain the purpose and complete declaration for the development of the system. Assumptions , constraints , system requirements and constraints also illustrated.

Scope

The scope of this document is to create the specification requirement document that would be referred by all the stakeholders of the project to ascertain their understanding of the specs requirement

Sign off

Sign off should be taken from the Project Manager and the COO before starting the development of the system.

Approver Name	Project Role	Signature/ Approval	Date

Support Information

For any support, related queries please write into GIC’s email ID.

GIC Company Background

GIC Limited was founded to provide “Managed Support Services”, “Custom Development” and other consulting services, which are designed to meet the specific needs of the enterprises with development and support requirements.

GIC works with Fortune 500 enterprises and currently serves customer from its offices in UK and India. GIC and its subsidiaries in Asia provide consulting services for Banking, Financial and Healthcare services.

Project Objective

Invoice Manager is a product based web application project. This product target audience are middle and big retail sectors. IM application empowers to keep the account information consistently up-to-date, organized and actionable.

It is a commercial payment management application. Core functionality of this application is raising invoices and managing payments.

Application Modules in scope

- Payments
- Products
- Customers
- Settings
- Reports
- Users

Application Modules not in scope

- The customer has no direct access to the application and so cannot create a quotation themselves, only the administrator has access to the application.
- This application provides a functionality for adding a maximum of 999 customers or products in a single go Discussion Forum

Assumptions / Constraints

- Scope: If the project scope changes from the original baselined version then it would be covered in a separate Scope change document along with revision of this document as well. The changes in scope should be agreed and approved by all the stakeholders. Any changes in the scope may affect the project deadline and may incur charges.
- Software usage: The users are required to use the product when the minimum specified specifications are met to avoid any performance degradation to the product

- Since the application is a web based portal hence there is a need for the browser. It will be assumed that the user possesses decent internet connectivity

Risks

- No known risks at this time

Overall Description

Product Perspective

Invoice Manager is web based application used to manage customers. It manages products and sales of client. The application supports payments, quotations, invoices and features reports. It gives exhaustive reports of products (stock) and sales. Clients (i.e. Customers) have no access to the application. They can only request items by phone, where they will quote a price, which will be entered by company administrators manually into the system in form of a quotation. If the price is agreed between company and customer then that quotation is changed into an invoice.

Product Features

Payments: This module has following sub modules namely:

- List Invoice
- Add Invoice
- List Quotations
- Add Quotations

Products: This module has the following sub modules as follows:

- List Products
- Add Products
- Import products by csv

Customers: This module has the following sub modules such as:

- List Customers
- Add Customer
- Import customer by .csv

Settings: This module has the following sub module.

- Companies
- Add Company
- Tax Rates
- Add Tax Rates

Companies /Tax Rates: This submodule

Displays the details of the company / Tax Rates.

User who has view access can list the companies / Tax Rates.

Add Company / Add Tax Rates: This enables the users who has Sales staff / Admin access can add the company and tax rates.

Reports: This module has the following sub modules.

- Daily sales
- Monthly Sales
- Sales Report
- Payment Report

Dash Board:

- Dash board shows the overview of Total Invoices raised.
- How many invoices fully paid and how many invoices are partly paid?
- How many invoices are overdue, how many invoices pending and how many invoices were cancelled?

Users: This module has the following sub modules:

- List Users
- Add New Users

Design and Implementation Constraints

The customer has no direct access to the application and so cannot create a quotation themselves, only the administrator has access to the application.

This application provides a functionality for adding a maximum of 999 customers or products in a single go Discussion Forum.

There is a limit to the simultaneous usage of the application even though highest care has been taken that maximum number of users can use the system however it depends on the load balancer to even out the traffic and also user session timeout is set to 10 minutes of inactivity.

Long running queries like empty searches which takes processing time might result in some performance degradation and it can be avoided by providing good number of each criteria so that a section of data is searched through the database to provide the query result.

Users are requested to ensure that they log into the portal through a secure network and avoid using the portal from suspicious sources to avoid any security issues that may arise from non-suspecting sources.

Application memory usage is set to minimum however it is recommended that the users accessing the portal should have some free memory in the system through which they would access the portal.

Functional Requirements

Payments:

List Invoices/List Quotations: This submodule enables the user who has appropriate R & A (sales staff) should be able to list all the invoices / quotations raised.

Add Invoice/Add Quotations: This submodule enables the user (sales staff) (ex: accountant or asst. accountant) to create invoices / quotations to the customer.

Products:

User with right R & A (admin) should be able to List Products / Add Product / Import products in a .csv file.

Customers:

User who has appropriate access such as sales staff R & A should be able to List / Add / Import customer in a .csv file.

Companies :

_Displays the details of the company. User who has view access can list the companies. Add Company: This enables the users who has Sales staff / Admin access can add the company.

Tax Rates:

Displays the details of the Tax Rates. User who has view access can list Tax Rates. Add Tax Rates: This enables the users who has Sales staff / Admin access can add the tax rates.

Reports:

This Reports module provides the company to monitor the sales activities in order to take necessary actions to improve sales in a slow-moving product. Payment report provides the company / Accounts department to monitor and chase the customers who is payment is due.

Dash Board:

Dash board shows the overview of Total Invoices raised.

How many invoices fully paid and how many invoices are partly paid?

How many invoices are overdue, how many invoices pending and how many invoices were cancelled?

Users:

This module enables the employees based on their nature of job and their roles to get access to the application to perform their duties.

Non-Functional Requirements

The non- functional requirements include the following:

- a) Availability
The portal should be available or online without any issues 24*7 and should be down in the defined and agreed downtime period for maintenance activities
- b) Scalability
The Portal should have scalability so that any changes that might come in future are incorporated into the portal
- c) Reliability
The portal should be reliable in providing correct and precise information at any given time

Technical Requirements

The technical requirements are listed below:

- a) Security
The portal should have security features which include user authentication so that any unauthorized access to the portal is avoided. Only those users that have access to the portal can login. This would be handled when developing the Login functionality
- b) Network
The portal would be available through internet and would have specific ports opened so that it is accessible to intranet of the institute where it would be hosted and used. This would ensure that adequate security protocols are adhered and avoid any case of unauthorized usage.
This would be handled when the servers are provisioned and the Network team or the technical team would be responsible to ensuring correct configurations are maintained. Traffic would be handled via the load balancers.
- c) Environment
There would be 3 different environments available for testing purposes which include – Development (DEV), Quality (QA) and Production (PR)
- d) Logging
User and system logging option would be available and the log purging duration would be set to 90 days. Logging would be essentials in maintaining, housekeeping and troubleshooting.

System Architecture

The portal would follow n-tier architecture and would mostly comprising of the following:

- a) User Access Layer
This would be the UI or the front end which would be available to the end user to interact with the portal
- b) Business Process Layer

This would comprise of writing the business logic so that the user defined actions are processed with the help of the code

c) Data Access layer

This would be responsible to taking the actions requested by the user and passing the parameters to the database to submit and / or fetch the data from the database and pass it to the user interface for the end user to see.

d) Database

The database would have the schema that would ensure that all the fields mentioned in the UI are mapped to its subsequent fields in database to maintain the data.

Architecture Diagram

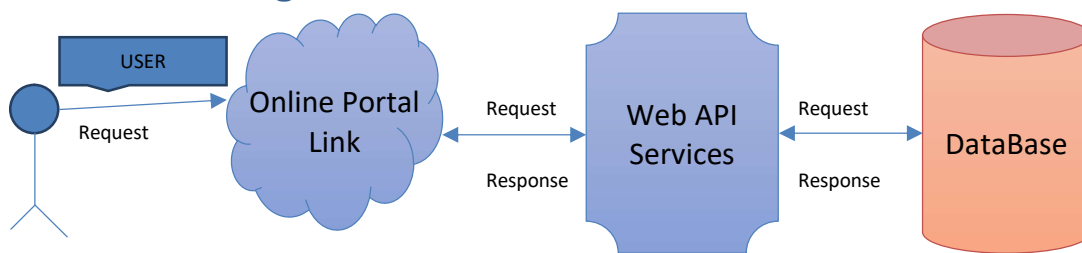


Fig I – Service Request Flow

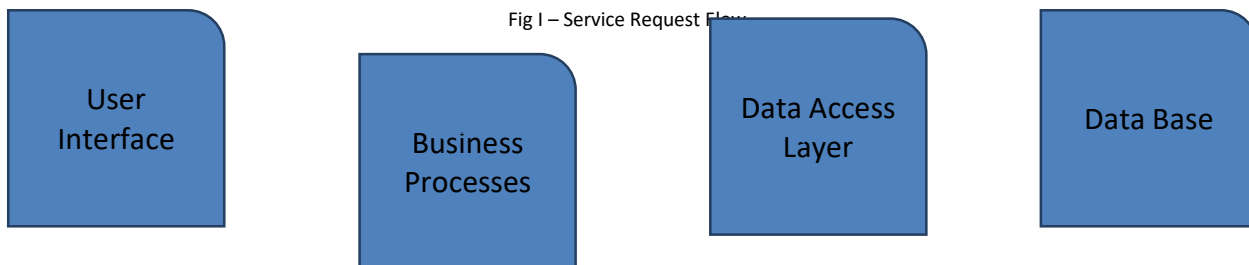


Fig II – N- tier Architecture diagram

Infrastructure Details

- Front End: HTML5 using CSS3 and Bootstrap
- Back End: Microsoft SQL Server 2016
- Middleware: RESTful Web Services
- Servers: Windows Server 2016 or AWS
- Target Browsers: Internet Explorer, Chrome, Safari, Firefox
- Source Repository: GitHub

Performance Specifications

- This application should be available online and be used using web browsers

- Since the application has graphs and data grid tables hence the response time for a particular data display should not be greater than 3-4 seconds for a good internet connection.
- The database should be scalable and must have the capability to hold more information in future as the data would be incremental. SQL server is scalable enough to meet this requirement.
- The number of connections to the system should not slow down the performance
- Error handling should be implemented and the system should be able to handle all the run time errors.