PROJECT REPORT

PROJECT NAME: CUSTOMER CARE REGISTRY – CLOUD COMPUTING

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ABSTRACT

Online TRAIN Ticket Reservation System is a cloud-based application that works within a centralized network. This project presents a review on the software program

"Online TRAIN Ticket Reservation System" as should be used in a TRAIN transportation system, a facility which is used to reserve seats, cancellation of reservation, customer complain and different types of route enquiries used on securing quick reservations. OBTRS is built for managing and computerizing the cloud database, ticket booking and tracking TRAIN and travel made. It maintains all customer details; TRAIN details and customer complain. In addition, HTML Hypertext Markup language was used for the front- end of the software while the back end was designed using python. The software achieved is capable of improving the customer hand and customers complains with cloud operations. It is recommended that despite the present functionality of

the designed software, an additional functionality such as the use of E-mail to send tickets and notifications to the customer and customer complaints with cloud technology.

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

The prevalent view in various global circles is that man is presently living in an age growth of information gathering, processing and dissemination, popularly called the information age. For this reason, managers and other users of information especially in transport industries are demanding more kinds of information to support management, problem solving their issues and operations. They must therefore respond to the increasing requirement for information and data management through the cloud technology. Electronic tickets, or e-tickets, gives evidence that their holders have the permission to enter a place of entertainment, use a means of transportation, or have access

to some Internet services. The design of this online system will be beneficial to the company because it has not existed before and was not able to solve customers' issues. The ultimate expectation is to inspire a feasibility study aimed at providing proper guidance and awareness to any future potential investors and to solve the customers problem, to buy train ticket, make payment, and ask for information online easily. And staffs can solve problem of customer through the mail form and they can also check the details of ticket and if the customers find any kind of complain they can easily register them complain through mail. The agent who will respond to each and every complain through the cloud technology.

1.2 OBJECTIVE

1. Providing a web-based train ticket reservation function where a customer can buy train ticket through the online system without a need to queue up at the counter to purchase a train ticket.
2. Enabling customers to check the availability and types of trainees online.

Customer can check the time departure for every train through the system.

3. Ability of customers to complain their reservation.
4. Admin user privileges in of complain at time and will receives the solution for complain and problem.

CHAPTER 2

LITERATURE SURVEY

[1]. Gede Juanumasta, The Role of Customer Service Through Customer Relationship Management (CRM), 2019.

To improve customer loyality and good image and also qualitative study, researchers used a paradigm Non positivism. It aims to underdstand the meaning of behaviour symbol and phenomena by using sampling purposive sampling.

[2].Lucie Kanovska, Customer Service And Their Roles For Industrial Small And Medium Companies, 2009.

The aim of this paper is to present the problems of the customer service and their important role for small scale and medium scale company from the theoretical view and also selected results of research held in industrial.

[3].Mohammad Heydari,HadisehAbaszadeh,Habibollah Danai, The Relationship Between Customer Relationship Management and Customer Satisfaction With service Received, 2015.

Today, with the advancement of information technology in the organization of new systems of productions that can reduce internal cost, better interaction with environment and ultimately help to make a profit. Customer satisfaction is one of these tools.

[4].A. Michael Knemeyer, Douglas M. Lambert and Sebastian J. GarciaDastugue, The Customer Service Management Process

Customer services are kind of service being provided by companies to their products. Customer service can be founded in all economic spheres, such as in a primary sphere, as well as in secondary and teritary sphere.

CHAPTER 3

EXISTING SYSTEM AND PROPOSED SYSTEM

3.1 EXISTING SYSTEM

Currently, the type of system being used at the counter is an internal system which is manually used in selling the train tickets. The problems facing the company are that customers have to go to the counter to buy train ticket or ask for train schedule, customers will also have to queue up for a long time in order to secure a train ticket and will also need to pay cash when they buy the train ticket. Data storage accessing from anywhere very difficult and something and complains get messed up with lots of things.

3.2 PROPOSED SYSTEM

In this proposed system user who wants to book tickets have to register. The and agent who wants can accesses page. The user has to login the page or they can register if they are new to the login page. After logging the page, if suppose the user have forgot the passwords. In forgotten password, if user has forgotten the forward they can easily access their account again by resetting their password. In dashboard the ticket for train available of sits and with cost of ticket will displayed. Through that they can register their rain tickets. If they face any problem or issues they have complete rights to complain they issues, where agent will be solving the customer issues through mails with immediate response.

CHAPTER 4

4.1 ARCHITECTURE DESIGN

CHAPTER 5 SYSTEM SPECIFICATION 5.1 SOFTWARE SPECIFICATION

Front End : HTML, CSS

Back End : python

Operating System : Windows 10

5.2 HARDWARE SPECIFICATION

PROCESSOR : INTEL

CORE I3. RAM :

4 GB RAM

MONITOR : 15” COLOR

HARD DISK : 100 GB

5.3 MODULES

There are 5 types of modules in this project

1. User creation
2. User details
3. Budget details
4. Management view-data wise
5. IBM cloud.

In the account creation module, the user can create „n‟ number of accounts with individual maintenance.

5.3 MODULE DISCRIPTION

A. User Creation

In the account creation module, the user can create „n‟ number of accounts with individual maintenance.

B. User details

This module for user can enter their details such has name, address, mobile no, etc., c. Budget details

This module mainly depends on the HTML and CSS database for storing detail and expense details and income. The category transaction is stored in a HTML. D.

Management View- Date Wise.

By retrieving all the income and expense details are viewed. The income and expenses are retrieved by using HTML and CSS and viewed in smart data table viewer.

E. IBM cloud

In IBM cloud all the data has been stored through the web application developments. This cloud processes will store all the details od user and can be viewed in data viewed table.

5.4 Web application

Web applications can be simple consisting of only static web pages or they can be dynamic and interactive.

Static web pages are stored in the file system of web server usually displays the same information to all visitors. Whereas dynamic pages are constructed by a program that produce the HTML. This type of web application provide individual information to the user and let them personalize the content according to their preferences.

How the (static) web work?

We already know that to open a web page we enter URL or click on link and web browser displays web page that we request. Let's discuss the steps that happen behind the scene.

1. The user enters a URL in the browser.
2. The browser sends a request to the web server over the internet.
3. Web Server examines the request and based on the request server finds the requested page already stored in its local drive.
4. Web Server sends the response to the web client (browser).
5. Browser gets the HTML and renders it into a display for the user.

The request and response communications over the internet between client and server are held using the HTTP protocol. That's why the server is often called as HTTP server. When a server answers a request, the server usually sends some type of content to the browser so that the browser can display it. Servers often send the browser a set of instructions written in HTML. HTTP uses URLs (Uniform Resource Locator) to identify data on the Internet.

How Web applications work

Web applications do not need to be downloaded since they are accessed through a network. Users can access a Web application through a web browser such as Google Chrome, Mozilla Firefox or Safari.

For a web app to operate, it needs a Web server, application server, and a database. Web servers manage the requests that come from a client, while the application server completes the requested task. A database can be used to store any needed information.

Web applications typically have short development cycles and can be made with small development teams. Most Web apps are written in JavaScript, HTML5, or Cascading Style Sheets (CSS). Client-side programming typically utilizes these languages, which help build an

application front-end. Server-side programming is done to create the scripts a Web app will use. Languages such as Python, Java, and Ruby are commonly used in server-side programming.

Benefits

Web applications have many different uses, and with those uses, comes many potential benefits. Some common benefits of Web apps include:

1. Allowing multiple users access to the same version of an application.
2. Web apps don't need to be installed.
3. Web apps can be accessed through various platforms such as a desktop, laptop, or mobile.
4. Can be accessed through multiple browsers.

Web Application vs. other application types

Within the mobile computing sector, Web apps are sometimes contrasted which are applications that are developed specifically for a particular platform or device and installed on that device. However, the two are not mutually exclusive. Native applications are applications typically downloaded and made specifically for the type of device it is downloaded on. Native apps can commonly make use of the devicespecific hardware, such as a GPS or camera on a mobile native app.

Programs that combine the two approaches are sometimes referred to as hybrid applications. Hybrid apps work similar to a Web app but are installed to the device as a native app would be.

CHAPTER 6 SYSTEM SOFTWARE 6.1 HTML

HTML stands for **Hyper Text Markup Language**, which is the most widely used language on Web to develop web pages. **HTML** was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995. HTML 4.01 was a major version of HTML and it was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.

Fig no: HTML page

Why to Learn HTML?

Originally, **HTML** was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers. Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

HTML is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning HTML:

1. **Create Web site** - You can create a website or customize an existing web template if you know HTML well.
2. **Become a web designer** - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.
3. **Understand web** - If you want to optimize your website, to boost its speed and performance, it is good to know HTML to yield best results.
4. **Learn other languages** - Once you understand the basic of HTML then other related technologies like JavaScript, php, or angular are become easier to understand.

Description of HTML Example

<!DOCTYPE>: It defines the document type or it instruct the browser about the version of HTML.

<html >: This tag informs the browser that it is an HTML document. Text between html tag describes the web document. It is a container for all other elements of HTML except <!DOCTYPE>

<head>: It should be the first element inside the <html> element, which contains the metadata (information about the document). It must be closed before the body tag opens.

<title>: As its name suggested, it is used to add title of that HTML page which appears at the top of the browser window. It must be placed inside the head tag and should close immediately. (Optional)

<body>: Text between body tag describes the body content of the page that is visible to the end user. This tag contains the main content of the HTML document.

<h1>: Text between <h1> tag describes the first level heading of the webpage.

<p>: Text between <p> tag describes the paragraph of the webpage.

Applications of HTML

As mentioned before, HTML is one of the most widely used language over the web. I'm going to list few of them here:

1. **Web pages development** - HTML is used to create pages which are rendered over the web. Almost every page of web is having html tags in it to render its details in browser.
2. **Internet Navigation** - HTML provides tags which are used to navigate from one page to another and is heavily used in internet navigation.
3. **Responsive UI** - HTML pages now-a-days works well on all platform, mobile, tabs, desktop or laptops owing to responsive design strategy.
4. **Offline support** HTML pages once loaded can be made available offline on the machine without any need of internet.
5. **Game development**- HTML5 has native support for rich experience and is now useful in gaming development arena as well.

6.2 CSS

CSS is used to control the style of a web document in a simple and easy way.

CSS is the acronym for **"Cascading Style Sheet"**. This tutorial covers both the versions CSS1, CSS2 and CSS3, and gives a complete understanding of CSS, starting from its basics to advanced concepts.

Fig no: HTML and CSS page

Why to Learn CSS?

Cascading Style Sheets, fondly referred to as **CSS**, is a simple design language intended to simplify the process of making web pages presentable.

CSS is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning CSS:

1. **Create Stunning Web site** - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.
2. **Become a web designer** - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.
3. **Control web** - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
4. **Learn other languages** - Once you understand the basic of HTML and CSS then other related technologies like JavaScript, php, or angular are become easier to understand.

Hello World using CSS.

Just to give you a little excitement about CSS, I'm going to give you a small conventional CSS Hello World program,

```
<!DOCTYPE html>
<html>
  <head>
    <title>This is document title</title>
    <style>       h1 {
color: #36CFFF;
    }
    </style>
  </head>
  <body>
    <h1>Hello World! </h1>
```

```
  </body>
</html>
```

Applications of CSS

As mentioned before, CSS is one of the most widely used style language over the web.

I'm going to list few of them here:

1. **CSS saves time** - You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
2. **Pages load faster** - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So, less code means faster download times.
3. **Easy maintenance** - To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
4. **Superior styles to HTML** - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
5. **Multiple Device Compatibility** - Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.
6. **Global web standards** - Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

6.3 JAVASCRIPT

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform. JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages,

whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

JavaScript was first known as **Live Script,** but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name **Live Script**. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

The ECMA-262 Specification defined a standard version of the core JavaScript language.

1. JavaScript is a lightweight, interpreted programming language.
2. Designed for creating network-centric applications.
3. Complementary to and integrated with Java.
4. Complementary to and integrated with HTML.
5. Open and cross-platform

Fig no: JavaScript page

Why to Learn JavaScript

JavaScript is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain.

I will list down some of the key advantages of learning JavaScript:

1. JavaScript is the most popular programming language in the world and that makes it a programmer's great choice. Once you learnt JavaScript, it helps you developing great front-end as well as back-end software's using different JavaScript based frameworks like jQuery, Node.JS etc.
2. JavaScript is everywhere, it comes installed on every modern web browser and so to learn JavaScript you really do not need any special environment setup. For example, Chrome, Mozilla Firefox, Safari and every browser you know as of today, supports JavaScript.

   JavaScript helps you create really beautiful and crazy fast websites. You can develop your website with a console like look and feel and give your users the best Graphical User Experience.
3. JavaScript usage has now extended to mobile app development, desktop app development, and game development. This opens many opportunities for you as JavaScript Programmer.
4. Due to high demand, there is tons of job growth and high pay for those who know JavaScript. You can navigate over to different job sites to see what having JavaScript skills looks like in the job market.
5. Great thing about JavaScript is that you will find tons of frameworks and Libraries already developed which can be used directly in your software development to reduce your time to market.

There could be 1000s of good reasons to learn JavaScript Programming. But one thing for sure, to learn any programming language, not only JavaScript, you just need to code, and code and finally code until you become expert.

There are many useful **JavaScript frameworks** and libraries available:

6. Angular

7. React
8. jQuery
9. Vue.js
10. Ext.js
11. Ember.js
12. Meteor
    Mithril
13. Node.js
14. Polymer
15. Aurelia
16. Backbone.js

It is really impossible to give a complete list of all the available JavaScript frameworks and libraries. The JavaScript world is just too large and too much new is happening.

APPLICATIONS OF JAVASCRIPT PROGRAMMING

As mentioned before, **JavaScript** is one of the most widely used **programming languages** (Front-end as well as Back-end). It has its presence in almost every area of software development. I'm going to list few of them here:

1. **Client-side validation** - This is really important to verify any user input before submitting it to the server and JavaScript plays an important role in validating those inputs at front-end itself.
2. **Manipulating HTML Pages** - JavaScript helps in manipulating HTML page on the fly. This helps in adding and deleting any HTML tag very easily using JavaScript and modify your HTML to change its look and feel based on different devices and requirements.

3. **User Notifications** - You can use JavaScript to raise dynamic pop-ups on the webpages to give different types of notifications to your website visitors.
   Back-end Data Loading - JavaScript provides Ajax library which helps in loading back-end data while you are doing some other processing. This really gives an amazing experience to your website visitors.
4. **Presentations** - JavaScript also provides the facility of creating presentations which gives website look and feel. JavaScript provides RevealJS and Bespoke libraries to build a web-based slide presentation.
5. **Server Applications** - Node JS is built on Chrome's JavaScript runtime for building fast and scalable network applications. This is an event-based library which helps in developing very sophisticated server applications including Web Servers.

This list goes on, there are various areas where millions of software developers are happily using JavaScript to develop great websites and others software's.

ADVANTAGES OF JAVASCRIPT

The merits of using JavaScript are −

1. **Less server interaction** − You can validate user input before sending the page off to the server. This saves server traffic, which means less load on your server.
2. **Immediate feedback to the visitors** − They don't have to wait for a page reload to see if they have forgotten to enter something.
3. **Increased interactivity** − You can create interfaces that react when the user hovers over them with a mouse or activates them via the keyboard.

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4. **Richer interfaces** − You can use JavaScript to include such items as draganddrop components and sliders to give a Rich Interface to your site visitors.

LIMITATIONS OF JAVASCRIPT

We cannot treat JavaScript as a full-fledged programming language. It lacks the following important features −

1. Client-side JavaScript does not allow the reading or writing of files. This has been kept for security reason.
2. JavaScript cannot be used for networking applications because there is no such support available.
3. JavaScript doesn't have any multi-threading or multiprocessor capabilities.

Once again, JavaScript is a lightweight, interpreted programming language that allows you to build interactivity into otherwise static HTML pages.

JAVASCRIPT DEVELOPMENT TOOLS

One of major strengths of JavaScript is that it does not require expensive development tools. You can start with a simple text editor such as Notepad. Since it is an interpreted language inside the context of a web browser, you don't even need to buy a compiler.

To make our life simpler, various vendors have come up with very nice JavaScript editing tools. Some of them are listed here −

1. **Microsoft FrontPage** − Microsoft has developed a popular HTML editor called FrontPage. FrontPage also provides web developers with a number of JavaScript tools to assist in the creation of interactive websites.
2. **Macromedia Dreamweaver MX** − Macromedia Dreamweaver MX is a very popular HTML and JavaScript editor in the professional web development crowd. It provides several handy prebuilt JavaScript components, integrates well with databases, and conforms to new standards such as XHTML and XML.

3. **Macromedia Home Site 5** – Home Site 5 is a well-liked HTML and JavaScript editor from Macromedia that can be used to manage personal websites effectively.

JAVASCRIPT IN INTERNET EXPLORER

Here are simple steps to turn on or turn off JavaScript in your Internet Explorer

1. Follow **Tools** → **Internet Options** from the menu.
2. Select **Security** tab from the dialog box.
3. Click the **Custom Level** button.
4. Scroll down till you find **Scripting** option.
5. Select *Enable* radio button under **Active scripting**.
6. Finally click OK and come out

To disable JavaScript support in your Internet Explorer, you need to select **Disable** radio button under **Active scripting**.

JavaScript in Firefox

Here are the steps to turn on or turn off JavaScript in Firefox −

1. Open a new tab → type **about: config** in the address bar.
2. Then you will find the warning dialog. Select **I'll be careful, I promise!**
3. Then you will find the list of **configure options** in the browser.
4. In the search bar, type **JavaScript. Enabled**.
5. There you will find the option to enable or disable JavaScript by right-clicking on the value of that option → **select toggle**.

If JavaScript. Enabled is true; it converts to false upon clicking **toggle**. If JavaScript is disabled; it gets enabled upon clicking toggle.

JavaScript in Chrome

Here are the steps to turn on or turn off JavaScript in Chrome − • Click the Chrome menu at the top right-hand corner of your browser.

1. Select **Settings**.
2. Click **Show advanced settings** at the end of the page.
3. Under the **Privacy** section, click the Content settings button.
4. In the "JavaScript" section, select "Do not allow any site to run JavaScript" or "Allow all sites to run JavaScript (recommended)".

JavaScript in Opera

Here are the steps to turn on or turn off JavaScript in Opera −

1. Follow **Tools** → **Preferences** from the menu.
2. Select **Advanced** option from the dialog box.
3. Select **Content** from the listed items. • Select **Enable JavaScript** checkbox.
4. Finally click OK and come out.

To disable JavaScript support in your Opera, you should not select the **Enable JavaScript checkbox**.

6.4 PYTHON

Python is a high-level, interpreted, interactive and object-oriented scripting language. Python is designed to be highly readable. It uses English keywords frequently where as other languages use punctuation, and it has fewer syntactical constructions than other languages.

1. **Python is Interpreted**– Python is processed at runtime by the interpreter. We do not need to compile our program before executing it. This is similar to PERL and PHP.

2. **Python is Interactive**– We can actually sit at a Python prompt and interact with the interpreter directly to write our programs.

3. **Python is Object-Oriented**– Python supports Object-Oriented style or technique of programming that encapsulates code within objects.

4. **Python is a Beginner's Language**– Python is a great language for the beginner-level programmers and supports the development of a wide range of applications from simple text processing to WWW browsers to games.

The system utilizes Python programming language with Google's Tensorflow Machine Learning Library to build and deploy the CNN. The performance is analyzed based on real world scenarios tested on the neural network. The network architecture makes use of 9 convolutional and max-pooling layers, followed by 2 fully connected layers. The network is a concoction of classification and detection models.

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991.

It is used for:

5. web development (server-side),
6. software development,
7. mathematics,
8. System scripting.

Python Features

Python's features include –

1. **Easy-to-learn**– Python has few keywords, simple structure, and a clearly defined syntax. This allows the student to pick up the language quickly.
2. **Easy-to-read**– Python code is more clearly defined and visible to the eyes.
3. **Easy-to-maintain**– Python's source code is fairly easy-to-maintain.
4. **A broad standard library**– Python's bulk of the library is very portable and cross-platform compatible on UNIX, Windows, and Macintosh.
5. **Interactive Mode**– Python has support for an interactive mode which allows interactive testing and debugging of snippets of code.
6. **Portable**– Python can run on a wide variety of hardware platforms and has the same interface on all platforms.
7. **Extendable**– We can add low-level modules to the Python interpreter. These modules enable programmers to add to or customize their tools to be more efficient.
8. **Databases**– Python provides interfaces to all major commercial databases.
9. **Scalable**– Python provides a better structure and support for large programs than shell scripting.

Apart from the above-mentioned features, Python has a big list of good features, few are listed below –

10. It supports functional and structured programming methods as well as OOP.

11. It can be used as a scripting language or can be compiled to byte-code for building large applications.
12. It provides very high-level dynamic data types and supports dynamic type checking.
13. It supports automatic garbage collection.
14. It can be easily integrated with C, C++, COM, ActiveX, CORBA, and Java.

Python is available on a wide variety of platforms including Linux and Mac OS X. Let's understand how to set up our Python environment.

Local Environment Setup

Open a terminal window and type "python" to find out if it is already installed and which version is installed.

1. Unix (Solaris, Linux, FreeBSD, AIX, HP/UX, SunOS, IRIX, etc.)
2. Win 9x/NT/2000
3. Macintosh (Intel, PPC, 68K)
4. OS/2
5. DOS (multiple versions)
6. PalmOS
7. Nokia mobile phones

8. Windows CE
9. Acorn/RISC OS
10. BeOS
11. Amiga
12. VMS/OpenVMS
13. QNX
14. VxWorks
15. Psion
16. Python has also been ported to the Java and .NET virtual machine

6.2.1 APPLICATIONS

1. Python can be used on a server to create web applications.
2. Python can be used alongside software to create workflows.
3. Python can connect to database systems. It can also read and modify files.
4. Python can be used to handle big data and perform complex mathematics.
5. Python can be used for rapid prototyping, or for production-ready software development.

6.2.2 FEATURES

1. Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc.).
2. Python has a simple syntax similar to the English language.
3. Python has syntax that allows developers to write programs with fewer lines than some other programming languages.
4. Python runs on an interpreter system, meaning that code can be executed as soon as it is written. This means that prototyping can be very quick.

5. Python can be treated in a procedural way, an object-oriented way or a functional way.

The most recent major version of Python is Python 3, which we shall be using in this project. However, Python 2, although not being updated with anything other than security updates, is still quite popular.

It is possible to write Python in an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or Eclipse which are particularly useful when managing larger collections of Python files. In this project, Python will be written in Thonny Software.

6.2.3 Python Syntax compared to other programming languages

1. Python was designed for readability and has some similarities to the English language with influence from mathematics.
2. Python uses new lines to complete a command, as opposed to other programming languages which often use semicolons or parentheses.

6.3 VISUAL STUDIO

Visual Studio is an **Integrated Development Environment(IDE)** developed by Microsoft to develop GUI (Graphical User Interface), console, Web applications, web apps, mobile apps, cloud, and web services, etc. With the help of this IDE, you can create managed code as well as native code. It uses the various platforms of Microsoft software development software like Windows store, Microsoft Silverlight, and Windows API, etc. It is not a language-specific IDE as you can use this to write code in C#, C++, VB (Visual Basic), Python, JavaScript, and many more languages. It provides support for 36 different programming languages. It is available for Windows as well as for macOS. **Evolution of Visual Studio:** The first

version of VS(Visual Studio) was released in 1997, named as Visual Studio 97 having version number 5.0. The latest version of Visual Studio is 15.0 which was released on March 7, 2017. It is also termed as Visual Studio 2017. The supported *.Net Framework Versions* in latest Visual Studio is 3.5 to 4.7. Java was supported in old versions of Visual Studio but in the latest version doesn't provide any support for Java language.

Visual Studio Editions

There are 3 editions of Microsoft Visual Studio as follows: **1. Community:** It is a **free** version which is announced in 2014. *All other editions are paid*. This contains the features similar to Professional edition. Using this edition, any individual developer can develop their own free or paid apps like *.Net applications*, Web applications and many more. In an enterprise organization, this edition has some limitations. For example, if your organization have more than 250 PCs and having annual revenue greater than $1 Million (US Dollars) then you are not permitted to use this edition. In a non-enterprise organization, up to five users can use this edition. Its main purpose is to provide the Ecosystem (Access to thousands of extensions) and Languages (You can code in C#, VB, F#, C++, HTML, JavaScript, Python, etc.) support. **2. Professional:** It is the commercial edition of Visual Studio. It comes in Visual Studio 2010 and later versions. It provides the support for XML and XSLT editing and includes the tool like Server Explorer and integration with Microsoft SQL Server. Microsoft provides a free trial of this edition and after the trial period, the user has to pay to continue using it. Its main purpose is to provide Flexibility (Professional developer tools for building any application type), Productivity (Powerful features such as CodeLens improve your team's productivity), Collaboration (Agile project planning tools, charts, etc.) and Subscriber benefits like Microsoft software, plus Azure, Pluralsight, etc. **3. Enterprise:** It is an integrated, end to end solution for teams of any size with the demanding quality and scale needs.

Microsoft provides a 90-days free trial of this edition and after the trial period, the user has to pay to continue using it. The main benefit of this edition is that it is highly scalable and deliver high-quality software.

Getting Started with Visual Studio 2017

1. First, you have to download and install the Visual Studio. For that, you can refer to **Downloading and Installing Visual Studio 2017**. Don't forget to select the .NET core workload during the installation of VS 2017. If you forget then you have to **modify** the installation.
2. You can see a number of tool windows when you will open the Visual Studio and start writing your first program as follows:

    a. **Code Editor:** Where the user will write code.
    b. **Output Window:** Here the Visual Studio shows the outputs, compiler warnings, error messages and debugging information.
    c. **Solution Explorer:** It shows the files on which the user is currently working.
    d. **Properties:** It will give additional information and context about the selected parts of the current project.
3. A user can also add windows as per requirement by choosing them from **View** menu. In Visual Studio the tool windows are customizable as a user can add more windows, remove the existing open one or can move windows around to best suit.

Various Menus in Visual Studio: A user can find a lot of menus on the top screen of Visual Studio as shown below

a. Create, Open and save projects commands are contained by **File** menu.
b. Searching, Modifying, Refactoring code commands are contained by the **Edit** menu.
c. **View** Menu is used to open the additional tool windows in Visual Studio.

d. **Project** menu is used to add some files and dependencies in the project.
e. To change the settings, add functionality to Visual Studio via extensions, and access various Visual Studio tools can be used by using **Tools** menu.

Advantages of using Visual Studio IDE:

4. A full-featured programming platform for several operating systems, the web, and the cloud, Visual Studio IDE is available. Users can easily browse the UI so they can write their code quickly and precisely.
5. To help developers quickly identify potential errors in the code, Visual Studio offers a robust debugging tool.
6. Developers can host their application on the server with confidence because they have eliminated anything that could lead to performance issues.
7. No matter what programming language developers are using, users of Visual Studio can get live coding support. For faster development, the Platform offers an autocomplete option. The built-in intelligent system offers descriptions and tips for APIs.

Through Visual Studio IDE you can easily Collab with your teammates in a same project. This IDE helps the developers to share, push and pull their code with their teammates.

8. Every user of Visual Studio has the ability to customize it. They have the option to add features based on their needs. For example, they can download add-ons and install extensions in their IDE. Even programmers can submit their own extensions.

Note:

9. Support for different programming languages in Visual Studio is added by using a special **VSPackage** which is known as *Language Service*.
10. When you will install the Visual Studio then the functionality which is coded as VSPackage will be available as Service.

11. Visual Studio IDE provides the three different types of services known as **SVsSolution**, **SVsUIShell**, and **SVsShell**.
12. SVsSolution service is used to provide the functionality to enumerate solutions and projects in Visual Studio.
13. SVsUIShell service is used to provide User Interface functionality like toolbars, tabs etc.
14. SvsShell service is used to deal with the registration of VS Packages.

Features

VS Code supports a wide array of programming languages from Java, C++, and Python to CSS, Go, and Dockerfile. Moreover, VS Code allows you to add on and even creating new extensions including code linters, debuggers, and cloud and web development support.

The VS Code user interface allows for a lot of interaction compared to other text editors. To simplify user experience, VS Code is divided into five main regions:

The activity bar

15. The side bar
16. Editor groups
17. The panel
18. The status bar

The image below shows how these regions are described

Getting started

You can install the latest version of Visual Studio Code from their official website. After installation, you can run the editor by entering the code -n command into the terminal. This will prompt VS Code to start and display a fresh instance. If you want

to continue working from where you left off in the previous coding session, enter the code command without the -n flag. If you want to open VS Code in a certain directory, navigate to the directory and enter the code -r command. You are now on your way to writing powerful code on your VS Code environment!

RESULTS

Providing good customer service can create satisfied customer, who are then more likely to recommend the business to others. 94% of customers will recommend a company whose service they are rate as “very good”. The request and response communications over the internet between client and server are held using the HTTP protocol. Web applications typically have short development cycles and can be made with small development teams. Most Web apps are written in JavaScript, HTML5, or Cascading Style Sheets (CSS). Allowing multiple users access to the same version of an application. Web apps don’t need to be installed. Web apps can be accessed through various platforms such as a desktop, laptop, or mobile.

CONCLUSION

It can be observed that cloud computer applications are very advanced technology in every field of human endeavor. Here all the information about customer that made reservation can be gotten just by clicking a button with this new system, some of the difficulties encountered with the manual system are overcome. It will also reduce the workload of the staff, reduce the time used for making reservation at the train terminal and also increase efficiency. The application also has the ability to update records in various files automatically thereby relieving the company’s staff the stress of working from file security of data, and complain the problem and reliable for every user.

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DEMO LINK :
https://drive.google.com/file/d/15VoaQA72PNBxBP9cKvRxScctWknK2m2U/view?usp=drivesdk
Github : https://github.com/IBM-EPBL/IBM-Project-24891-1659950500