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CHAPTER-1

COMPANY PROFILE

1.1 FOUNDATION:

STS has been founded by group of senior IT Professional. Right from the inception of this start up, STS has prospered by Leaps and bounds in technology products and critical solutions. SachTech Solution established back in 29 December, 2011 at Mohali, India to serve the varying need of individuals as well as SMEs in today's competitive market across the globe it was incorporated as SACHTECH SOLUTION PRIVATE LIMITED with CIN U72900CH2016PTC041177 on 11th Aug 2016 under the Companies Act, 2013 in India.

As of year 2018, SachTech has a strong team of more than 80 members in Mohali, India lead by passionate young entrepreneurs serving customers from across the globe in following countries: USA, Canada, UK, Brazil, Spain, Malaysia, UAE, Egypt, Australia, Finland and so on. We are continuously increasing our reach with potential customers and determined to expand our services to everyone in the globe. We embrace our responsibility to create a positive impact in the communities in which we work and live. We use proven knowledge to make recommendations and provide expert guidance to our customers. We listen, we care, and we serve. SachTech Solution innovates and constantly improves. We do what we say we'll do. SachTech Solution believes in people and their dreams.

Within the span of six years, STS is the strong team of more than 80 members having its presence in India (Mohali) in 7000 sq ft. & in Canada. Our operations are spread in New York, UK, Australia, Saudi Arabia, UAE and Israel.

Mission & Vision: Our Mission is to be the world's leading IT Channel in products, services and solutions that empower and alchemize the way consumers and businesses assemble, manage, distribute and communicate information. Our vision is to become a world-class software development and technology provider and to provide clients with innovated technical and business solutions by utilizing industry standards and technology.

Achievements: STS believes in Quality and it is evident from various technology breaks through like from fastest development systems to Desktop Retail Applications integrated with highly innovative data center services. STS works along with the client to improve its business outcomes by exploring new business opportunities, deriving cost takeout, and increasing process efficiency without any major change. From innovative ideas to their implementation and thereafter, STS offers all business transformation outsourcing services to clients under one flagship in four different phases of consulting, developing, outsourcing and training.

1.2 SERVICES WE OFFER:

I. **Consulting**: STS has 360-degree approach including each business process through a panel of various domain experts, who work hard along with the client to identify the requirements to achieve client's goal while respecting its value. STS has devised ready to opt industry vertical consulting solutions for various processes like Business Case Analysis, Business process re-engineering and Management product, Development and Management, IT Strategy Formulation, Technology Support Development, Internal Marketing, Product Testing, Performance Management etc.

II. **Development**: STS has the honor of developing innovative technologies and the growth of cloud, mobile computing and social media have put additional burdens on staff looking to quickly provide modern solutions. We also offer bouquet of various enterprise solutions, Android applications, Desktop applications, Web & Device Applications.

III. **Outsourcing:** Besides various readymade STS business process outsourcing solutions for various processes like collocation services, Onsite Database Administration Services, Online Counter etc., we have specialization in various industrial critical, technical and general processes. Our man

resources are trained for client processes and work as client's integral part and are fully accessible by client directly.

IV. **Industrial Training:** From corporate training to end user training and technical Trainings like System Administration, Enterprise Architecture, Enterprise Network etc.

STS has client based dedicated training programs to ensure client can take maximum advantage of our system, services and solutions. Apart from in-house trainers, we have ever-growing team of our training partners offering customized professional training modules to enterprising and up comings professionals.

CHAPTER-2

DOCEO (TUTORIAL)

2.1 INTRODUCTION:

DOCEO(TUTORIAL) is provide **education** that takes place over the **Internet**. It is often referred to as "e- **learning**" among other terms. However, **online learning** is just one type of "distance **learning**" - the umbrella term for any **learning** that takes place across distance and not in a traditional classroom.

A click of a mouse button provides any student anywhere with unprecedented opportunities to learn. So if a child in Grand Junction wants to master Japanese, it's possible online. If a budding artist in Five Points wants to study the masterpieces of the Louvre, it's possible online. If a future Stephen Hawking in La Junta wants to study Gravitational Entrophy with the man himself, it's possible online. If military parents want continuity in their children's education throughout frequent moves to serve our country, then it's possible online.

The proposed of this project is a smart appointment booking system that provides patients or any user an easy way of booking a doctor's appointment online. This is a web based application that overcomes the issue of managing and booking appointments according to user's choice or demands. The task sometimes becomes very tedious for the compounder or doctor himself in manually allotting appointments for the users as per their availability. Hence this project offers an effective solution where users can view various booking slots available and select the preferred date and time. The already booked space will be marked yellow and will not be available for anyone else for the specified time. This system also allows users to cancel their booking anytime. The application uses HTML as a front-end, SQLite as database and Python as the back-end.

This can be used by entering respective username and password. It is accessible either by an administrator or receptionist. Only the respective person can add data in the database. The data can be retrieved easily. The interface is very user-friendly. The data are well protected and data processing is very fast, accurate and relevant.

2.2 BENEFITS OF PROJECT:

1) **Variety of programs and courses**: From traditional four-year universities to completely online career colleges, higher education today offers a variety of options for students. This means that no matter what students study, from nursing to neuroscience, they can find the courses or programs they need online. Students can also earn every academic degree online, from a career certificate to a doctorate.

2) **Lower total costs**: Online programs prove a more affordable option than traditional colleges. Though not all online degrees offer less expensive net tuition prices than traditional colleges, associated expenses almost always cost less. For example, there are no commuting costs, and sometimes required course materials, such as textbooks, are available online at no cost. In addition, many colleges and universities accept credits earned via free massive open online courses (MOOCs), the most recent advance in online education. These free online courses can help students fulfill general education requirements.

3) **More comfortable learning environment**: Commercials that feature online students studying in their pajamas only skims the surface of one of the benefits of online education: no physical class sessions. Students listen to lectures and complete assignments sent to them electronically, with no need to fight traffic, leave work early for class, or miss important family time.

4) **Convenience and flexibility**: Online courses give students the opportunity to plan study time around the rest of their day, instead of the other way around. Students can study and work at their convenience. Course material is always accessible online, making special library trips unnecessary. All of these benefits help students balance work and family commitments with their education.

5) **More interaction and greater ability to concentrate**: WWhile contradictory evidence about the rate of online student participation versus participation in traditional courses exists, one thing remains certain: Online courses offer shy or more reticent students the opportunity to participate in class discussions more easily than face-to-face class sessions. Some students even report better concentration in online classes due to the lack of classroom activity.

6) **Career advancement**: Students can take online courses and even complete entire degrees while working, while in-between jobs, or while taking time to raise a family. This academic work will explain any discontinuity or gaps in a resume as well. Also, earning a degree can show ambitiousness to prospective employers and a desire to remain informed and prepared for new challenges.

7) **Continue in your profession**: Even if someone wants to complete a degree, it may not mean they want to leave their current job. For most students today, increasing college costs mandate that some students continue working while in school. The previously mentioned flexibility of online programs enable students to keep working while also pursuing academic credentials.

8) **Avoid commuting**: During snowstorms and thunderstorms, colleges may cancel classes to avoid putting commuting students at risk of dangerous driving conditions. Rather than miss important class sessions, students in online courses can always "attend" by participating in discussion boards or chat sessions, turning in their work on time, and watching lectures or reading materials. Many students also find substantial savings on fuel costs with no commute for classes.

9) **Improve your technical skills**: Even the most basic online course requires the development of new computer skills, as students learn to navigate different learning management systems (LMS) and programs. The participation skills students learn within their online courses translate to many professions, including creating and sharing documents, incorporating audio/video materials into assignments, completing online training sessions, etc. Some schools even offer students free laptops or iPads.

10) **Transfer credits**: For colleges students who want to attend summer classes, but live too far from their colleges and/or work summer jobs, taking online classes from an accredited college and transferring the credits to their primary college can be beneficial. Students can earn college credit while still enjoying their summer vacation or fulfilling the responsibilities of their seasonal employment. Similarly, if a college or university does not offer enough open sections of a required course, students can take the course online at another college and transfer the credits.

2.3 FUNCTIONALITY OF PROJECT:

I. Student side functionality:

1) Register & Login
2) View profile & change
3) view and apply courses
4) Feedback
5) Online Payment
6) View for tutors
7) Logout

II. Tutor side functionality:

1) Register & login
2) View & Change Profile
3) View and apply courses
4) View feedback
5) Logout

III. Admin side functionality:

1) Login/ logout
2) Add courses
3) View tutor/ student and authorize
4) View and check requests
5) Feedback view and reply
6) Activate/de-activate student/tutor

2.4 MOODULES OF PROJECT:

1) **Admin:**
   Admin will login with the default username and password. Admin can view the registered tutors and students. He can also view the requests from tutors. Admin will confirm the requests then the details of tutors are shown to student and the tutor will be assigned to student.

2) **Tutor:**
Tutor will login and register into the application by giving the username and password, after logging in tutor will select the course and location and the timings with his availability. if any student requests were there in that locality the tutor will be assigned to student.

3) Student:
Student will register and login into the application by giving username and password and student need to select the course and timings and if any tutors available in that area the request will be forwarded to admin, admin will confirm the request the tutor will be assigned to student.

4) **Existing System:**
In Existing System, the users need to visit the nearest tutorial point and there after he need to enquire the courses and the availability timings of the tutor. This makes the process lengthy and complicated.

5) **Proposed System:**
In Proposed System the tutors and students will registered and based on the student's locality the tutors will be mapped by the timings selected by the student, this makes the whole process simple and effective.

6) Login/ Registration:
Users have to first register themselves to login into the system.

7) View and update Profile:
The student and the tutors both have permission to view and update our profile, it's necessary to fill our data.

8) **Request:**

The system has request form, where student request can provide into system and the tutor has permission to check it.

9) **View and apply Courses:**

The student and the tutors both have permission to view courses, but student need to apply for the curses.

10) **Feedback:**

The system has a feedback form, where student can provide feedback into the system.

11) **Payment:**

The system provides many methods for pay our course fee, for students.

12) **Logout:**

Logging out informs the system that the current user wishes to end the login session.

CHAPTER-3

TECHNOLOGY USED

3.1 ABOUT PYTHON:

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed.

Python was conceived in the late 1980s, and its implementation began in December 1989 by Guido van Rossum at Centrum Wiskunde & Informatica (CWI) in the Netherlands as a successor to the ABC language (itself inspired by SETL) capable of exception handling and interfacing with the Amoeba operating system.

What can PYTHON do?

Python is a general purpose programming language. Hence, you can use the programming language for developing both desktop and web applications. Also, you can use Python for developing complex scientific and numeric applications. Python is designed with features to facilitate data analysis and visualization.

In, February 1991, van Rossum published the code (labeled version 0.9.0) to alt.sources. Already present at this stage in development were classes with inheritance, exception handling, functions, and the core data types of list, dict, str and so on. Also in this initial release was a module system borrowed from Modula-3; Van Rossum describes the module as "one of Python's major programming units". Python's exception model also resembles Modula-3's, with the addition of an else clause. In 1994 comp.lang.python, the primary discussion forum for Python, was formed, marking a milestone in the growth of Python's user base.

Python reached version 1.0 in January 1994. The major new features included in this release were the functional programming tools lambda, map, filter and reduce. Van Rossum stated that "Python acquired lambda, reduce(), filter() and map(), courtesy of a Lisp hacker who missed them and submitted working patches".

3.2 FRONT END:

- **HTML:** HTML stands for **H**yper **T**ext **M**arkup **L**anguage.
  HTML is the standard markup language for creating Web pages.HTML describes the structure of Web pages.
  HTML elements are represented by tags.HTML tags label pieces of content such as "heading", "paragraph", "table", and so on.
  Browsers do not display the HTML tags, but use them to render the content of the page.

- **CSS:** CSS stands for **C**ascading **S**tyle **S**heets. It is a simply designed language intended to simplify the process of making web pages presentable.
  CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work.
  CSS provides powerful control over the presentation of an HTML document. It can control the layout of multiple web pages all at once.

- **BOOTSTRAP:** Bootstrap is a free and open-source framework for faster and easier web development. It's the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.
  It includes HTML and CSS based design templates for common user interface components like Typography, Forms, Buttons, Tables, Navigations, Dropdowns, Alerts, Modals, Tabs, Accordion, Carousel and many other as well as optional JavaScript extensions.

- **Java Script:** Java Script (JS for short) is a full-fledged dynamic programming language that, when applied to an HTML document, can provide dynamic interactivity on websites. It is very powerful **client-side scripting language.** It was initially created to "make web pages alive". JavaScript is incredibly versatile. You can start small, with carousels, image galleries, fluctuating layouts, and responses to button clicks. With more experience, you'll be able to create games, animated 2D and 3D graphics, comprehensive database-driven apps, and much more!

3.3 BACK END:

- **PYTHON:** Python is a general purpose, dynamic, high level and interpreted programming language. It supports Object Oriented programming language. It is simple and easy to learn and provide lots of high-level data structures.
  Python is easy to learn yet powerful and versatile scripting language which make it attractive for Web Development.
  Python is not intended to work on special area such as web programming. That is why it is known as multipurpose because it can be used with web, enterprise, 3D CAD etc.
  Python make the development and debugging fast because there is no compilation step included in python and edit-test-debug cycle is very fast.

- **DJANGO:** Django is an open-source framework for backend web applications based on python. Its main goals are simplicity, flexibility, reliability and scalability.
  Django has its own naming system for all functions and components (e.g., HTTP responses are called "views").
  Django provides a dynamic CRUD (create, read, update and delete) interface, configured with admin modules and generated via introspection. CRUD is used to describe the basic database commands, which means the interface facilitates viewing, changing and searching for introduction.

We use the DJANGO framework because:

- It is fast and simple.
- It is secure.
- It suits any web application project.
- It is well established.

Database Access:

Django attempts to support as many features as possible on all database back-ends. However, not all database back-ends are alike, and we've had to make design decisions on which features to support and which assumptions we can make safely. This file describes some of the features that might be relevant to Django usage. Of course, it is not intended as a replacement for server-specific documentation or reference manuals.

Django in its 'out-of-the-box' state is set up to communicate with SQLite -- a lightweight relational database included with the Python distribution. So by default, Django automatically creates a SQLite database for your project.
In addition to SQLite, Django also has support for other popular databases that include: PostgreSQL, MySQL and Oracle.

File Access:

In Windows, for example, a file can be any item manipulated, edited or created by the user/OS. That means files can be images, text documents, executables, and much more. Most files are organized by keeping them in individual folders.

In Python, a file is categorized as either text or binary, and the difference between the two file types is important.

Text files are structured as a sequence of lines, where each line includes a sequence of characters. This is what you know as code or syntax.

Each line is terminated with a special character, called the EOL or End of Line character. There are several types, but the most common is the comma {,} or newline character. It ends the current line and tells the interpreter a new one has begun.

A backslash character can also be used, and it tells the interpreter that the next character – following the slash – should be treated as a new line. This character is useful when you don't want to start a new line in the text itself but in the code.

A binary file is any type of file that is not a text file. Because of their nature, binary files can only be processed by an application that know or understand the file's structure. In other words, they must be applications that can read and interpret binary.

CHAPTER-4

FEASIBILITY STUDY

4.1 TECHNICAL FEASIBILITY:

It is a measure of the practically of a specific technical solution and the availability of technical resources and expertise

- The proposed system uses Bootstrap, CSS, HTML, JavaScript as front-end and Django server as back-end tool.
- Django is a popular tool used to design and develop database objects such as table views, indexes mainly it is a framework with a set of rules.
- The above tools are readily available, easy to work with and widely used for developing commercial application.

Hardware used in this project are i3 processor 2.4GHz, 2GB DDR3 memory, 500 GB hard disk. These hardware were already available on the existing computer system. The software like Atom Editor, Anaconda IDE and operating system WINDOWS 10 used were already installed on the existing computer system. So no additional hardware and software were required to purchase and it is technically feasible.

4.2 OPERATIONAL FEASIBILITY:

It is common knowledge that computer installations have something to do with turnover, transfers, retraining and changes in employee job status. Therefore, it is understandable that the introduction of a candidate system requires special efforts to educate, sell, and train the staff on new ways of conducting business.

- No major training and new skills are required as it is based on Django set of rules and regulations.
- It will help in the time saving and fast processing and dispersal of user request and applications.
- New product will provide all the benefits of present system with better performance.
- Improved information, better management and collection of the reports.
- User support.

From there points our project is operationally feasible too.

4.3 BEHAVIORAL FEASIBILITY:

People are inherent to change. In this type of feasibility check, we come to know if the newly developed system will be taken and accepted by the working force i.e. the people who will use it.

ER-DIAGRAM:

An ER diagram shows the relationship among entity sets. An entity set is a group of similar entities and these entities can have attributes. In terms of DBMS, an entity is a table or attribute of a table in database, so by showing relationship among tables and their attributes, ER diagram shows the complete logical structure of a database. Let's have a look at a simple ER diagram to understand this concept.

Here are the geometric shapes and their meaning in an E-R Diagram. We will discuss these terms in detail in the next section(Components of a ER Diagram) of this guide so don't worry too much about these terms now, just go through them once.

Rectangle: Represents Entity sets.
Ellipses: Attributes
Diamonds: Relationship Set
Lines: They link attributes to Entity Sets and Entity sets to Relationship Set
Double Ellipses: Multivalued Attributes
Dashed Ellipses: Derived Attributes
Double Rectangles: Weak Entity Sets
Double Lines: Total participation of an entity in a relationship set

Components of ER-Diagram:

ER diagram has three main components:

1) Entity

2) Attribute

3) Relationship

Entity:

An entity is an object or component of data. An entity is represented as rectangle in an ER-diagram. For example: In the following ER diagram we have two entities Student and College and these two entities have many to one relationship as many students study in a single college. We will read more about relationships later, for now focus on entities**.**

Weak Entity:

An entity that cannot be uniquely identified by its own attributes and relies on the relationship with other entity is called weak entity. The weak entity is represented by a double rectangle. For example – a bank account cannot be uniquely identified without knowing the bank to which the account belongs, so bank account is a weak entity.

2. Attribute

An attribute describes the property of an entity. An attribute is represented as Oval in an ER diagram. There are four types of attributes:

1. Key attribute
2. Composite attribute
3. Multivalued attribute
4. Derived attribute

1. Key attribute:

A key attribute can uniquely identify an entity from an entity set. For example, student roll number can uniquely identify a student from a set of students. Key attribute is represented by oval same as other attributes however the **text of key attribute is underlined**.

2. Composite attribute:

An attribute that is a combination of other attributes is known as composite attribute. For example, In student entity, the student address is a composite attribute as an address is composed of other attributes such as pin code, state.

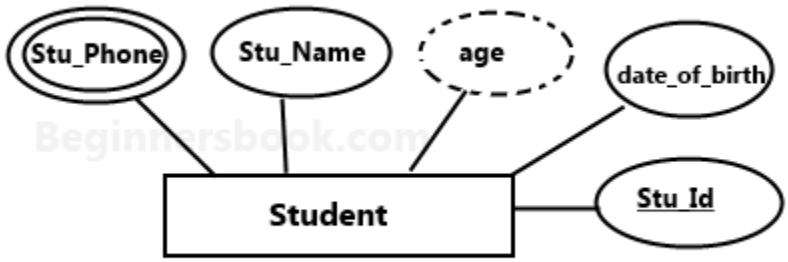
3. Multivalued attribute:

An attribute that can hold multiple values is known as multivalued attribute. It is represented with **double ovals** in an ER Diagram. For example – A person can have more than one phone numbers so the phone number attribute is multivalued.

4. Derived attribute:

A derived attribute is one whose value is dynamic and derived from another attribute. It is represented by **dashed oval** in an ER Diagram. For example – Person age is a derived attribute as it changes over time and can be derived from another attribute (Date of birth).

E-R diagram with multivalued and derived attributes:



3. Relationship:

A relationship is represented by diamond shape in ER diagram, it shows the relationship among entities. There are four types of relationships:
1. One to One
2. One to Many
3. Many to One
4. Many to Many

1. One to One Relationship

When a single instance of an entity is associated with a single instance of another entity then it is called one to one relationship. For example, a person has only one passport and a passport is given to one person.

2. One to Many Relationship

When a single instance of an entity is associated with more than one instances of another entity then it is called one to many relationship. For example – a customer can place many orders but a order cannot be placed by many customers.

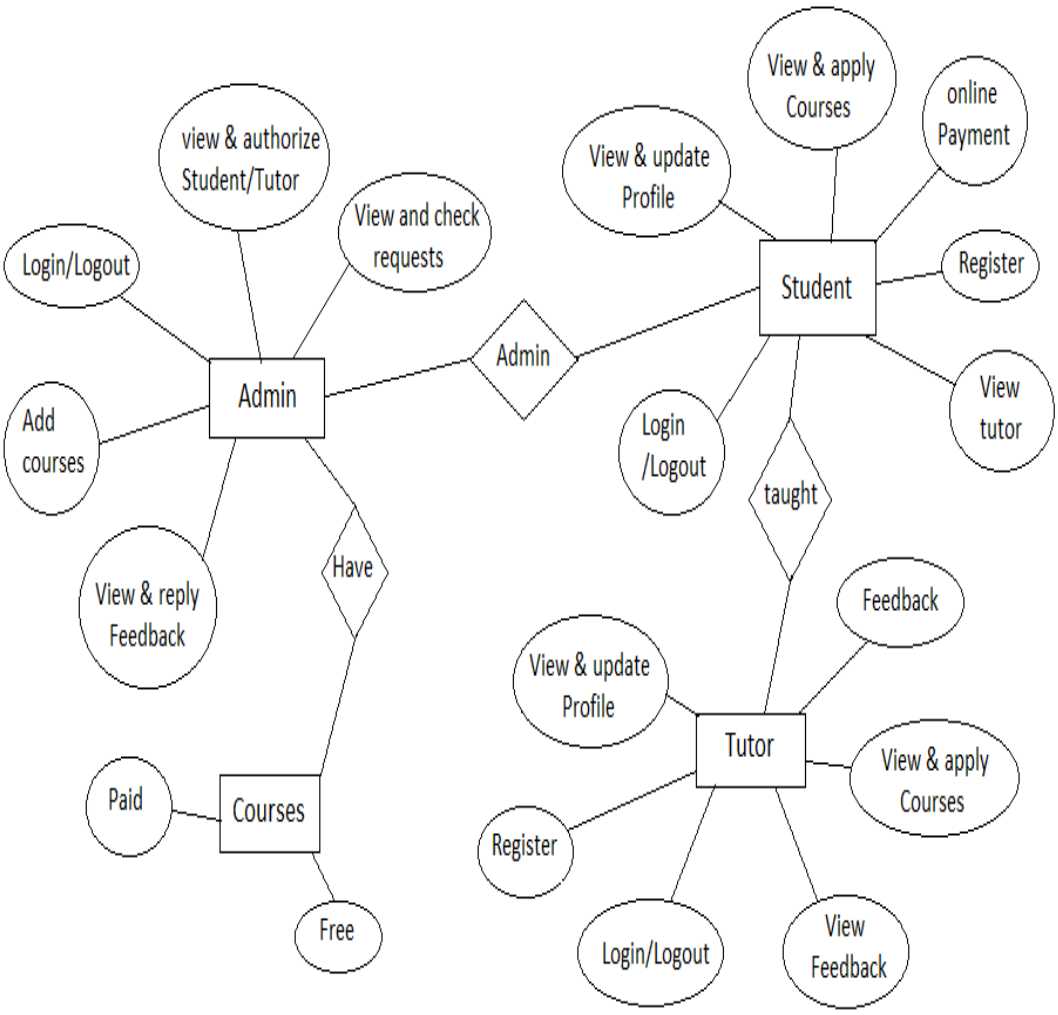
3. Many to One Relationship

When more than one instances of an entity is associated with a single instance of another entity then it is called many to one relationship. For example – many students can study in a single college but a student cannot study in many colleges at the same time.

4. Many to Many Relationship

When more than one instances of an entity is associated with more than one instances of another entity then it is called many to many relationship. For example, a can be assigned to many projects and a project can be assigned to many students.

ER-DIAGRAM OF DOCEO(TUTORIAL):



CHAPTER-5

PLATFORMS/ TOOLS USED

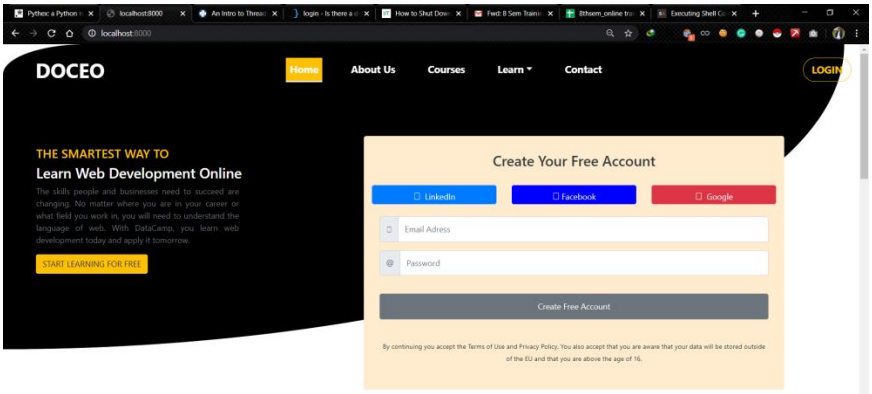
5.1 Hardware Platform:

Processor	**:**	Processor – i3
RAM	**:**	1GB or above
Hard disk utilization	**:**	5GB or above

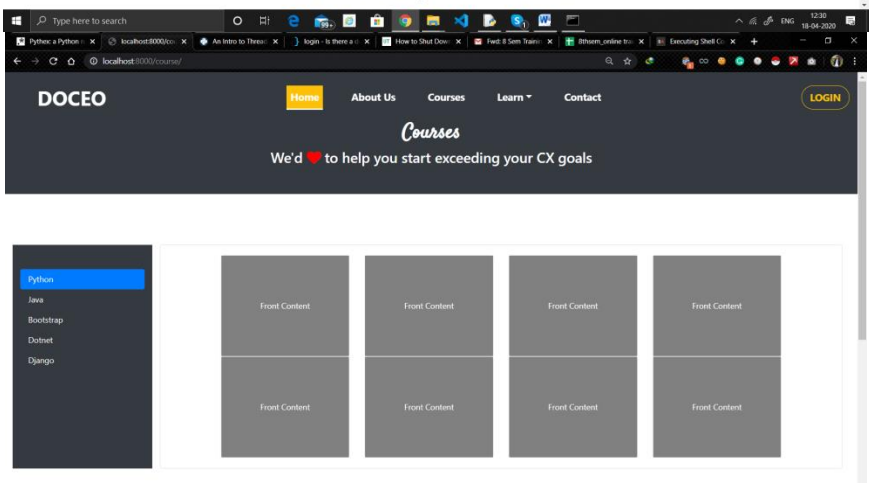
5.2 Software Platform:

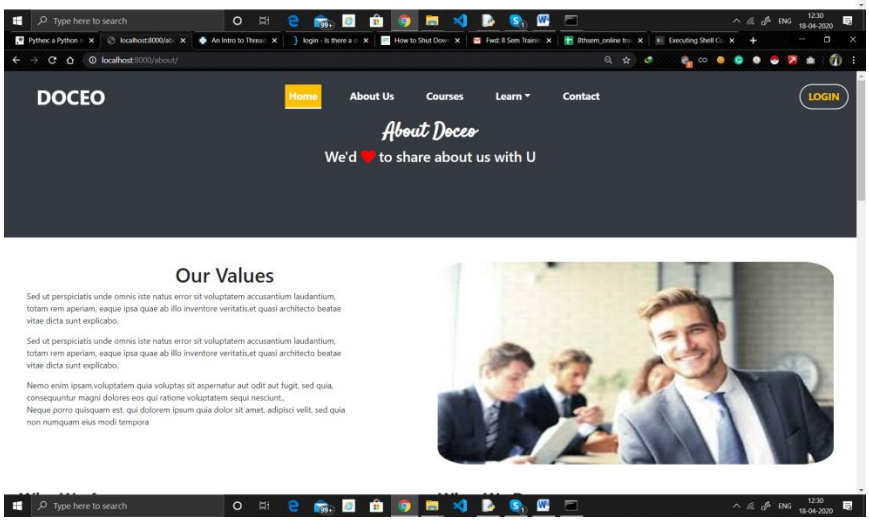
Front End	**:**	HTML, CSS, BOOTSTRAP, Java Script
Back End	**:**	Python, DJANGO
Editor	**:**	Visual studio Code, Google Chrome
Operation System	**:**	Windows 10

5.3 Front End :



Learn The Way You Learn Best





CHAPTER-6

6.1 CONCLUSION AND FUTURE SOPE:

While developing the system a conscious effort has been made to create and develop a software package, making use of available tools, techniques and resources – that would generate a proper system. While making the system, an eye has been kept on making it as user-friendly. As such one may hope that the system will be acceptable to any user and will adequately meet his/her needs. As in case of any system development process where there are a number of short comings, there have been some shortcomings in the development of this system also. There are some of the areas of improvement which couldn't be implemented due to time constraints.

6.2 BIBLIOGRAPHY:

- https://www.usf.edu/ucm/marketing/intro-social-media.aspx
- https://www.easymedia.in/social-media-main-features/amp/
- www.usf.edu/ucm/marketing/intro-social-media.aspx
- www.easymedia.in/social-media-main-features/amp/
- www.en.m.wikipedia.org
- www.geeksforgeeks.org/css-introduction/
- www.w3schools.com
- www.quackit.com/tutorial/
- www.tutorialrepublic.com
- www.guuru99.com
- www.javascript.info
- www.developer.mozilla.org
- www.javatpoint.com/python-tutorial
- www.djangostars.com/blog/why-we-use-django-framework/