Project Report

On

ONLINE CATERING SERVICES

Submitted to:

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POLYWING

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PREFACE

Nowadays mostly persons are fond of eating and serving good quality and tasteful foods. They want to meet with good consultant to provide catering services for their special events who gives them better results.

This project named "**Online Catering Services**" is a Python based web application created using Django framework for providing online catering services. By using this application, you can check catering services provided by the company and book them.

Our project is just an effort to make these two ends meet, user and consultants and build a bond of trust for their own sake. This application can be used by persons to book services for any event like marriage, birthday, anniversary, etc.

ACKNOWLEDGEMENT

We take this opportunity to express our deepest gratitude to those who have generously helped us in providing the valuable knowledge and it is with real pleasure, that we record our indebtedness to our academic guide, **MR. CHETAN BATRA**, TRAINING & PLACEMENT INCHARGE CSE(POLYWING), for her counsel and guidance during the preparation of this project and other staff of **SHAHEED BHAGAT SINGH STATE UNIVERSITY, FEROZPUR**

I would like to take this opportunity to convey my deep sense of gratitude to my External guide **Mrs. Neha**, for his direction, support, and steady motivation. I am extremely obliged to him for his continuous suggestions, help and cooperation, without which it was impossible to achieve the success in the work allocated to me.

At the end I would love to thank all of staff members of **Softwizz Technologies Pvt. Ltd.** for providing an excellent and healthy environment during work.

And finally, we would like to thank each and every person who has contributed in any of the ways in our project.

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CHAPTER 1

COMPANY PROFILE

About Softwizz

Softwizz is a software development company providing solutions in the field of education, construction, publishing and many more. Our specialists are truly sensitive and responsive to the needs of our clients due to their unwavering dedication and unequaled professionalism, which help our company to deliver wide-ranging and proficient custom web design services.

Softwizz Pvt. Ltd. is leading software development and training group in various domains across the industry like CSE IT, Non-IT (ECE, ME, ETC, EEE) and Management based programs. We are in software development industry, corporate training as well as individual training program to meet our market segments.

Softwizz Pvt. Ltd. customized program is to provide the training Software industry with project ready candidates by filling the gap between theoretical knowledge and industry requirement.

Vision:

To be the most admired and respected Technology company providing “Best value” software solution and education system.

Mission:

To achieve the leadership position in our focus domains and to become a reason for smile for everyone related with the organization in the form of staff, clients and trainees by providing the best services with all the commitment and dedication of our work.

Core Value:

Clients first- We exist because of our clients.

Reliability and transparency- committed to be ethical, transparent and reliable in all our operation.

Services

SOFWIZZ offers a wide range of Engineering Projects and Information Technology services. These include:

- **Software Development Process**
- **Software Development Quality**
- **Software Development Solutions**
- **Social Media**
- **Ecommerce Solution**
- **Web Hosting**

Approach

SOFTWIZZ sees teamwork on every project as the key success ingredient and are responsible for creating this environment. The overall project manager is duty-bound in ensuring effective communication to all stakeholders and at all levels. Teams are built by combining the strengths of the individual members and refining skills to meet and exceed the Client's expectations.

We also believe in a hands-on approach on all our projects. This is why the Director of the firm will always be in control of the key functions on a project. SOFTWIZZ is equipped with the latest technology and has the necessary staff and resources to ensure that best professional service is always provided.

CHAPTER 2

INTRODUCTION OF PROJECT

2.1 INTRODUCTION

About the Project:

Nowadays, most of the **"Catering Reservation Ordering System"** around the world using the manual ordering system. This system needs a person to take an order from the customers. This system relies on large numbers of manpower to handle customer reservation, inquiry, ordering food, placing order, reminding dishes. This typical method is kind of wasting of time and energy when there are a lot of customers at that time. Moreover, it may be cause a misunderstanding between the customer and the person taking the order. However, if there are too many waiters to be hired, it may be waste of resource during nonpeak hour. It also will give an extra-work to the cashier to record all the transaction. There are some early efforts have been made to replace this manual ordering process. However, this system is only replacing paper and pen used by the waiter to take an order. This system requires the customer to make an order through their web-based application. Therefore, the research has been done to develop a system which will give a lot more benefit to both catering owner and customers. Customer can directly place an order from the system and misunderstanding between customers and waiters can be reduced to minimum. Moreover, it also will improve the data collection since order make by the customer is directly sent to the database. It will reduce time waiting by the customer and catering owner can reduce the expenses on manpower.

2.2 MODULES OF THE PROJECT

Administrator Module: -

Admin is the main key in this project. He can add rates of products and services on the site. He can also add exciting new offers to attract more customers on the site.

1. **Dashboard**: In this section, admin can briefly view the total subscriber, total registered users, and total bookings.
2. **Food Category:** In this section, admin can manage category(Delete).
3. **Bookings:** In this section admin can view the booking details and they have also right to change status according to current status.
4. **Subscriber:** In this section, admin can view the email id of subscribers.

User module: -

User is the surfer on this site. He can check all the services and their rates on this site. He can also book catering services for a particular function like marriage, birthday, anniversary, etc. through the website. He can also select the time and address on the website.

User

- View Menu
- Give Feedback

View Product:

User enters this system view the product via direct and search option.

Menu:

User can see the menu available by the catering service company.

2.3 Functionalities

The menu essentially performs two functions: (a) it informs the customer or consumer about what is available, and (b) the catering staff about what is to be prepared. A well planned menu reflects careful thought. It represents three points of view (a) the customer gets value for money in terms of the quantity of food served, variety and the palatability as well as the way the food is served, (b) the employees who have to translate the written menu into the actual food products, and (c) the management who get satisfaction in terms of profit, good

reputation, satisfied customers who will come back to the establishment. In profit making establishments, the menu creates an image which also reflects the overall style of the restaurant. Attractive, well designed menus help to promote sales and can be a means of advertising. There are several kinds of menus which are very interesting and challenging, particularly for those who have keen interest in varied cuisines.

CHAPTER 3

REQUIREMENT ANALYSIS

This process is also known as feasibility study. In this phase, the development team visits the customer and studies their system. They investigate the need for possible software automation in the given system. By the end of the feasibility study, the team furnishes a document that holds the different specific recommendations for the candidate system. To understand the nature of the program(s) to be built, the system engineer or "Analyst" must understand the information domain
for the software, as well as required function, behavior, performance and interfacing.

Requirements analysis in systems engineering and software engineering, encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product, taking account possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements.

Requirement's analysis is critical to the success of a systems. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

Types of Requirements

There is some common type of software requirements are used as:

1. Customer Requirements:

Statements of fact and assumptions that define the expectations of the system in terms of mission objectives, environment, constraints, and measures of effectiveness and suitability (MOE/MOS). The customers are those that perform the eight primary functions of systems engineering, with special emphasis on the operator as the key customer. Operational requirements will define the basic need and, at a minimum, answer the questions posed in the following listing:

- Operational distribution or deployment: Where will the system be used?
- Mission profile or scenario: How will the system accomplish its mission objective?

- Performance and related parameters: What are the critical system parameters to accomplish the mission?
- Utilization environments: How are the various system components to be used?
- Effectiveness requirements: How effective or efficient must the system be in performing its mission?
- Operational life cycle: How long will the system be in use by the user?
- Environment: What environments will the system be expected to operate in an effective manner?

2. Architectural Requirements:

Architectural requirements explain what has to be done by identifying the necessary system architecture of a system.

3. Structural Requirements:

Structural requirements explain what has to be done by identifying the necessary structure of a system.

4. Behavioral Requirements:

Behavioral requirements explain what has to be done by identifying the necessary behavior of a system.

5. Functional Requirements:

Functional requirements explain what has to be done by identifying the necessary task, action or activity that must be accomplished. Functional requirements analysis will be used as the toplevel functions for functional analysis.

6. Non-functional Requirements:

Non-functional requirements are requirements that specify criteria that can be used to judge the operation of a system, rather than specific behaviors.

7. Performance Requirements:

The extent to which a mission or function must be executed; generally measured in terms of quantity, quality, coverage, timeliness, or readiness. During requirements analysis,

performance (how well does it have to be done) requirements will be interactively developed across all identified functions based on system life cycle factors; and characterized in terms of the degree of certainty in their estimate, the degree of criticality to system success, and their relationship to other requirements.

8. Design Requirements:

The “build to,” “code to,” and “buy to” requirements for products and “how to execute” requirements for processes expressed in technical data packages and technical manuals

3.1 PROBLEM ANALYSIS

Problem Statement

Now there are a lot of food and beverage industry is still in the stage of manual workshop. Due to price factors, technical factors and other constraints, these catering enterprises cannot achieve large-scale production, production efficiency is very low. At the same time, practitioners are individual workers, their dishes are single production or small batch production, their skills are based on their own experience, there is no opportunity to Catering System.

Proposed System

- Users can view latest offers.
- Users can view various services provided.
- Users can give feedback about the site.
- Users can online book for any service.
- User can give feedback.
- Admin can reply to user feedbacks.

3.2 REQUIREMENT SPECIFICATION DOCUMENT

3.2.1 SOFTWARE REQUIREMENT SPECIFICATION

A software requirements specification (SRS) is a complete description of the behavior of the system to be developed. It includes a set of use cases that describe all of the interactions that the users will have with the software. Use cases are also known as functional requirements. In addition to use cases, the SRS also contains nonfunctional (or supplementary) requirements. Non- functional requirements are requirements that impose constraint on the design or implementation (such as performance requirements, quality standard or design constraint).

In system engineering and software engineering, requirements analysis encompasses those tasks that go into determining the requirements of a new or altered system, taking account of the possibly conflicting requirements of the various stakeholders, such as users. Requirement's analysis is critical to the success of project. The document that contains all the requirements of the project is determined as "Software Requirements Specification".

Software requirements specification states the goals and objectives of the software, describing it in the context of the computer-based system.

The Information Description provides a detailed description of the problem that the software must solve. Information content, flow and structure are documented.

A description of each function required to solve the problem is presented in the Functional Description. Validation Criteria is probably the most important and ironically the most often neglected section of the software requirement specification.

An SRS minimizes the time and effort required by developers to achieve desired goals and also minimizes the development cost. A good SRS defines how an application will interact with system hardware, other programs and human users in a wide variety of real-world situations. Parameters such as operating speed, response time, availability, portability, maintainability, footprint, security and speed of recovery from adverse events are evaluated. Methods of defining an SRS are described by the IEEE (Institute of Electrical and Electronics Engineers) specification 830-1998.

3.2.2 SPECIFIC REQUIREMENTS

1. Processing Requirements

In this step we analyzed the processing capabilities of the system on which the proposed system would be developed, and the specification is divided into two categories namely:

- Minimum Hardware Requirements

1	System Type	64-bit operating System
2	RAM	4 GB
3	Hard Disk	1 TB of free HDD space for Internet Cache.
4	Internet Connection	512Kbps
5	Processor Speed	5.2 GHz

- Minimum Software Requirements

I.	Operating System	Windows 10
II.	Front End	HTML5 and CSS3
III.	Back End	SQLite3
IV.	Web Server	Django Local Server
V.	Designing Software	Notepad++ or Python IDLE
V1.	Framework	Django

2. Input /Output Requirements:

Input Requirements:

- User registers on the site.
- User enters his or her feedback.
- Admins enter his or her user id and password.
- Admin can reply to user feedbacks.

Output Requirements:

- User can view various services and menu.
- User gets reply from admin.
- Users can book any service.
- Admin gets feedback.

3.2.4 TECHNOLOGY USED

3.2.4.1 PYTHON

- Python is an object-oriented, high-level programming language with integrated dynamic semantics primarily for web and app development. It is extremely attractive in the field of Rapid Application Development because it offers dynamic typing and dynamic binding options.
- Python is relatively simple, so it's easy to learn since it requires a unique syntax that focuses on readability.
- One of the most promising benefits of Python is that both the standard library and the interpreter are available free of charge, in both binary and source form.
- Often, programmers fall in love with Python because of the increased productivity it provides. Since there is no compilation step, the edit-test-debug cycle is incredibly fast.

History:

- Python was originally conceptualized by Guido van Rossum in the late 1980s as a member of the National Research Institute of Mathematics and Computer Science in Netherland.
- Python 0.9.0 was first released in 1991.
- In 1994, Python 1.0 was released with new features like: lambda, map, filter, and reduce.
- In 2000, Python 2.0 was released. This version was more of an open-source project with new features like: list comprehensions, garbage collection system.
- Python 3.0 was the next version and was released in December of 2008 (the latest version of Python is 3.6.4).
- ABC programming language is said to be the predecessor of Python language which was capable of Exception Handling and interfacing with Amoeba Operating System.
- The name "Python" was adopted from the comedy series "Monty Python's Flying Circus".

Features:

- Simple and elegant syntax which is easier to learn: Easy to read and write Python programs compared to other languages.

- ❖ Free and open source: Can freely use and distribute Python.
- ❖ Portability: Can move Python programs from one platform to another.
- ❖ Extensible and Embeddable: Can easily combine pieces of C, C++ or other languages with Python code.
- ❖ High-level Interpreted Language: Don't have to worry about memory management or garbage collection.
- ❖ Large Standard Libraries to solve common tasks: Like MySQL dB to connect to database.
- ❖ Object-Oriented: With OOP, you can divide complex problems into smaller sets by creating objects.

3.2.4.2 THE WEB AND HTML

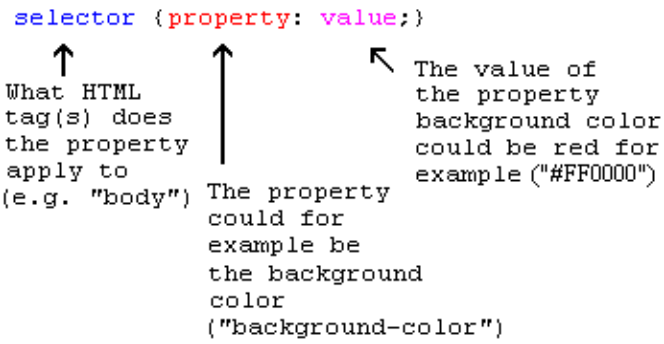
World Wide Web (WWW) programming deals with the development of hypertext document interaction mechanisms, which provide the client with a rich and intuitive interface to the information that he or she desires to view. Web development heavily utilizes the functionality of the Hypertext Markup Language, commonly known as HTML. HTML is a simple scripting language that is interpreted within a web browser. It provides functionality to identify and specify how information is presented to the user. Some of the important features of HTML that make it ideal for online representation of information are –

- Ease of Use – HTML constructs are very easy to comprehend and can be used effectively by anybody.
- Machine Independence – The methodology used by HTML to mark up information is independent of its representation on a particular hardware or software architecture.
- Standardization – HTML syntax is a worldwide standard, developed by the W3C
- Flexible – HTML has been extended in many forms to provide additional functionality.

CSS: Cascading Style Sheet

Basically, used for styling purpose.

Syntax:



A CSS rule has two main parts: a selector, and one or more declarations:

The selector is normally the HTML element you want to style.

Each declaration consists of a property and a value.

This page will be save with the extension .css

The property is the style attribute you want to change. Each property has a value.

CSS can be added to your pages at 3 different levels:

1. Internal
2. External
3. Inline

3.2.4.4 JAVA SCRIPT

Java script is one of the most simple, versatile and effective languages used to extend functionality in websites. Uses range from on screen visual effects to processing and calculating data on web pages with ease as well as extended functionality to websites using third party scripts among several other handy features, however it possesses some negative effects that might make you want to think twice before implementing JavaScript on your website.

Advantages

- Java is executed on the client side: this means that the code is executed on the user's processor instead of the web server thus saving bandwidth and strain on the web server.

- Java Script is a relatively easy language The JavaScript language is relatively easy to learn and comprises of syntax that is close to English. It uses the DOM model that provides plenty of prewritten functionality to the various objects on pages making it a breeze to develop a script to solve a custom purpose.

- JavaScript is relatively fast to the end user As the code is executed on the user's computer, results and processing is completed almost instantly depending on the task (tasks in JavaScript on web pages are usually simple so as to prevent being a memory hog) as it does not need to be processed in the site's web server and sent back to the user consuming local as well as server bandwidth.

- Extended functionality to web pages Third party add-ons like Grease monkey enable JavaScript developers to write snippets of JavaScript which can execute on desired web pages to extend its functionality. If you use a website and require a certain feature to be included, you can write it yourself and use an add-on like grease monkey to implement it on the web page.

Disadvantages of JavaScript

Security Issues:

JavaScript snippets, once appended onto web pages execute on client servers immediately and therefore can also be used to exploit the user's system. While certain restriction is set by modern web standards on browsers, malicious code can still be executed complying with the restrictions set.

3.2.4.5 SQLite3

(Used in backend)

Introduction:

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. The code for SQLite is in the public domain and is thus free for use for any purpose, commercial or private. SQLite is the most widely deployed database in the world with more applications than we can count, including several high-profile projects.

SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file. The database file format is cross-platform - you can freely copy a database between 32-bit and 64-bit systems or between big-endian and little-endian architectures. These features make SQLite a popular choice as an Application File Format. SQLite database files are a recommended storage format by the US Library of Congress. Think of SQLite not as a replacement for Oracle but as a replacement for fopen()

SQLite is a compact library. With all features enabled, the library size can be less than 600KiB, depending on the target platform and compiler optimization settings. (64-bit code is larger. And some compiler optimizations such as aggressive function in lining and loop unrolling can cause the object code to be much larger.) There is a tradeoff between memory usage and speed. SQLite generally runs faster the more memory you give it. Nevertheless, performance is usually quite good even in low-memory environments. Depending on how it is used, SQLite can be faster than direct filesystem I/O.

SQLite is very carefully tested prior to every release and has a reputation for being very reliable. Most of the SQLite source code is devoted purely to testing and verification. An automated test suite runs millions and millions of test cases involving hundreds of millions of individual SQL statements and achieves 100% branch test coverage. SQLite responds gracefully to memory allocation failures and disk I/O errors. Transactions are ACID even if interrupted by system crashes or power failures. All of this is verified by the automated tests using special test harnesses which simulate system failures. Of course, even with all this testing, there are still bugs. But unlike some similar projects (especially commercial competitors) SQLite is open and honest about all bugs and provides bugs lists and minute-by-minute chronologies of code changes.

The SQLite code base is supported by an international team of developers who work on SQLite full-time. The developers continue to expand the capabilities of SQLite and enhance its reliability and performance while maintaining backwards compatibility with the published interface spec, SQL syntax, and database file format. The source code is absolutely free to anybody who wants it, but professional support is also available.

CHAPTER 4

SYSTEM ANALYSIS

INTRODUCTION

System analysis is the process of studying the business processors and procedures, generally referred to as business systems, to see how they can operate and whether improvement is needed. This may involve examining data movement and storage, machines and technology used in the system, programs that control the machines, people providing inputs, doing the processing and receiving the outputs.

INVESTIGATION PHASE

The investigation phase is also known as the fact-finding stage or the analysis of the current system. This is a detailed study conducted with the purpose of wanting to fully understand the existing system and to identify the basic information requirements. Various techniques may be used in fact-finding and all fact obtained must be recorded. A thorough investigation was done in every effected aspect when determining whether the purposed system is feasible enough to be implemented.

Investigation

As it was essential for us to find out more about the present system, we used the following methods to gather the information: -

1. Observation: -Necessary to see the way the system works first hand.

2. Document sampling: - These are all the documents that are used in the system. They are necessary to check all the data that enters and leaves the system.

3. Questionnaires: - These were conducted to get views of the other employees who are currently employed in the system.

System Security

System security is a vital aspect when it comes to developing a system. The system should ensure the facility of preventing unauthorized personnel from accessing the information and the data within the system. The system should provide total protection for each user's information so that the integrity of data is sustained and also prevent hackers from hacking the system.

The proposed system ensures the security and the integrity of data. This is done by providing a password login system . And for example the System Administrator has access to all kinds of information.

By providing this facility information is properly managed and information is protected.

FEASIBILTY STUDY

Feasibility study is done so that an ill-conceived system is recognized early in definition phase. During system engineered, however we concentrate our attention on four primary areas of interest. This phase is really important as before starting with the real work of building the system it is very important to find out whether the idea thought is feasible or not.

- Economic Feasibility: An evaluation of development cost weighted against the ultimate income or benefit derived from the developed system.
- Technical Feasibility: A study of function, performance and constraints that may affect the ability to achieve an acceptable system.
- Operational Feasibility: A study about the operational aspects of the system.

ECONOMIC ANALYSIS

Among the most important information contained in feasibility study is Cost Benefit Analysis and assessment of the economic justification for a computer based system project. Cost Benefit Analysis delineates costs for the project development and weights them against tangible and intangible benefits of a system. Cost Benefit Analysis is complicated by the criteria that vary with the characteristics of the system to be developed, the relative size of the project and the expected return on investment desired as part of companies strategic plan. In addition, many benefits derived from a computer-based system are intangible (e.g. better

design quality through iterative optimization, increased customer satisfaction through programmable control etc.)

TECHNICAL ANALYSIS

During technical analysis, the technical merits of the system are studied and at the same time additional information about the performance, reliability, maintainability and predictability is collected. Technical analysis begins with an assessment of the technical reliability of the proposed system.

- What technologies are required for accomplished system function and performance?
- What new materials, methods, algorithms, or processes are required and what is their development risk?
- How will these obtained from technical analysis from the basis for another go/no-go decision on the test system? If the technical risk is severe, if models indicate that the desired function cannot be achieved, if the pieces just won't fit together smoothly, it's back to the drawing board.

As the software is very much economically feasible, then it is really important for it to be technically sound. The software will be built among:

- ✓ Backend: SQLite3
- ✓ Frontend: Python, Django

OPERATIONAL ANALYSIS

The project is operationally feasible. This product is being made for the convenience of persons who want to book caterers for any function. This system will greatly reduce a huge burden of them. So because of the above stated advantages the users of the system will not be reluctant at all.

CHAPTER 5

SOFTWARE DESIGN

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

Design process for the software system has two levels, namely:

a) System Design

b) Detailed Design

5.1 SYSTEM DESIGN

This design level is also called top level design. At this level, the focus is on:

- Deciding which modules are needed for the system.
- The specifications of the system
- How the modules should be interconnected?

5.1.1 ARCHITECTURAL DESIGN

Analysts collect a great deal of unstructured data through interviews, questionnaires, on-site observations, procedural manuals and like. It is required to organize and convert the data through system flowcharts, data flow diagrams, structured English, decision tables and the like which support future developments of the system.

The Data flow diagrams and various processing logic techniques show how, where, and when data are used or changed in an information system, but these techniques do not show the definition, structure, and relationships within the data.

It is a way to focus on functions rather than the physical implementation. This is analogous to the architect's blueprint as a starting point for system design. The design is a solution, a "how to" approach, compared to analysis, a "what is" orientation.

System design is a highly creative process. This System design process is also referred as data modeling. The most common format used for data modeling is entity-relationship (E-R) diagramming. Data modeling using the E-R notation explains the characteristics and structure of data independent of how the data may be stored in computer memories.

1. The External Design

External design consists of conceiving, planning out and specifying the externally observable characteristics of the software product. These characteristics include user displays or user interface forms and the report formats, external data sources and the functional characteristics, performance requirements etc. External design begins during the analysis phase and continues into the design phase.

2. Physical design

The physical design relates to the actual input and output processes of the system. This is laid down in terms of how data is input into a system, how it is verified/ authenticated, how it is processed, and how it is displayed as output. Physical design, in this context, does not refer to the tangible physical design of an information system. To use an analogy, a personal computer's physical design involves input via a keyboard, processing within the CPU, and output via a monitor, printer, etc. It would not concern the actual layout of the tangible hardware, which for a PC would be a monitor, CPU, motherboard, hard drive, modems, video/graphics cards, USB slots, etc.

3. Logical design

The logical design of a system pertains to an abstract representation of the data flows, inputs and outputs of the system. This is often conducted via modeling, which involves a simplistic (and sometimes graphical) representation of an actual system. In the context of systems design, modeling can undertake the following forms, including:

- Data flow diagrams
- Entity Relationship Diagrams

Prototyping Model has been used for software development according to which a throwaway prototype of the proposed system, based on the currently known requirements, is given to the user so that he has a fair idea about how the proposed system is going to be like. This will help him in deciding the interface, input and output requirements.

It can be easily adjudged that inputs and outputs are big in number, can increase exponentially and may create a big chaos if not restricted properly. As the user spends some time on the prototype, he will become more precise about his own input and output requirements. This prototype will provide him with an environment analogous to the proposed system's environment.

Because of object oriented support in Python, various concepts (like reusability, polymorphism, isolation etc.) are already there but for the efficient management of system components, Component based Software Engineering will also be exercised which will help in a resultant library of components, the benefit of which will be reusability and fast development.

Because of lack of hierarchical structure in object-oriented approach, there is no meaning of Bottom-up or Top-down testing. Testing will begin from the most rudimentary levels of the system and will move towards higher level components which will be based on design phase rather than coding phase. In little words, it can be said that 'CLUSTER Testing' will be exercised to scrutinize all the parts and their associative functionality.

5.1.1.1 DATA FLOW DIAGRAMS (DFD)

It is a way of expressing system requirement in a graphical form; this leads to a modular design. It is also known as bubble chart, has the purpose of clarifying system requirements and identifying major transformations that will become program in system design. So it is the starting point of the design phase that functionally decomposes the requirement specifications down to the lowest level of details. A DFD consist of a series of bubbles joined by lines. The bubbles represent data transformation, and the lines represent data flows in the system. There are basically four main symbols used in a DFD, which are depicted below:

i. Square: It represents source/destination of system data.

ii. Arrow: It identifies data flow; it is a pipeline through which the data flows.

iii. Circle/Bubble: It represents a process that transforms incoming data flow into outgoing data flow. A process can be represented by a circle or an oval bubble.

iv. Open Rectangle: It represents a data store.

Rules:

1. Processes should be named and numbered. Name should represent the process.
2. The direction of flow is from top to bottom and from left to right.
3. When a process is exploded into lower levels, they are numbered properly.
4. The name of data stores, sources and destinations are written in capital letters.

Process and data flow names have the first letter capitalized.

Components:

Data flow diagram illustrates the processes, data stores and external entities in an organization or other system the connecting data flows.

Data Flow Diagram

5.1.1.2 ER DIAGRAM

1 ENTITY RELATIONSHIP MODEL

As a database designer, one should use an entity relationship diagram as a tool to build the logical database design of a system. An ER diagram represent the following three elements:

- Entities: An Entity is an object with a distinct set of properties that is easily identified.
- Attributes: an attribute is a property of an entity that differentiates it forms another entities and provides information about the entity.
- Relationship: A relationship is a crucial part of the design of database.

2 COMPONENTS OF AN ER DIAGRAM

An ERD typically consists of four different graphical components:

ENTITY

A data entity is anything real or abstract about which we want to store data. Entity types fall into five classes: roles, events, locations, tangible things or concepts. E.g. employee, payment, campus, book. Specific examples of an entity are called instances. E.g. the employee John Jones, Mary Smith's payment etc.

RELATIONSHIP

A data relationship is a natural association that exists between one or more entities. E.g. Employees process payments.

CARDINALITY

Defines the number of occurrences of one entity for a single occurrence of the related entity. E.g. an employee may process many payments but might not process any payments depending on the nature of her job.

ATTRIBUTE

A data attribute is a characteristic common to all or most instances of a particular entity. Synonyms include property, data element, field. E.g. Name, address, Employee Number, pay rate are all attributes of the entity employee. An attribute or combination of attributes that uniquely identifies one and only one instance of an entity is called a primary key or identifier. E.g. Employee Number is a primary key for Employee.

3 Entity Relationship Diagram Notations

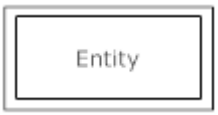
Peter Chen developed ERDs in 1976. Since then Charles Bachman and James Martin have added some sligh refinements to the basic ERD principles.

Entity

An entity is an object or concept about which you want to store information.

Weak Entity

A weak entity is an entity that must defined by a foreign key relationship with another entity as it cannot be uniquely identified by its own attributes alone.



Key attribute

A key attribute is the unique, distinguishing characteristic of the entity. For example, an employee's social security number might be the employee's key attribute.

Multivalued attribute

A multivalued attribute can have more than one value. For example, an employee entity can have multiple skill values.

Derived Attribute

A derived attribute is based on another attribute. For example, an employee's monthly salary is based on the employee's annual salary.

Relationships

Relationships illustrate how two entities share information in the database structure.

There are three types of relationships between entities:

One-to-One

One instance of an entity (A) is associated with one other instance of another entity (B). For example, in a database of employees, each employee name (A) is associated with only one social security number (B).

One-to-Many

One instance of an entity (A) is associated with zero, one or many instances of another entity (B), but for one instance of entity B there is only one instance of entity A. For example, for a company with all employees working in one building, the building name (A) is associated with many different employees (B), but those employees all share the same singular association with entity A.

Many-to-Many

One instance of an entity (A) is associated with one, zero or many instances of another entity (B), and one instance of entity B is associated with one, zero or many instances of entity A. For example, for a company in which all of its employees work on multiple projects, each instance of an employee (A) is associated with many instances of a project (B), and at the same time, each instance of a project (B) has multiple employees (A) associated with it.

5.1.1.3 USE CASE DIAGRAM

Use cases define interactions between external actors and the system to attain particular goals. There are three basic elements that make up a use case:

1 USE CASE DIAGRAM COMPONENTS

- Actors: Actors are the type of users that interact with the system.
- System: Use cases capture functional requirements that specify the intended behavior of the system.
- Goals: Use cases are typically initiated by a user to fulfill goals describing the activities and variants involved in attaining the goal.

Use cases are modelled using unified modelling language and are represented by ovals containing the names of the use case. Actors are represented using lines with the name of the actor written below the line. To represent an actor's participation in a system, a line is drawn between the actor and the use case. Boxes around the use case represent the system boundary.

Characteristics associated with use cases are:

- Organizing functional requirements
- Modeling the goals of system user interactions
- Recording scenarios from trigger events to ultimate goals
- Describing the basic course of actions and exceptional flow of events
- Permitting a user to access the functionality of another event

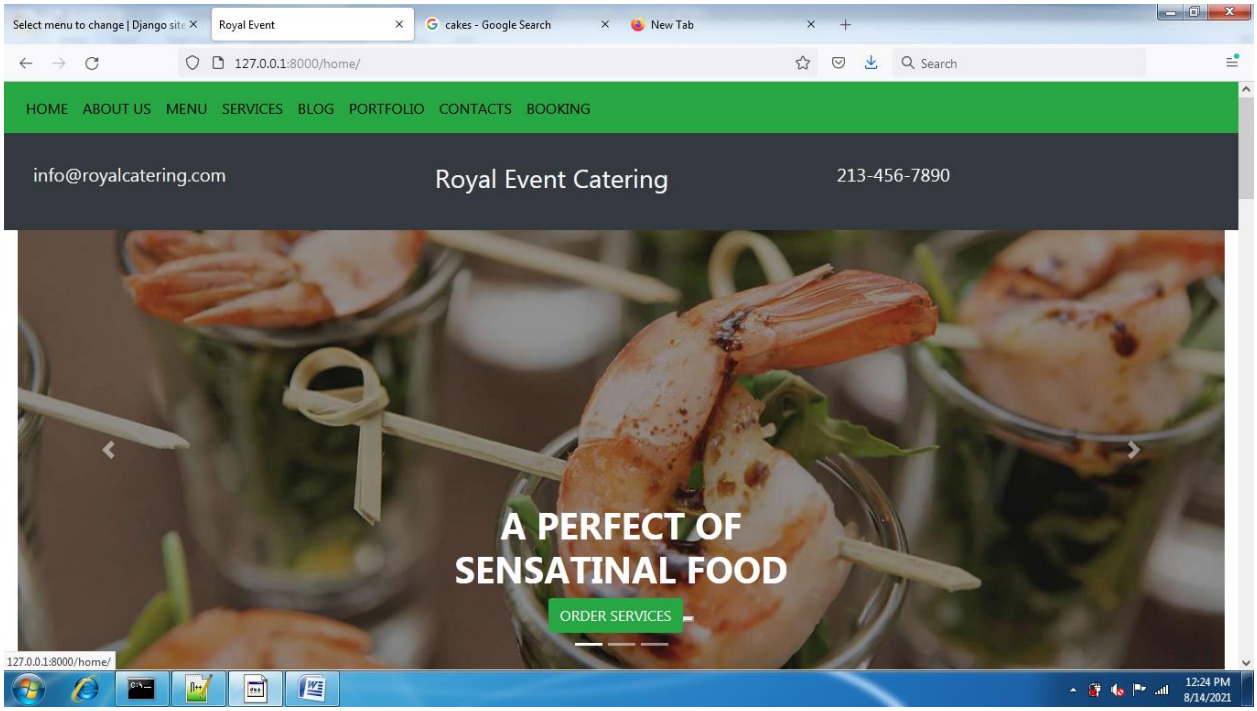
The steps in designing use cases are:

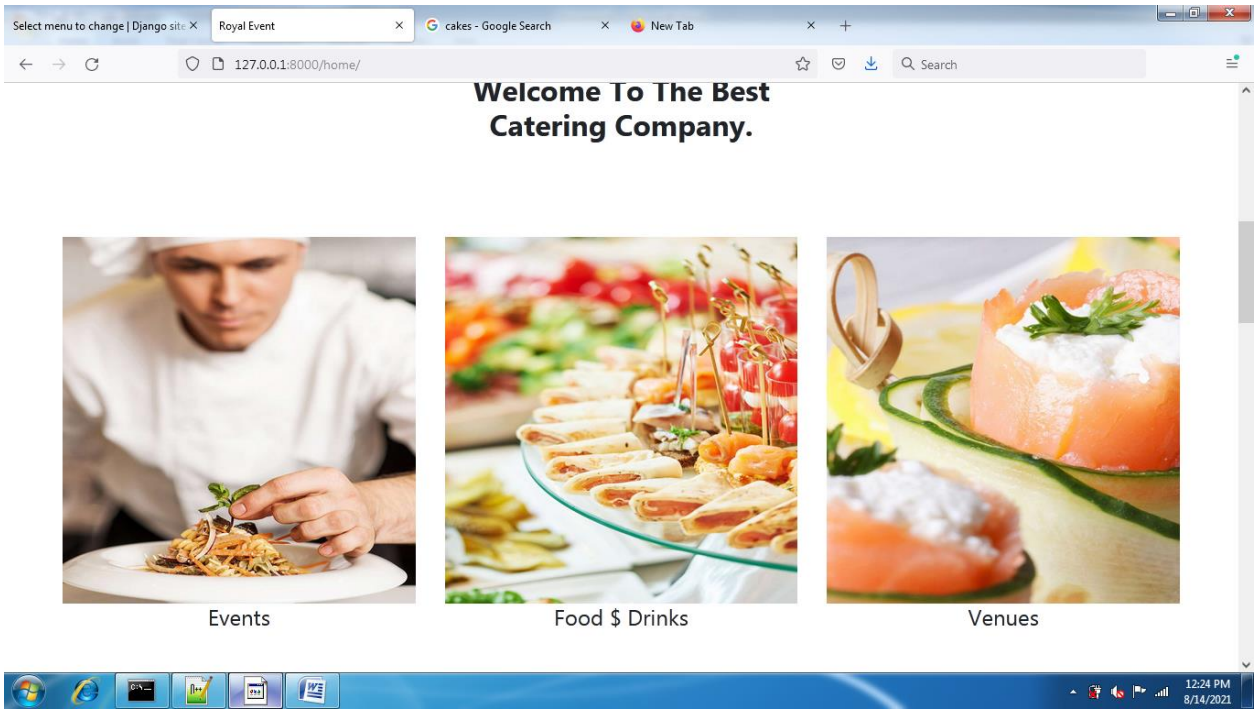
- Identify the users of the system
- For each category of users, create a user profile. This includes all roles played by the users relevant to the system.

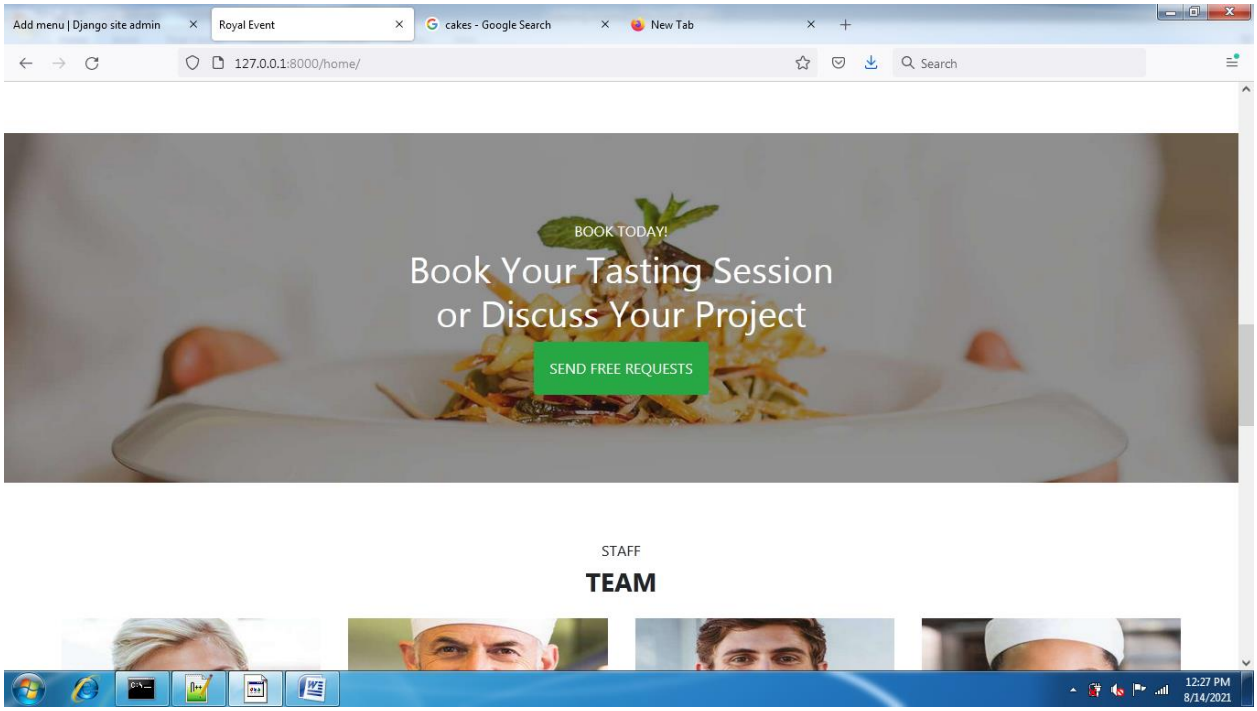
- Identify significant goals associated with each role to support the system. The system's value proposition identifies the significant role.
- Create use cases for every goal associated with a use case template and maintain the same abstraction level throughout the use case. Higher level use case steps are treated as goals for the lower level.
- Structure the use cases
- Review and validate the users

5.1.2 USER INTERFACE DESIGN

Home Page



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Book Your Tasting Session
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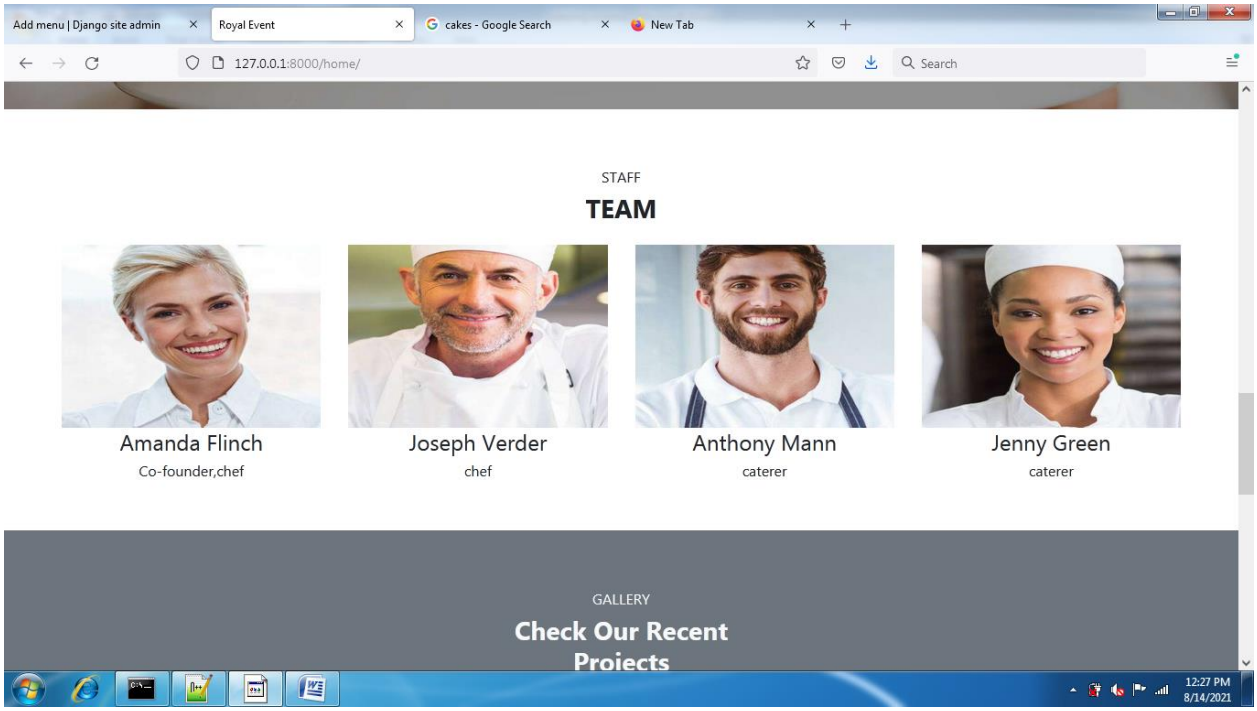
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Amanda Flinch
Co-founder,chef
Joseph Verder
chef
Anthony Mann
caterer
Jenny Green
caterer
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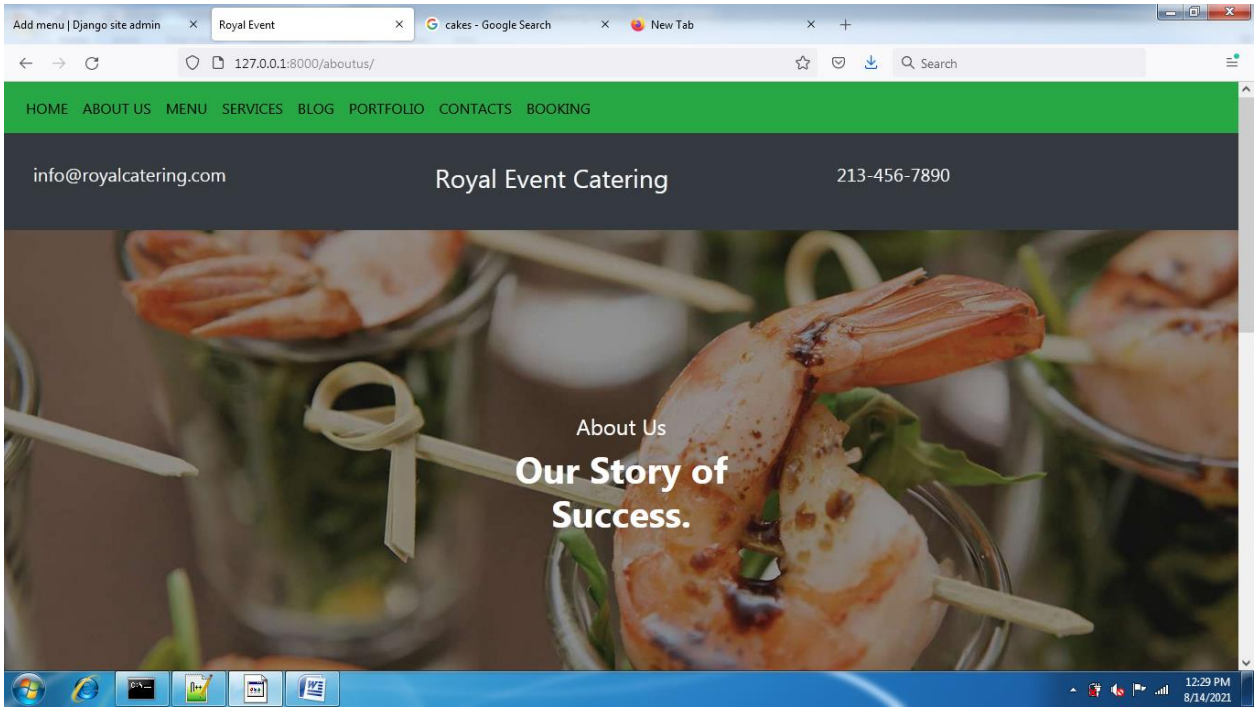
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About Us
Our Story of Success.
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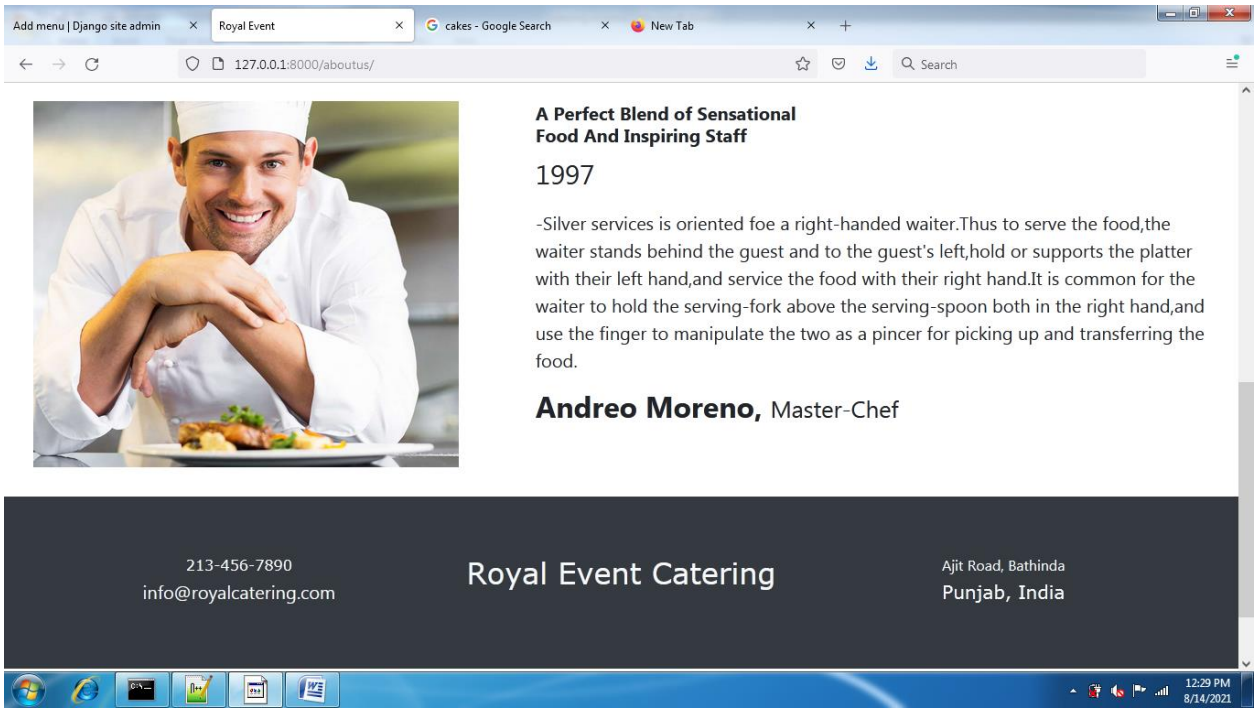
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A Perfect Blend of Sensational Food And Inspiring Staff
1997
-Silver services is oriented foe a right-handed waiter.Thus to serve the food,the waiter stands behind the guest and to the guest's left,hold or supports the platter with their left hand,and service the food with their right hand.It is common for the waiter to hold the serving-fork above the serving-spoon both in the right hand,and use the finger to manipulate the two as a pincer for picking up and transferring the food.
Andreo Moreno, Master-Chef
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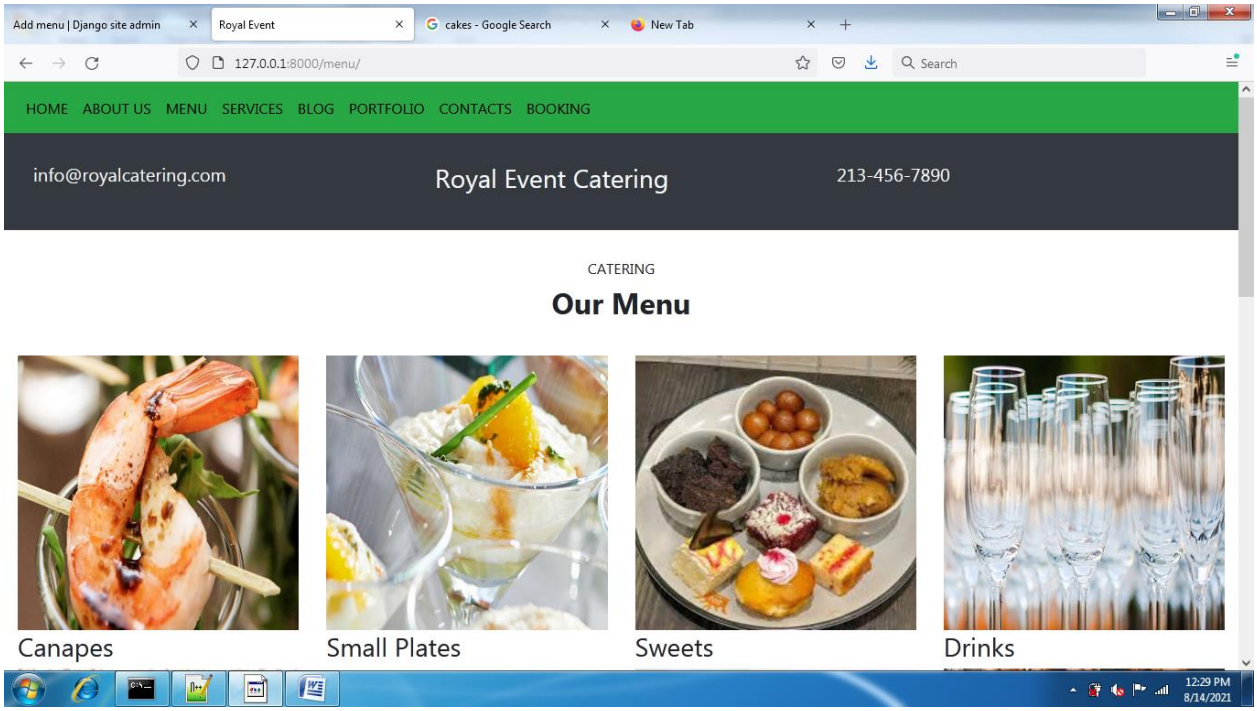
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Our Menu
Canapes
Small Plates
Sweets
Drinks
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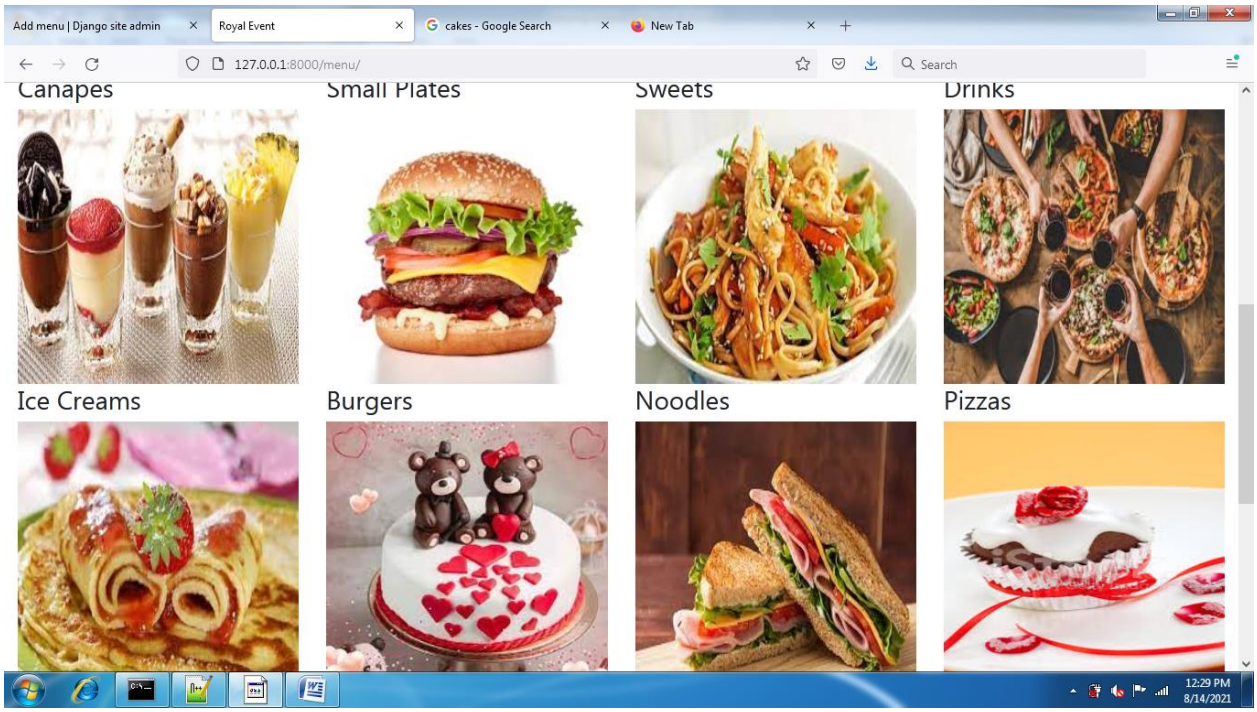
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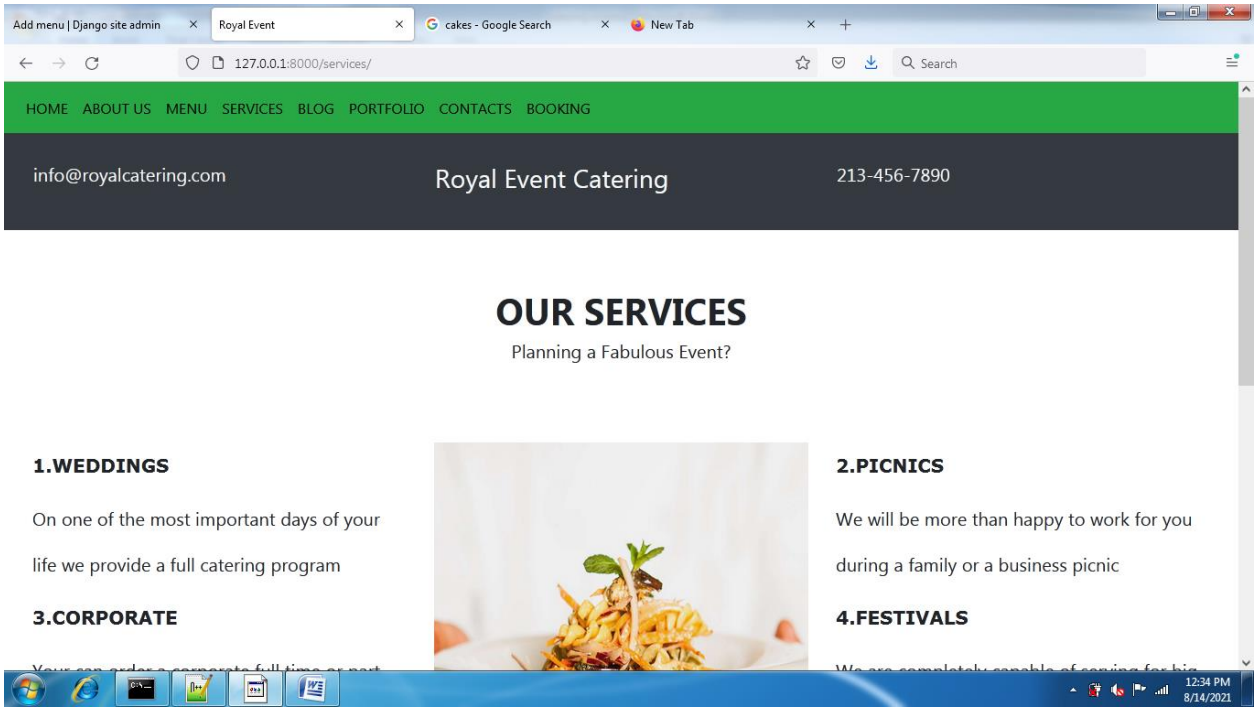
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On one of the most important days of your life we provide a full catering program
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We will be more than happy to work for you during a family or a business picnic
3.CORPORATE
4.FESTIVALS
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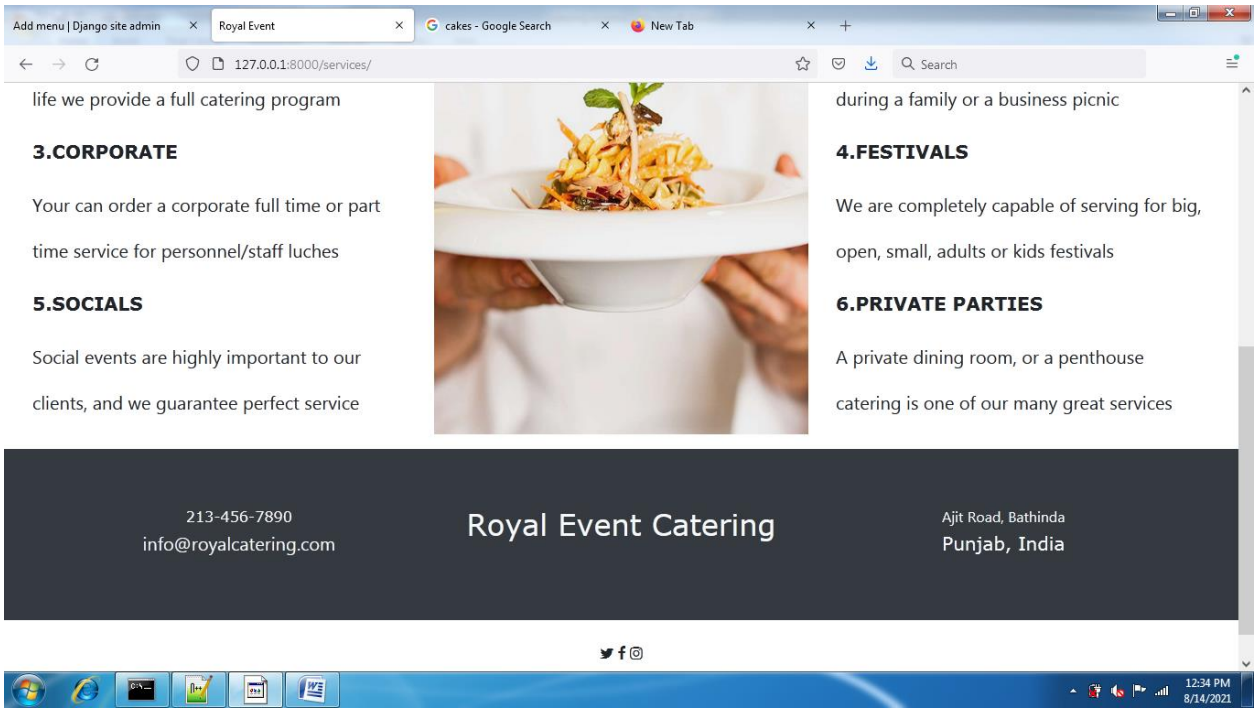
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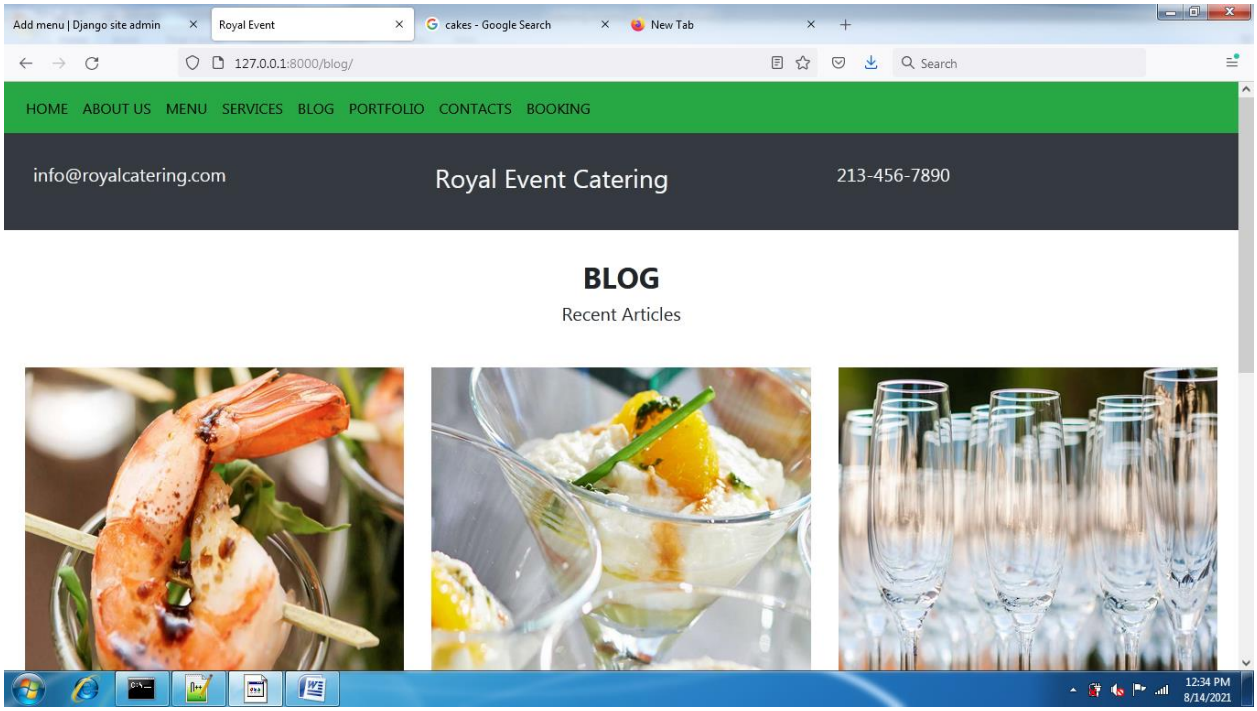
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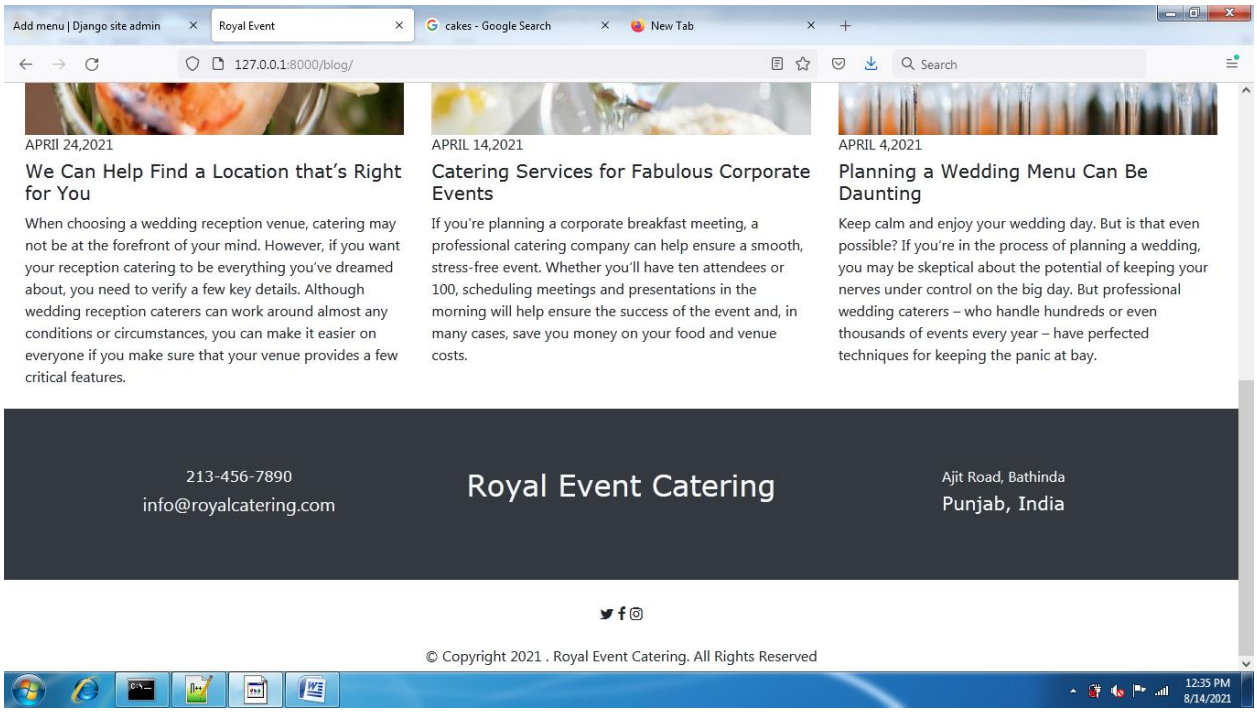
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We Can Help Find a Location that's Right for You
When choosing a wedding reception venue, catering may not be at the forefront of your mind. However, if you want your reception catering to be everything you've dreamed about, you need to verify a few key details. Although wedding reception caterers can work around almost any conditions or circumstances, you can make it easier on everyone if you make sure that your venue provides a few critical features.
APRIL 14,2021
Catering Services for Fabulous Corporate Events
If you're planning a corporate breakfast meeting, a professional catering company can help ensure a smooth, stress-free event. Whether you'll have ten attendees or 100, scheduling meetings and presentations in the morning will help ensure the success of the event and, in many cases, save you money on your food and venue costs.
APRIL 4,2021
Planning a Wedding Menu Can Be Daunting
Keep calm and enjoy your wedding day. But is that even possible? If you're in the process of planning a wedding, you may be skeptical about the potential of keeping your nerves under control on the big day. But professional wedding caterers – who handle hundreds or even thousands of events every year – have perfected techniques for keeping the panic at bay.
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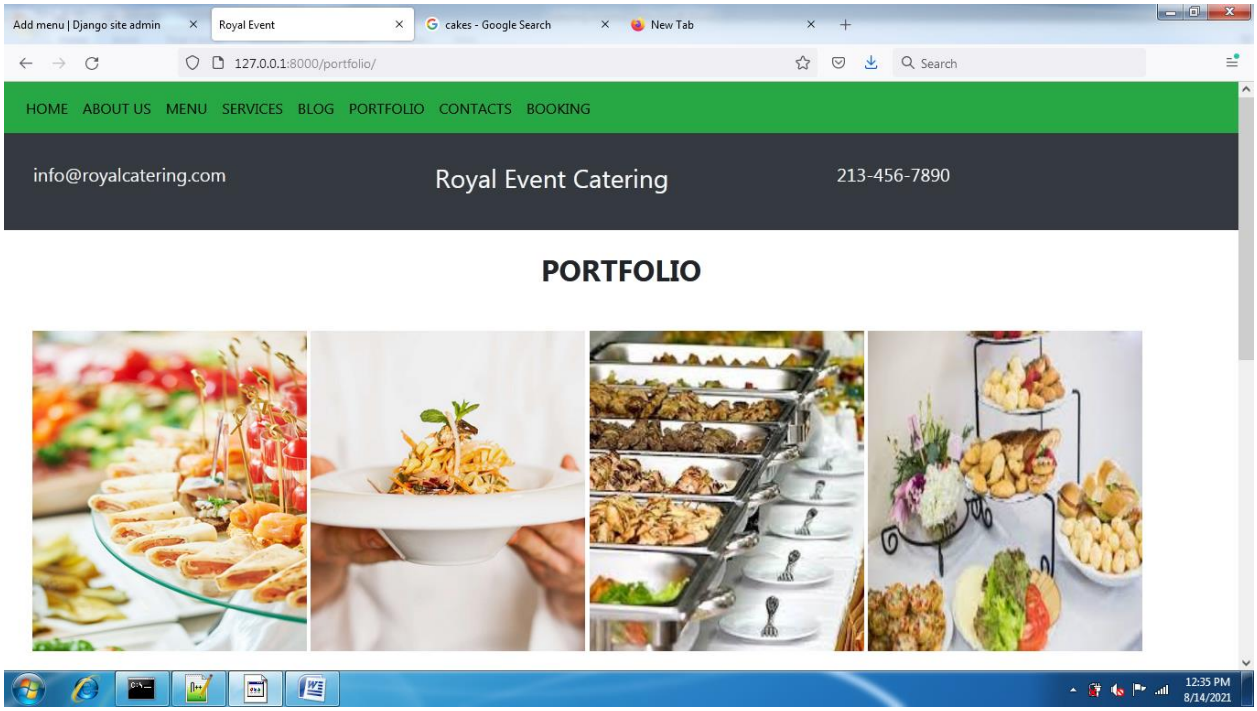
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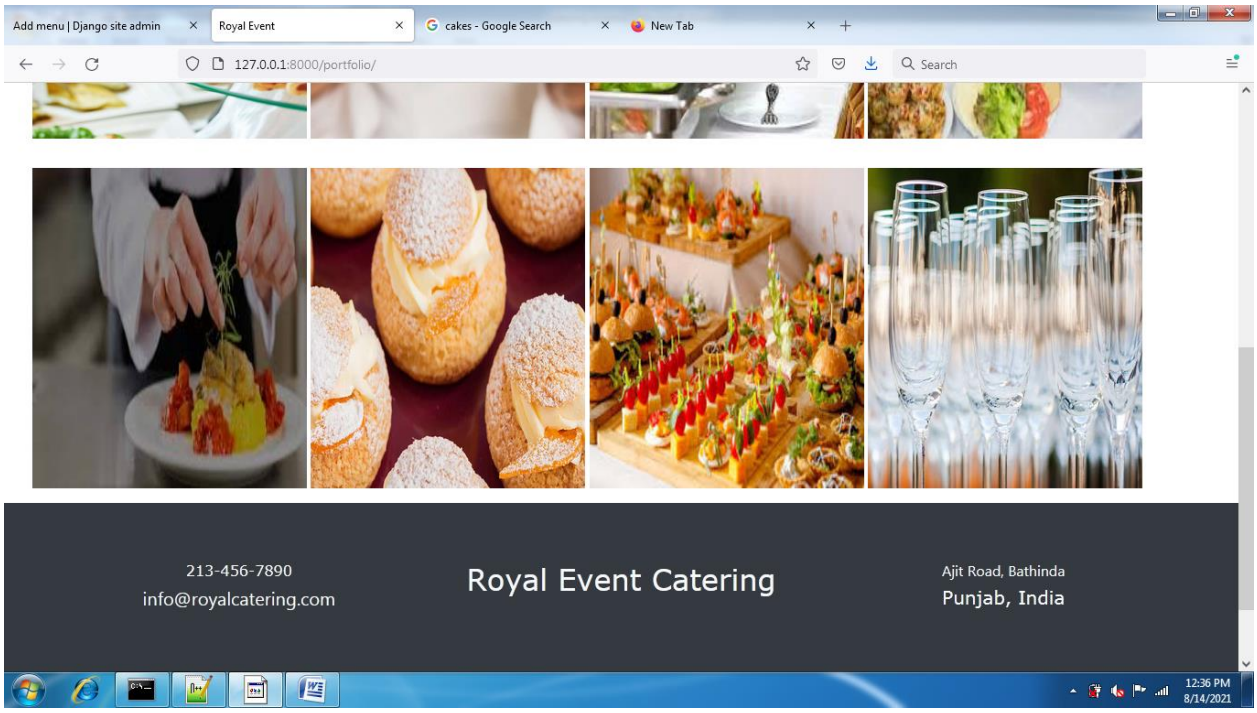
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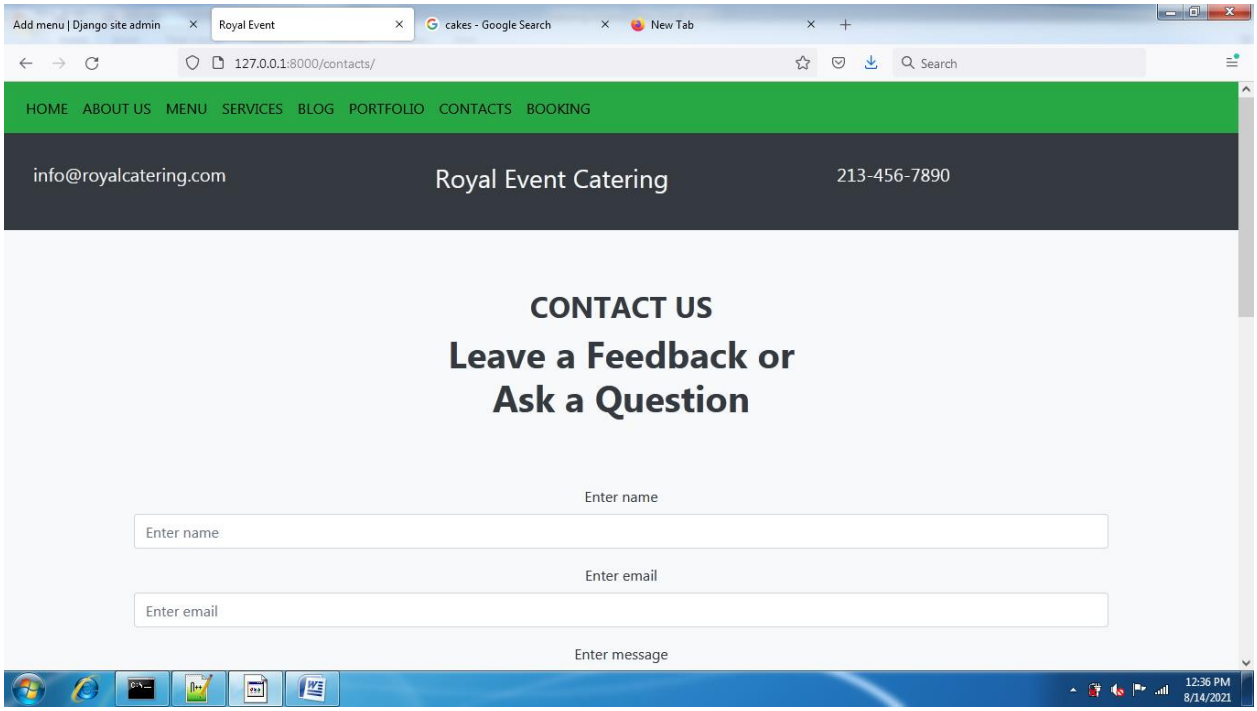
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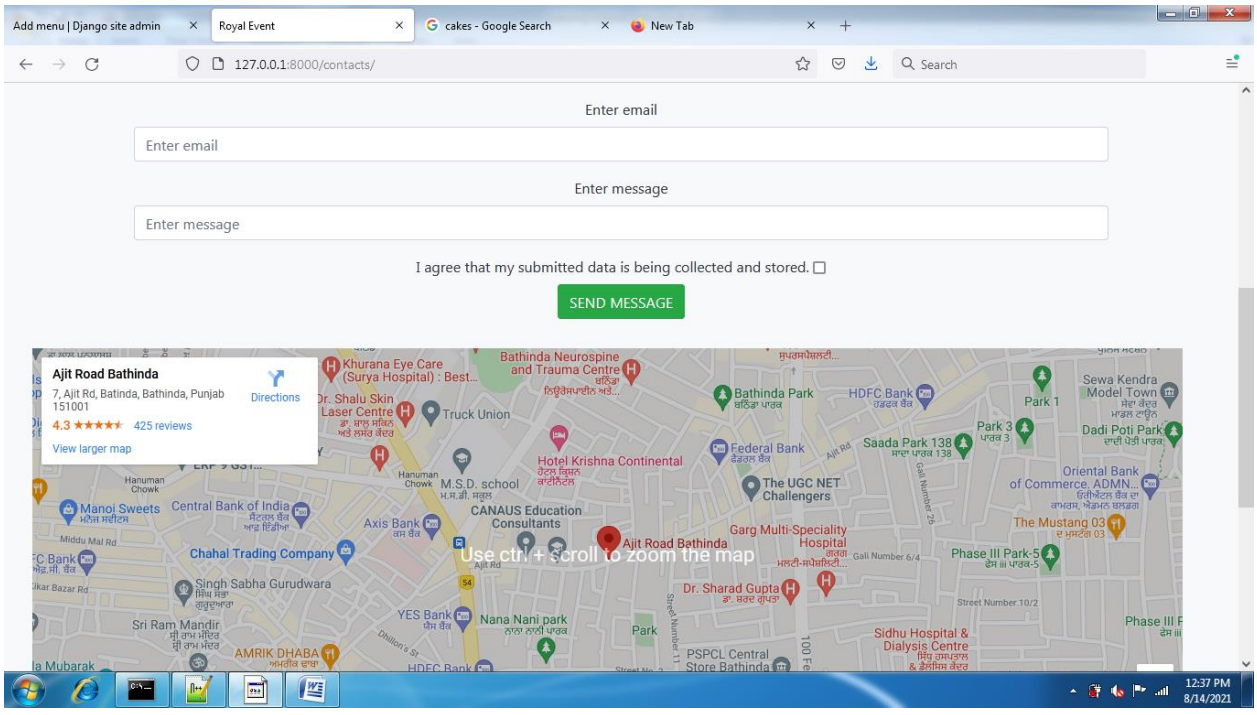
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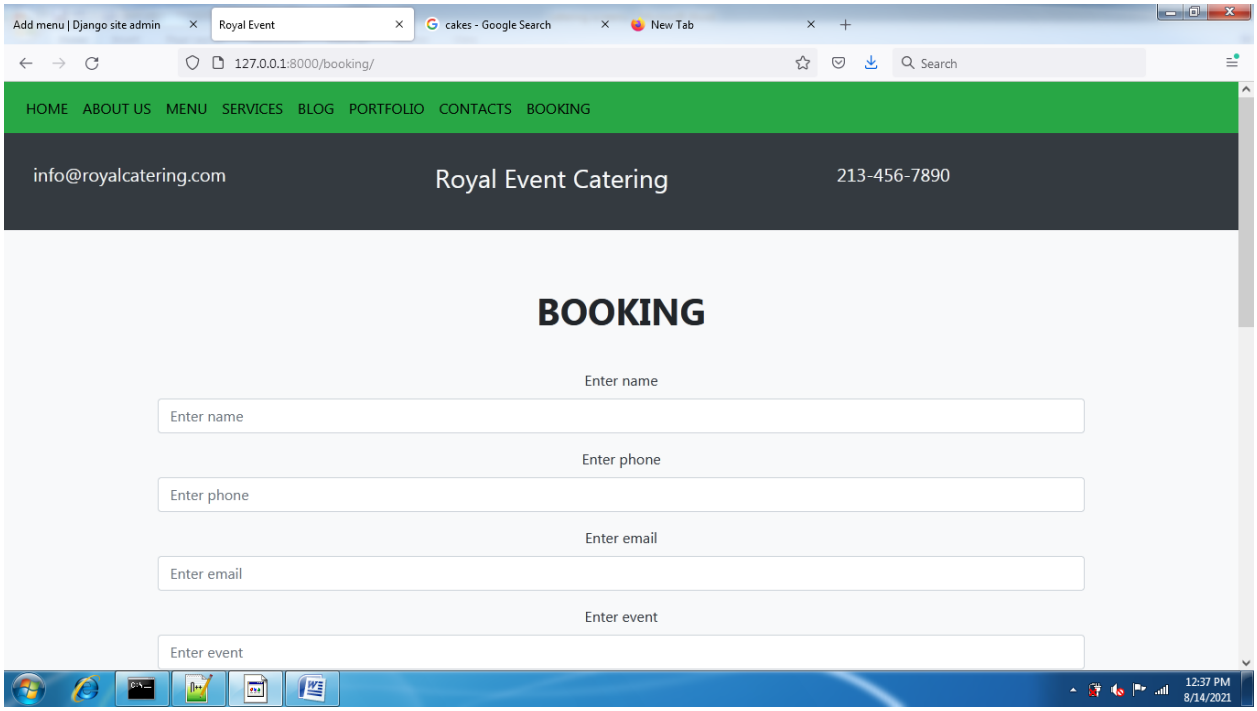
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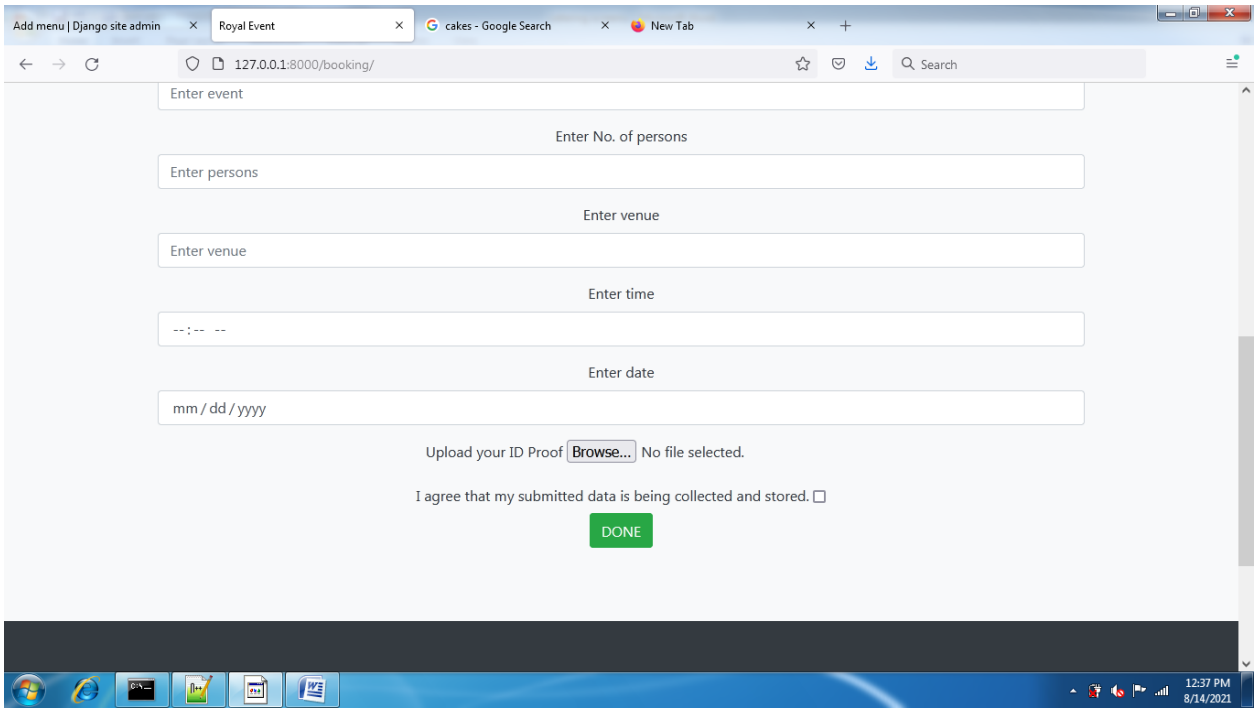
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Upload your ID Proof Browse... No file selected.
I agree that my submitted data is being collected and stored.
DONE
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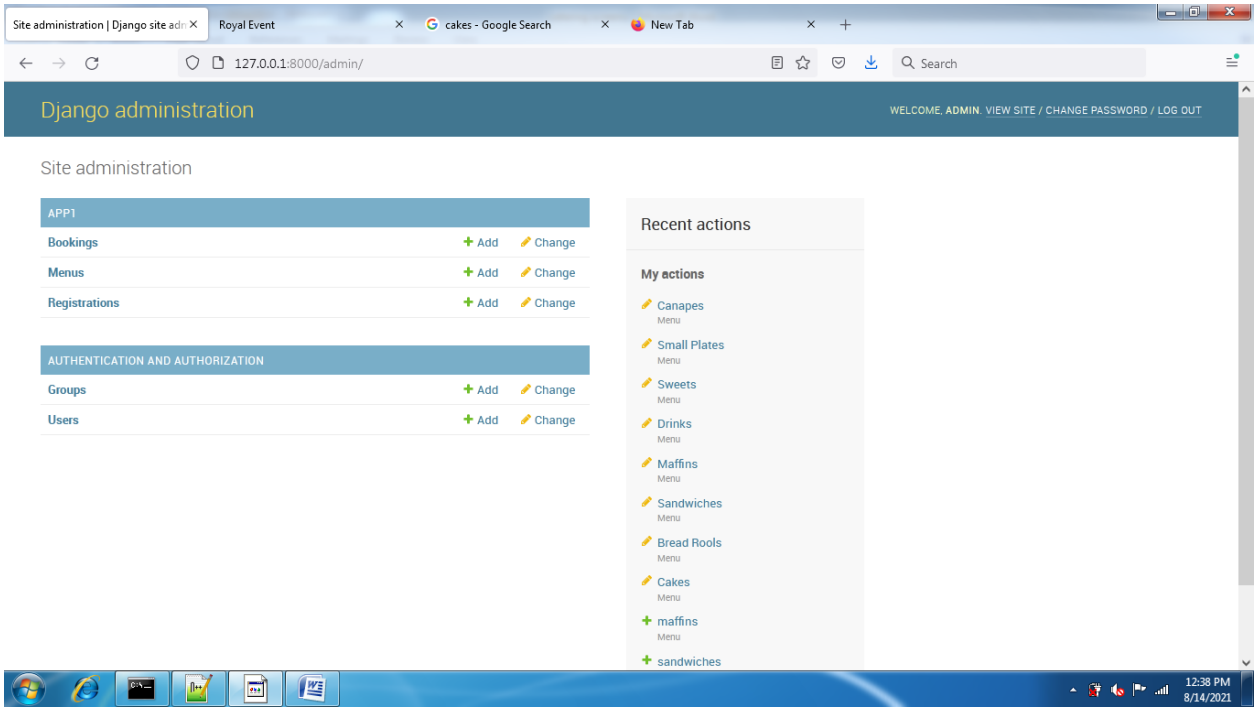
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Django administration
WELCOME, ADMIN. VIEW SITE / CHANGE PASSWORD / LOG OUT
Site administration
APP1
Bookings + Add Change
Menus + Add Change
Registrations + Add Change
AUTHENTICATION AND AUTHORIZATION
Groups + Add Change
Users + Add Change
Recent actions
My actions
Canapes Menu
Small Plates Menu
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Drinks Menu
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5.2DETAILED DESIGN

This design level is also called Logic Design. In this level, the internal design of the modules or how the specifications of the module can be satisfied is decided.

Much of the design effort for designing software is spent creating the system design. The input to the design phase is the specifications for the system to be designed. The output of the top-level design phase is the architectural design for the software to be built.

A design methodology is a systematic approach to create a design by applying set of techniques and guidelines. A design can be either object oriented or function oriented. In function-oriented design, the design consists of modules definitions with each module supporting a functional abstraction. In object-oriented design, the modules in the design represents data abstraction.

The snapshots of step-by-step forms designed to achieve the goal through the proposed system along with their brief description are shown below:

The main objective of the system design is to make the system user friendly. System design involves various stages as:

- Data Entry
- Data Correction
- Data Deletion
- Processing
- Updating
- Report Generation

System design is the creative act of invention, developing new inputs, a database, offline files, procedures and output for processing business to meet an organization objective. System design builds information gathered during the system analysis.

CHAPTER 6

CODING & DEVELOPMENT

The purpose of coding is to express the program logic in the best possible way and to the check it. The main reasons for coding are:

1. Unique Identification. Each item in a system should be identified uniquely and correctly.

2. Cross referencing. Diverse activities in an organization give rise to Transactions in different sub systems but affect the same item

3. Efficient storage. Code is a concise representation it reduces data entry me and improves reliability, Code as a key reduces storage space required for the data Retrieval based on a key search is faster in a computer.

Requirements of coding scheme:

The number of digits / characters used in a code must be minimal to reduce storage space of the code and retrieval efficiency. It should be expandable, that is it must allow new items to be added easily.

Type of Codes:

1. Serial Numbers. This method is that it is concise, precise and expandable. It is however not meaningful.

2. Block Codes. The block codes use blocks of serial numbers. This code is Expandable and more meaningful than the serial number coding. It is precise but not comprehensive.

3. Code Efficiency: It is often said that readability of a program is much more important than the intricacies of its code.

Main emphasis while coding was on style so that the end result was an optimized code.
The following points were kept into consideration while coding:

i) Coding Style: - The Structured programming method was used in all the modules of the project. It incorporated the following features:

- The code has been written so that the definition and implementation of each function is contained in one file.
- A group of related function was clubbed together in one file to include it when needed and save us from the labor of writing it again and again.

ii) Naming Convention: - As the project size grows, so does the complexity of recognizing the purpose of the variables. Thus, the variables were given meaningful names, which would help in understanding the context and the purpose of the variable. The function names are also given meaningful names that can be easily understood by the user.

iii) Indentation: - Judicious use of indentation can make the task of reading and understanding a program much simpler. Indentation is an essential part of a good program. If code id intended without thought, it will seriously affect the readability of the program. The higher-level statements like the definition of the variables, constants and the function are indented, with each nested block indented, stating their purposes in the code. Blank line is also left between each function definition to make the code look neat. Indentation for each source file stating the purpose of the file is also done.

6.1 CODING APPROACH

Top-down Approach:

A top-down approach (also known as stepwise design and in some cases used as a synonym of decomposition) is essentially the breaking down of a system to gain insight into its compositional sub-systems. In a top-down approach an overview of the system is formulated, specifying but not detailing anyfirst-level subsystems. Each subsystem is then refined in yet greater detail, sometimes in many additional subsystem levels, until the entire specification is reduced to base elements. A top-down model is often specified with the assistance of "black boxes", these make it easier to manipulate. However, black boxes may fail to elucidate elementary mechanisms or be detailed enough to realistically validate the model. Top-down approach starts with the big picture. It breaks down from there into smaller segments.

CHAPTER 7
TESTING

During testing the program to be tested is executed with the set of test cases and have the output of the program for the test cases is evaluated to determine if the program is performing as expected. Due to its approach dynamic testing can only ascertain the presence of errors in the program, the exact nature of errors is not usually decided by testing. Testing forms is the first in determining errors in the program.

Once a programs are tested individually then the system as a whole needs to be tested. During testing the system is used experimentally to ensure that the software does not fail i.e. it will run according to its specification. The programs executed to check for any syntax and logical errors. The Errors are corrected and test is made to determine whether the program is doing what it is supposed to do.

This system is tested using unit testing firstly then all the modules are integrated and again the system is tested using integrated testing and it was find that system is working according to its expectation.

Why testing is done

- Testing is the process of running a system with the intention of finding errors.
- Testing enhances the integrity of a system by detecting deviations in design and errors in the system.
- Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system.
- Testing also add value to the product by confirming to the user requirements.

Causes of Errors

The most common causes of errors in a software system are:

- Communication gap between the developer and the business decision maker: A communication gap between the developer and the business decision maker is normally due to subtle differences between them. The differences can be classified into five broad areas: Thought process, Background and Experience, Interest, Priorities, Language.
- Time provided to a developer to complete the project: A common source of errors in projects comes from time constraints in delivering a product. To keep to the

schedule, features can be cut. To keep the features, the schedule can be slipped. Failing to adjust the feature set or schedule when problems are discovered can lead to rushed work and flawed systems.

- Over Commitment by the developer: High enthusiasm can lead to over commitment by the developer. In these situations, developers are usually unable to adhere to deadlines or quality due to lack of resources or required skills on the team.
- Insufficient testing and quality control: Insufficient testing is also a major source of breakdown of e-commerce systems during operations, as testing must be done during all phases of development.
- Inadequate requirements gathering: A short time to market results in developers starting work on the Web site development without truly understanding the business and technical requirements. Also, developers may create client-side scripts using language that may not work on some client browsers.
- Keeping pace with the fast-changing Technology: New technologies are constantly introduced. There may not be adequate time to develop expertise in the new technologies. This is a problem for two reasons. First, the technology may not be properly implemented. Second, the technology may not integrate well with the existing environment.

Testing Principles

- To discover as yet undiscovered errors.
- All tests should be traceable to customer's requirement.
- Tests should be planned long before the testing actually begins.
- Testing should begin "in the small" & progress towards "testing in the large".
- Exhaustive Testing is not possible.
- To be most effective training should be conducted by an Independent Third Party

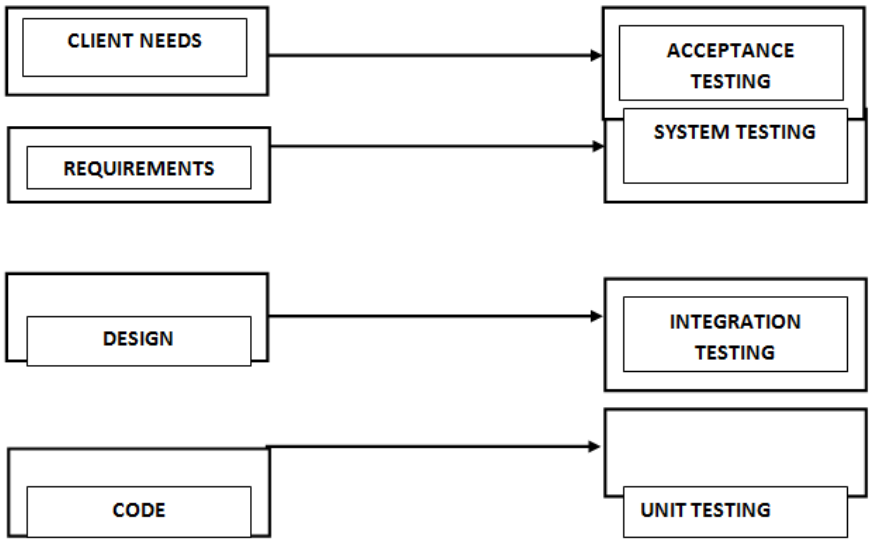
Testing Objectives

- Testing is a process of executing a program with the intent of finding errors.
- A good test case is one that has a high probability of finding an as yet undiscovered error.
- A successful test is one that uncovers an as yet undiscovered error.

Developing a Test Plan:

The first step in testing is developing a test plan based on the product requirements. The test plan is usually a formal document that ensures the product meets the following standards:

- Is thoroughly tested? Untested code adds an unknown element to the product and increases the risk of product failure.
- Meets product requirements: To meet customer needs, the product must provide the features and behavior described in the product specification. For this reason, product specifications should be clearly written and well understood.
- Does not contain defects: Features must work within established quality standards, and those standards should be clearly stated within the test plan.



A good test plan answers the following questions:

- How are tests written? Describe the languages and tools used for testing.
- Who is responsible for the testing? List the teams or individuals who write and perform the tests.
- When are the tests performed? The testing schedule closely follows the development schedule
- Where are the tests and how are test results shared? Tests should be organized so that they can be rerun on a regular basis.

- What is being tested? Measurable goals with concrete targets let you know when you have achieved success.

Some of these questions might have more than one answer, depending on the type of test. For instance, individual developers are often responsible for writing the first level of tests for their own code, while a separate testing team might be responsible for ensuring that all code works together.

The following sections describe the different types of tests and the techniques used with Visual Studio .NET to perform these tests.

TYPES OF TESTS

The test plan specifies the different types of tests that will be performed to ensure the product meets customer requirements and does not contain defects. Table 10-1 describes the most common test types.

Test type	Ensures that
Unit test	Each independent piece of code works correctly
Integration test	All units work together without errors
Regression test	Newly added features do not introduce errors to other features that are already working
Load test (also called stress test)	The product continues to work under extreme usage
Platform test	The product works on all of the target hardware and software platforms

A test plan has the following steps:

- Prepare test plan
- Specify conditions for user acceptance testing
- Prepare test data for program testing
- Prepare test data for transaction path testing
- Plan user testing
- Compile/Assemble program

- Prepare job performance aids
- Prepare operational documents

Test Subject	Test Method	Expected Result	Actual Result	Remarks
Complete testing of system on different browsers	The whole project is executed using different browsers like opera, Mozilla firefox, and internet explorer.	The project should give the same output on all the browsers.	Because High HD picture Quality, the size of the Website Become Large & on executing It takes Time to View.	Browser can sometime effect the working and performance of execution of the project.

Table: Test cases for system testing

- Component testing
- Integration testing
- User testing

UNIT TESTING

Unit testing focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications, testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins.

INTEGRATION TESTING

After unit testing, we have to perform integration testing. The goal here is to see if modules

can be integrated properly, the emphasis being on testing interfaces between modules. This testing activity can be considered as testing the design and hence the emphasis on testing module interactions.

SYSTEM TESTING

Here the entire software system is tested. The reference document for this process is the requirements document, and the goal is to see if software meets its requirements. Here entire 'HRRP' has been tested against requirements of project and it is checked whether all requirements of project have been satisfied or not.

ACCEPTANCE TESTING

Acceptance Testing is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of program is not emphasized.

WHITE BOX TESTING

This is a unit testing method, where a unit will be taken at a time and tested thoroughly at a statement level to find the maximum possible errors

White-box test focuses on the program control structure. Test cases are derived to ensure that all statement in the program control structure. Test cases are derived to ensure that all statement in the program control structure.

Test cases are derived to ensure that all statement in the program has been executed at least once during testing and that all logical conditions have been exercised. Basis path testing, a white box technique, makes use of program graphs (or graph matrices) to derive the set of linearly independent test that will ensure coverage. Condition and data flow testing further exercising degrees of complexity.

BLACK BOX TESTING

This testing method considers a module as a single unit and checks the unit at interface and communication with other modules rather getting into details at statement level. Here the module will be treated as a block that will take some input and generate output. Output for a given set of input combinations are forwarded to other modules.

Black-box testing techniques focus on the information domain of the software, deriving test cases by partitioning the input and output

TEST INFORMATION FLOW

A strategy for software testing may also be viewed in the context of the spiral. Unit testing begins at the vortex of the spiral and, concentrates on each unit, component of the software as implemented in source code. Testing progresses moving outward along the spiral to integration testing, where the focus is on designed the construction of the software architecture.

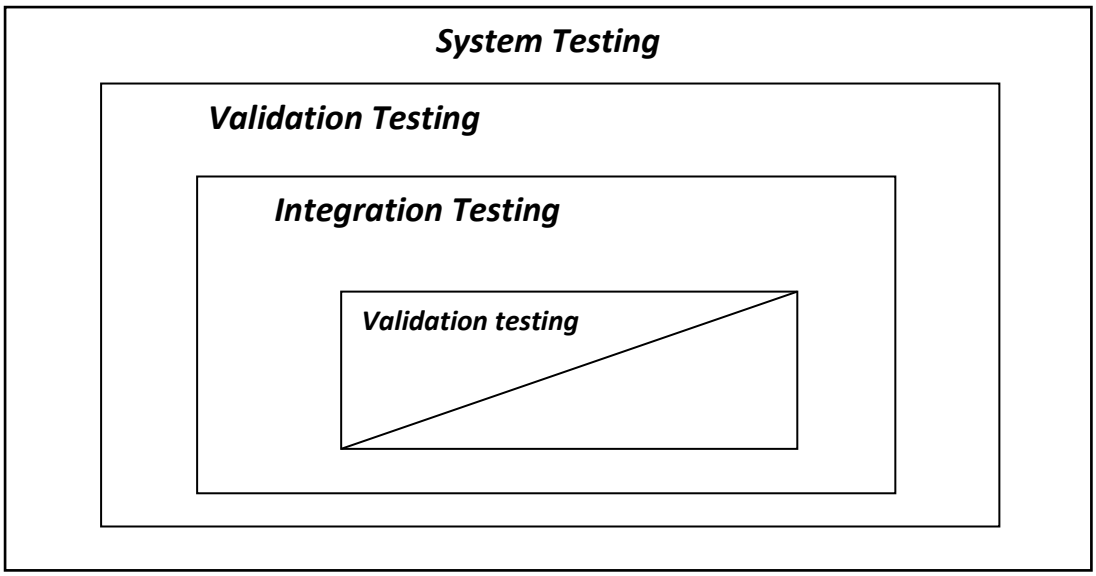


Fig: Stages of Testing

7.1 TEST CASES AND TEST CRITERIA

The main aim of integration test cases is that it tests the multiple modules together. By executing these test cases the user can find out the errors in the interfaces between the Modules.

In Website Testing, there will be User Panel. In this section the user can validate a specific URL.

No. of Test	Description	Test Inputs	Expected Results
1	Check for Login Screen	Enter values in Email and Password For E.g.: Email -**abc@gmail.com** Password-******	Inputs should be accepted.
	Backend Verification	**Select email, password from tbe_admin**	The entered Email and Password should be displayed at sqlprompt or phpMyAdmin.
2	Check for validation	Click submit or upload option	It should display complete details of the errors & warnings
3	Check for Registration	Fill the detail in given form.	Inputs should be accepted.
4	Backend verification	**Insert data in members**	The entered data should be displayed at the sql prompt.

CHAPTER 8
IMPLEMENTATION AND EVALUATION

An Implementation plan is a management tool for a specific policy measure, or package of measures, designed to assist agencies to manage and monitor implementation effectively.

Implementation plans are intended to be scalable and flexible; reflecting the degree of urgency, innovation, complexity and/or sensitivity associated with the particular policy measure. Agencies are expected to exercise judgment in this area; however, the level of detail should be sufficient to enable the agency to effectively manage the implementation of a policy measure.

At a minimum, plans should reflect the standards outlined in the Guide to Preparing Implementation Plans.

Implementation is the stage in the project where the theoretical design is turned into the working system and is giving confidence to the new system for the users i.e. will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of method to achieve the change over, an evaluation, of change over methods. Apart from planning major task of preparing the implementation is education of users. The more complex system is implemented, the more involved will be the system analysis and design effort required just for implementation. An implementation coordinating committee based on policies of individual organization has been appointed. The implementation process begins with preparing a plan for the implementation for the system. According to this plan, the activities are to be carried out, discussions may regarding the equipment has to be acquired to implement the new system.

Implementation is the final and important phase. The most critical stage is in achieving a successful new system and in giving the users confidence that the new system will work and be effective. The system can be implemented only after thorough testing is done and if it found to working according to the specification. This method also offers the greatest security since the old system can take over if the errors are found or inability to handle certain types of transaction while using the new system.

At the beginning of the development phase a preliminary implementation plan is created to schedule and manage the many different activities that must be integrated into plan. The implementation plan is updated throughout the development phase, culminating in a changeover plan for the operation phase. The major elements of implementation plan are test plan, training plan, equipment installation plan, and a conversion plan.

8.1 IMPLEMENTATION AND OUTPUTS

A crucial phase in the system development life cycle is the successful implementation of the new system design. Implementation simply means converting a new system design into operation. Implementation phase is used to translate the design phase into programming constructs. actual implementation of the project is done, or we can say that in this phase we develop all the aspect of the project. In this phase the programmer also does user documentation of the project.

Implementation Phases: - These are the following implementation different phases.
Phase 1: - During this phase, the project water quality goals and plant capacity are set. Then, with assistance from membrane manufacturers and specialty consultants, a critique of various technologies is conducted to assess feasibility and cost-effectiveness of membrane options. Many utilities can complete this phase with their own staff. It is crucial to give a “yes” or “no” to membranes in this phase. Remember, membranes may not be the best option for all types of waters and in every application.

Phase 2: - In this phase, advice from a specialized consultant is a must. This is when layouts and conceptual design are done to evaluate membrane options. This is also the last practical and cost-effective phase where you can go back to the feasibility study if the membrane is not found to be the best alternative. Detailed water quality investigation and sometimes piloting is done in this phase to verify membrane applicability and type of systems to use, as well as setting design parameters for the next phase. Depending on the piloting requirements and periods, this phase could take as little as two or three months to more than a year; if seasonal, water quality changes are substantial. If a pilot study is required, a detailed test protocol should be prepared to not only evaluate various manufacturers but also as a basis for operations and maintenance (O&M) cost evaluation. It is highly recommended to prepare this

test protocol with guidance from the permitting agencies and make them a part of the decision process.

The conclusion of Phase 2 should determine what type of membrane to use and the membrane manufacturer. If manufacturers were invited to pilot test, you must ensure that they are being evaluated in a fair and open environment. Test protocol is the key evaluation tool. It is also recommended to get them involved early in the draft test protocol so there are no surprises.

Phase 3: - Before starting Phase 3, all design parameters, plant capacity, reliability and redundancy factors, stand-by provisions, temperature and water quality considerations must be established. They will then become the design basis for the specialty consultant. Phase 3 is essentially when the local engineers working with the specialty consultants to perform detail designs and preparing the bidding documents while the local engineer is focusing on the site work, building, incoming power, etc. The specialty consultant is doing detail design and layout for the process equipment and setting the bidding requirements for the membrane system.

Depending on the project schedule and local requirements, typically three major submittals are prepared: 20% to 30%, 60% to 70% and 100% design.

It is critical to establish the type of procurement and short list manufacturers, and identify all key process needs during the 20% to 30% phase. Even with the same membrane technology, the system layout, process needs and power/chemical requirements are very different.

Phase 4: - This phase is the most complex phase in membrane system implementation. There are many different methods and ways of bidding membrane systems, each with its own advantages/disadvantages.

Phase 5: - The success and smoothness of Phase 5 depends on phases 3 and 4. The single most important factor becomes how detailed the bid document is and who is responsible for what material and equipment, as well as testing and guarantees.

Phases 6 and 7: - Typically, each entity performs its own function in phases 6 and 7, except the overall controls, for which one entity should be taking charge.

Phase 8: - This phase is preparing as- built, final O&M manuals and each entity completing its punch lists. The specialty consultant can be of great assistance to compile all O&M and shop drawings and provide a comprehensive operator training on the overall plant process, while each supplier provides training of individual components.

Post implementation: -

A Post-Implementation Review (PIR) is an assessment and review of the completed working solution. It will be performed after a period of live running, sometime after the project is completed.

There are three purposes for a Post-Implementation Review:

- To ascertain the degree of success from the project, in particular, the extent to which it met its objectives, delivered planned levels of benefit, and addressed the specific requirements as originally defined.
- To examine the efficacy of all elements of the working business solution to see if further improvements can be made to optimize the benefit delivered.
- To learn lessons from this project, lessons which can be used by the team members and by the organization to improve future project work and solutions.

In some cases, the first of these objectives can be a contractual issue. Where that is the case, it may be safer to run separate reviews - one focused on contractual compliance and the other seeking to derive further benefit from a no-blame review.

TYPES OF IMPLEMENTATIONS

- Implementation of a computer system to replace a manual system.
- Implementation of a new computer system to replace an existing system.
- Implementation of a modified application to replace an existing one, using the same computer.

Successful implementation may not guarantee improvement in the organization using the new system, but improper installation will prevent it. It has been observed that even the best system cannot show good result if the analysts managing the implementation do not attend to every important detail. This is an area where the systems analysts need to work with utmost care.

8.2 MAINTENANCE

Once the website is launched, it enters the maintenance phase. All systems need maintenance. Maintenance is required because there are often some residual errors remaining in the system that must be removed as they are discovered. Maintenance involves understanding the effects of the change, making the changes to both the code and the documents, testing the new parts and retesting the old parts that were not changed. Maintenance is mainly of two types:

1. Corrective Maintenance
2. Adaptive Maintenance

8.2.1 Corrective Maintenance:

Almost all software that is developed has residual errors or bugs in them. Many of these surfaces only after the system have been in operation, sometimes for a long time. These errors once discovered need to be removed, leading to the software to be changed. This is called Corrective Maintenance.

8.2.2 Adaptive Maintenance:

Even without bugs, software frequently undergoes change. The software often must be upgraded and enhanced to include more features and provide more services. This requires modification of the software. This type of maintenance is known as the Adaptive Maintenance

CHAPTER 9

CONCLUSION

The system that has been presented is mainly used in large scale catering enterprise, such as schools' and wedding, parties. The system is committed to provide consumers with a healthy and dietary nutrition. As for catering enterprises, it provides an automatic ordering food and checkout to cut down costs of labor, and still can provide a transparent management, sold-out meal statistics. So the system can reduce the unsalable food to improve the catering enterprises profit. Organization can advertise their product online.

- ✓ Organization can add product online
- ✓ Can add Notifications
- ✓ To Provide the Regular Alert System by E-Mails and SMS to Users even they are not Visiting Website
- ✓ Can take online bookings

SCOPE OF PROJECT

Catering Services is one of the most invaluable parts of hosting an event or party. As you organize to congregate people for whatever purpose, what better way to do it than over food? They provide a wide array of options to suit their client's needs. It can be a simple packed meal, a formal office lunch meeting, a fun family celebration, and many more. These services help you eliminate the need to prepare the food and the place as well as hire people to serve the food, on your own as they will have covered that part too. Caterers don't only serve food at events, there are many providers that purely deliver food per the customer's request. Some also manage an office's pantry as a concessionaire. The service industry is expanding its coverage, combined with modern tools and methods, has made a significant contribution to the food niche.

APPENDIX B

ANNEXURE

1.	Annexure – I	COVER PAGE
2.	Annexure – II	COMPANY CERTIFICATE
3.	Annexure-III	PREFACE
4.	Annexure – 1V	ACKNOWLEDGEMENT
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APPENDIX C

BIBLIOGRAPHY

Books:

Python the complete reference

Core Python Programming

Websites:

www.w3schools.com

www.google.com

www.tutorialspoint.com

www.learnpython.org