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FOOD WASTE MANAGEMENT SYSTEM

S.P Kale[*1], Meet Patel[*2], Mehtab Ansari[*3], Aditi Dhumal[*4], Ruchika Arote[*5]

[*1,2,3,4,5]Department Of Computer Science &Engineering, Sandip Polytechnic, Nashik, India.

ABSTRACT

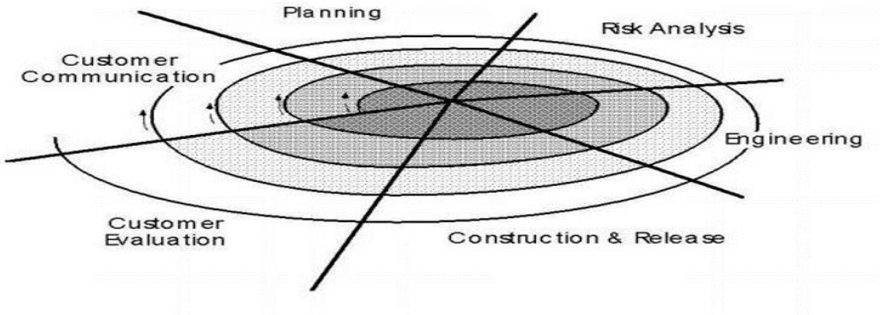
To develop a Web Based application that reduces the amount of food wastage produced in restaurants, functions and mess. The current system only provides information on amount of food wasted and does not provide an interface to donate and provide data analysis. Using data analysis, to visualize the impact. Donating the excess food that consists of the following details, first, providing the location of where excess food is available & details of the food quantity available. Immediate Alerts to nearby NGO's, orphanage, volunteers to collect them. According to a recent survey, 1.3 billion tons of food is being wasted each year and one third of food consumed are leftover. To produce a system that reduces the amount of food being wasted the focus of the project is to develop a web application that uses data analysis to visualize the impact of excess food, thus reducing food wastage. It also enables to give away the excess food produced by notifying the nearby users (NGO's, Volunteers) with details of the food available.

Keywords: Web Based Application, Food Donation, Excess Food, NGO, Analysis

I. INTRODUCTION

The food industry, as one of the largest industries around the world, is of primary importance to numerous national economies. However, the dramatic increase in world population and food supply chain demands will lead to a sharp increase of food production in the upcoming 50 years. Under these circumstances, high volumes of food industry wastes attract increasing social, political, and scientific attention at the national and international level. According to the report of the Food and Agriculture Organization (FAO, 2011a), roughly one-third of food produced for human consumption is lost or wasted globally. Taking into account the increasing number of hungry people as well as the restricted natural resources, it is easily understood that waste management systems will become one of the most important challenges of the twenty-first century. National legislations, international regulatory frameworks, and directives concerning waste management indicate waste prevention/minimization and by-product valorization as they key strategies for the effective management system and sustainability of the food industry as well as the improvement of food security. This chapter includes an extensive introduction to the concept of food waste recovery by providing definitions of waste, origin, distribution, and amount of wastes produced, along with aspects of the food supply chain. Moreover, waste management strategies, general regulatory policies, treatment methods, and effects of waste recovery on the sustainability of food production are discussed in detail.

II. METHODOLOGY



This model is combination of well-known waterfall model and iterative prototyping. It yields rapid development of more complete version of software. Using spiral model software is developed as series of evolutionary releases. During the initialreleases, it may just paperwork or prototype. But during later releases the version goestowards more completed stage.

The spiral model can be adopted to apply throughout entire lifecycle of the application from concept development to m1aintenance. The spiral model is divided into set of framework activities defined by software engineer team.

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The initial activity is shown from center of circle and developed in clockwise direction. Each spiral of the model includes following steps:

A. Communication

The software development process starts with communication between customer and developer. In this phase we communicated with the user with following principles Of communication phase.We prepared before the communication i.e., we decide agenda of the meeting for concentrating on the features and services provided by other similar applications.Our leader leads our team and drawn out all the requirement of from the user i.e., what they actually needed, what is input, output format of system.

B. Planning

It includes complete estimation, scheduling and risk analysis.In this phase we planned about when to release the software, cost estimation, risk in the project regarding messenger application and transfer of files in that.Finally in this phase we estimated the cost of the project including all expenditure of software, releasing software according to user deadline.

C. Modelling

It includes detail requirement analysis and project design. Flowchart shows complete pictorial flow of program whereas algorithm is step by step solution of problem .We analyse the requirement of the user according to that we draw the blockdiagrams of the system. That is nothing but behavioral structure of the system using UML i.e.

Class Diagram, Use case Diagram, Components Diagram etc.

D. Construction

1) Coding

Design details are implemented using appropriate programming language. In coding we have chosen the PHP programming language at the server side for interacting with the database. For developing the Web application, the JAVA language is used.

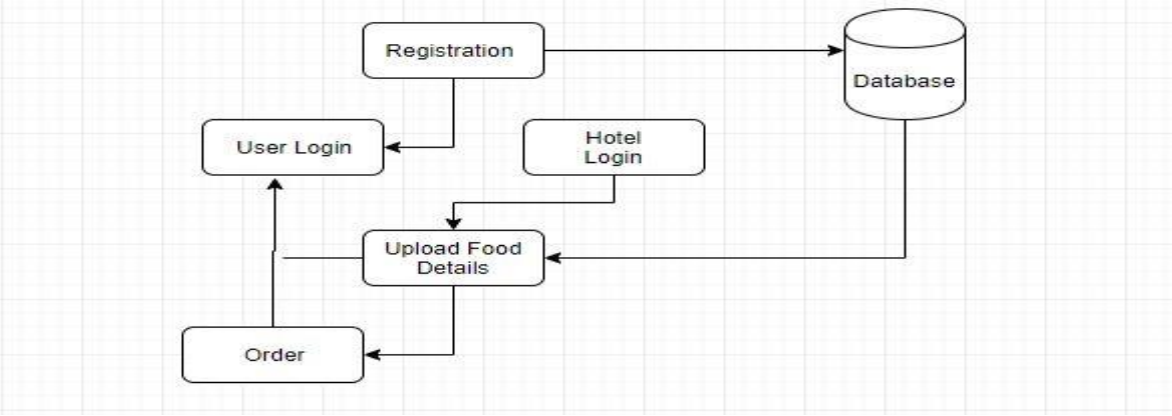
2) Testing

Testing is carried out by analyzing the application i.e., we first develop themodule of the application and step by step find out input and output errors such as interface errors, performance errors, data structure errors, initialization errorsetc. Therefore, here Black Box testing strategy is useful.

3) Deployment

It includes software delivery, support and feedback from customer. If usersuggest some corrections, or demands additional capabilities then changes are required for such corrections or enhancements. After user evaluation, next spiral implementation, 'user's suggestions' plus 'enhancement plan'. Thus, each iteration around the spiral leads to more completed version of software.

III. MODELING AND ANALYSIS



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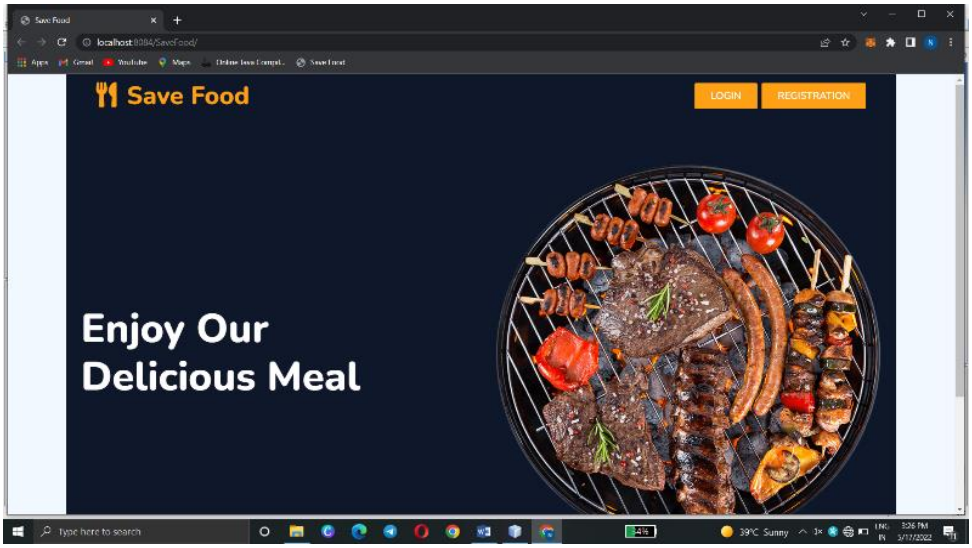
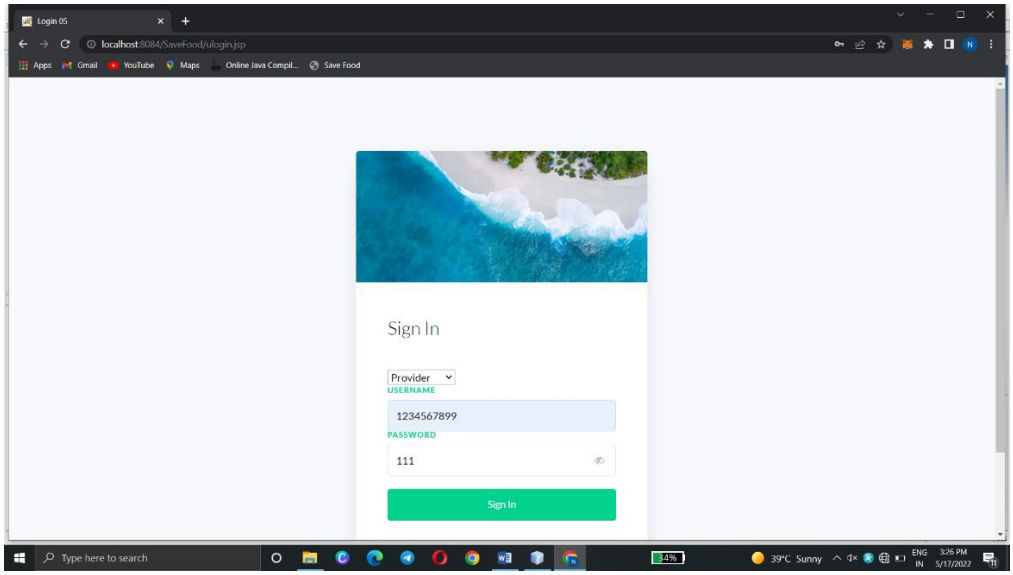
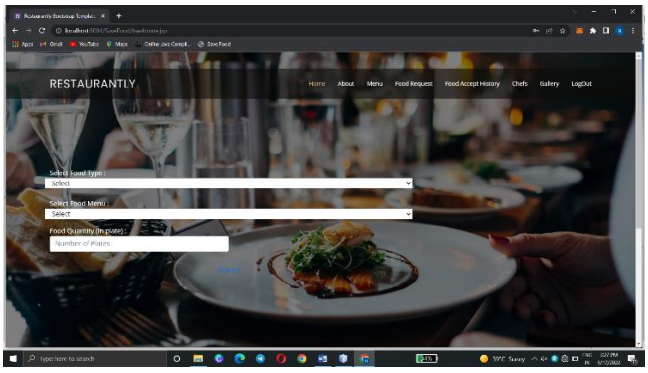
IV. RESULTS AND DISCUSSION







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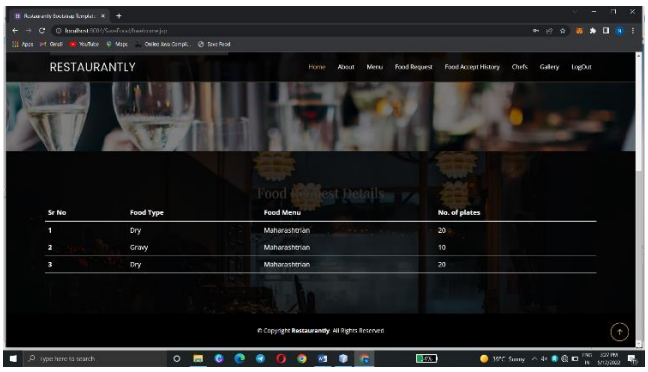

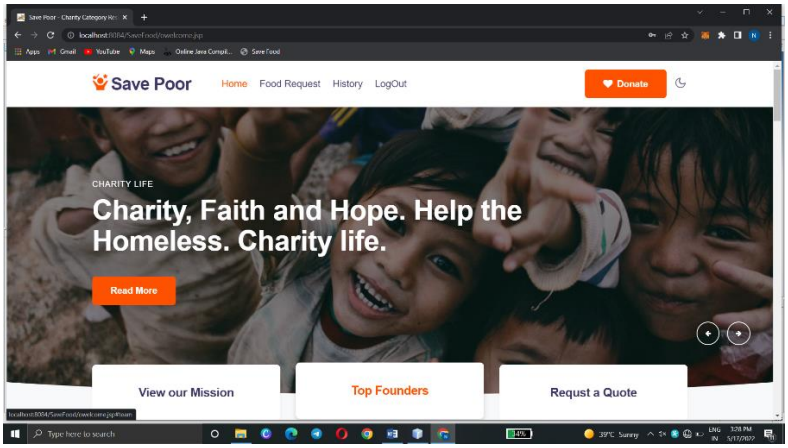

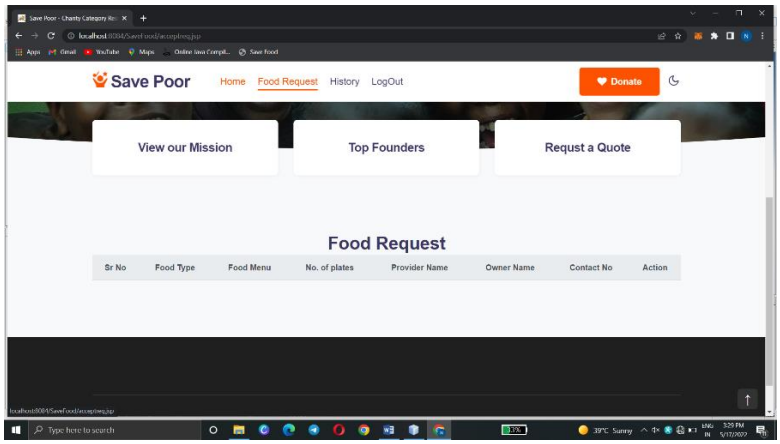

V. CONCLUSION

The complex reasons behind why nearly one-third of all food produced for human consumption is wasted are evident throughout the food supply chain, from production to consumption. While there are many practical strategies which have been discussed to reduce food loss and waste (i.e., improving storage facilities, starting food waste awareness campaigns), these do not solve the underlying causes of why loss and waste still exist to such a large extent in todays word. The largest barrier to eliminating food loss and waste is the corporate control of the global food system. Within this globalised, neoliberal political economy, waste brings profit and power; whether from corporations encouraging unnecessary and unhealthy overconsumption through marketing campaigns, or the governments of the developed world encouraging overproduction of food commodities to use as a mechanism of control through food aid, the global food system relies on creating and

profiting from waste. Food waste has serious social and environmental implications, but many of us don't think twice about it. Our hope is that after learning more about this this prevalent problem, YOU will do what you can to make a difference.Contact Logan City Council and encourage them to expand Cache Valley's green waste composting program. Talk to restaurants that you frequent about what they are doing to reduce food waste and end food insecurity in Logan

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