

Enhancing Procurement Efficiency: The Design and Implementation of an E-Bidding Process System

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ABSTRACT

An E-Bidding is an electronic bidding event according to defined negotiation rules . A buyer and two or more suppliers take part in this online event. The objective of this application is to provide a facility for conducting online auction of products. Users can bid for the products after registration. The purpose is to design a system to provide all functions of bidding and auction process.java environment used for simulation of proposed algorithm.

Keywords: *E-Bidding, java, Web Server.*

I. INTRODUCTION

The objective of this application is to provide a facility for conducting online auction of products. Users can bid for the products after registration. The purpose is to design a system to provide all functions of bidding and auction process.

II. EXISTING SYSTEM

The present system of auctioning is inefficient as it is difficult to coordinate various users. All users must be at the same place to complete bidding successfully. It is also difficult for users to communicate with each other.

III. PROPOSED SYSTEM

The proposed system is a web-based application which allows users to register their details and the product details they want to put for auction. Users can bid for one or more items and view the biddings made by other users. The application allows easy communication of information among the users and completes the auctioning effective

IV. PROCESS MODEL USED WITH JUSTIFICATION

SDLC (Spiral Model)

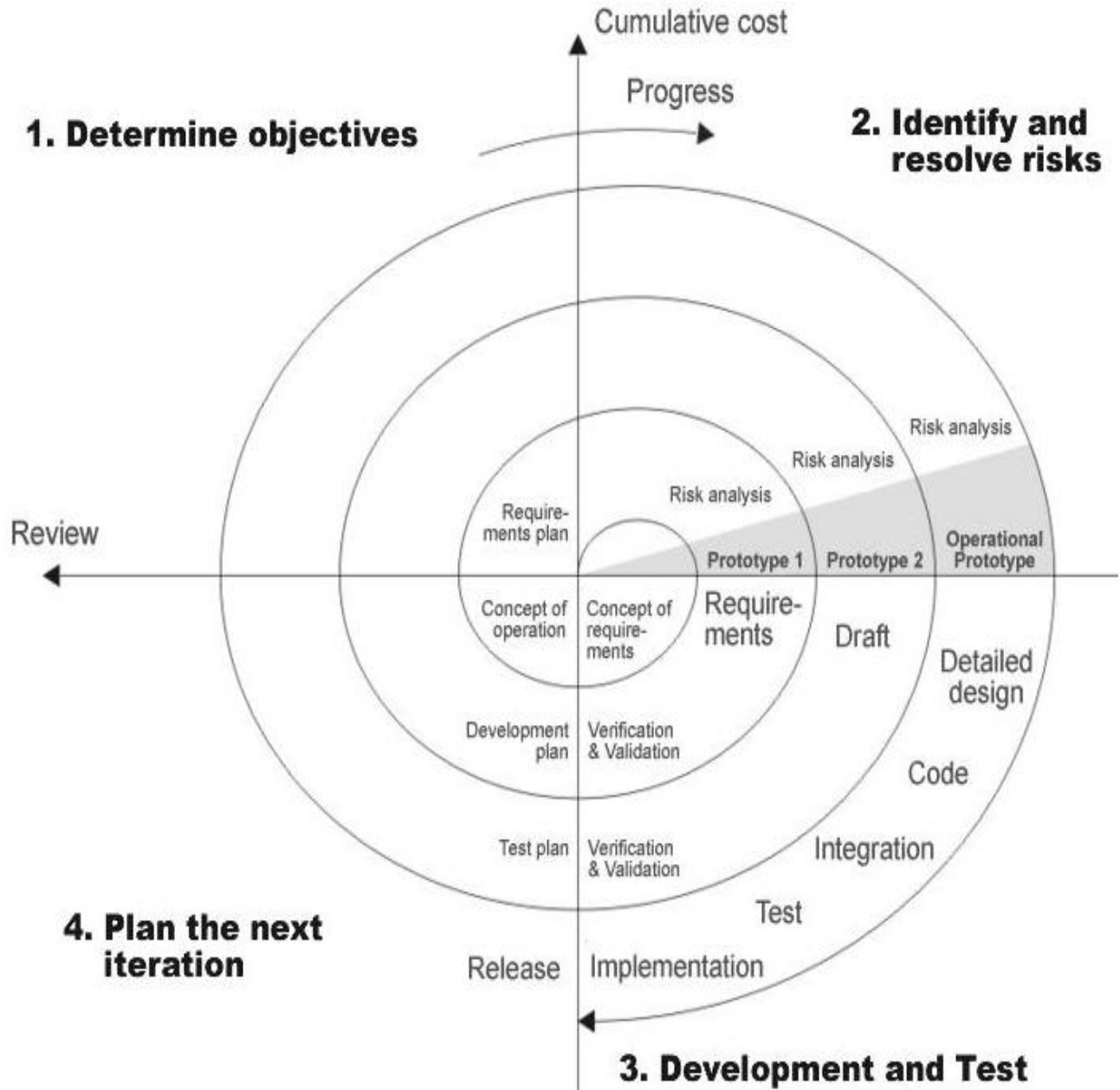


Figure 1: SDLC (Spiral Model)

V. SYSTEM ARCHITECTURE

Below architecture diagram represents mainly flow of requests from users to database through servers. In this scenario overall system is designed in three tiers separately using three layers called presentation layer, business logic layer and data link layer. This project was developed using 3-tier architecture.

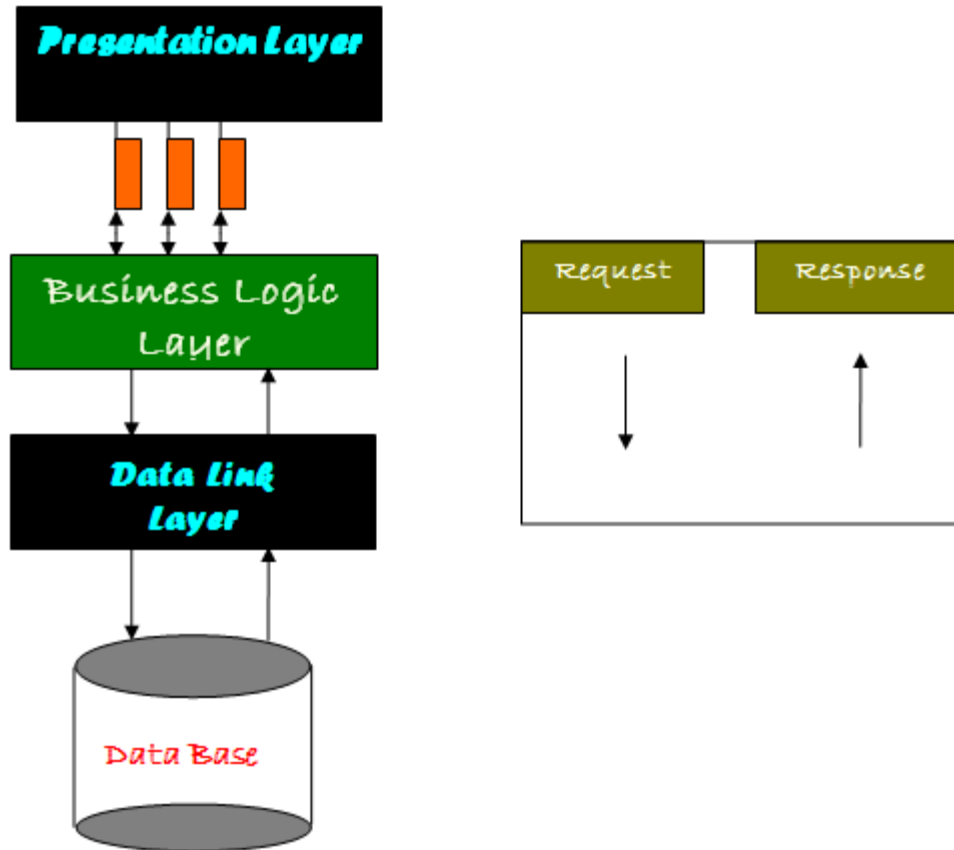


Figure: 2 System Architecture

VI. SOFTWARE REQUIREMENTS

Technology	: Java and J2EE
Web Technologies	: Html, JavaScript, CSS
Web Server	: Tomcat5.5
Database	: Oracle9i
Java Version	: JDK5.0

VII. BASIC HARDWARE EQUIPMENT'S

Pentium processor	:	512 MHZ
RAM Capacity	:	1 GB
Hard Disk	:	20GB
CD-ROM Drive	:	32 HZ
Keyboard	:	108 Standard
Mouse	:	Optical
Monitor	:	15" Color Monitor

7.1 Additional Tools:

HTML Designing	:	Dream weaver Tool
Development Tool kit	:	My Eclipse

VIII. TEST CASES

S.No.	INPUT	EXPECTED O/P	OBSERVED RESULT	PASS/ FAIL
1.	Enter admin username, password._	Admin home page should be display._	Admin home page displayed._	Pass
2.	Click on e-bidding process system	Bidding .jsp page must be opened	Bidding .jsp page displayed.	Pass
3.	Enter bidder details	Registered success/failed message should display.	Registered success/failed message is displayed.	Pass
4.	Enter item in search and choose category.	Bidders item category should display	Bidder item category is displayed	Pass
5.	Enter auction item and amount for bidding.	Auction item status should display in New items.	Auction Item status displayed in New items.	Pass
6.	Click on login button for bidding the item.	Valid user alert box should be displayed.	Valid user alert box is displayed.	Pass

7.	Click on closing items today or tomorrow.	Closing items should be displayed.	Closing items are displayed.	Pass
8.	Click on administration for checking reports.	Seller, Buyer, Item, User reports should be displayed.	Seller, Buyer, Item, User reports are displayed.	Pass

Validation

The system has been tested and implemented successfully and thus ensured that all the requirements as listed in the software requirements specification are completely fulfilled. In case of erroneous input corresponding error messages are displayed.

REFERENCE

1. Sabra Easterday: E-bidding: The New Global Business Trend. Accessed: 11 June 2013.
2. Jump up to:^{a b c d} Professor Doctor Lutz Kaufmann: Elektronische Verhandlungen – Erste empirische Befunde zu Auktionen im Einkauf (2003). Accessed: 11 June 2013.
3. Jump up to:^{a b} Roland Bogaschewsky: Electronic Procurement - Katalog-basierte Beschaffung, Marktplätze, B2B-Netzwerke .In: Roland Gabriel, Uwe Hoppe Electronic Business. Heidelberg (Germany), 2002, p. 23–43.