

Ecommerce website Using Angular & JSP servlet

Manoj Patil¹, Akshay Pandhare², Daivat Tagare³, Nikhil Rajput⁴, Prof. Babaso Shinde⁵

^{1, 2, 3, 4, 5} Dept of Computer Science

^{1, 2, 3, 4, 5} Shree Ramchandra College of Engineering

Abstract- *In this era of internet, e-commerce is growing by leaps and bounds keeping the growth of brick-and-mortar businesses in the dust. In many cases, brick-and-mortar businesses are resorting to having a counterpart which is internet or e-commerce driven. People in the developed world and a growing number of people in the developing world now use ecommerce websites on a daily basis to make their everyday purchases. Still the proliferation of e-commerce in the underdeveloped world is not that great and there is a lot to desire for. This system outlines different aspects of developing an ecommerce website and the optimum solution to the challenges involved in developing one. It consists of the planning process, which starts with determining the use case, domain modeling and architectural pattern of the web application. The entire development process is primarily divided into two parts: the front-end development and the back end development. The database design is also discussed with an emphasis on its relational connectivity. This no-nonsense method of developing an e-commerce website can be easily replicated and followed in developing e-commerce websites in the developing and underdeveloped countries where computing resources are scarce and expensive because of their socio-economic condition*

Keywords- java, servlet, jsp, e-commerce, web service.

I. INTRODUCTION

The "Online E-commerce Network Application" Service Division is committed to providing development and migration solutions. This is a simple and effective way to reduce human stress and time in the digital age. Support our shop Collections, digital initiatives and digital projects of external cooperative agencies, and the services it provides include: Digitization of analog objects, metadata management, digital storage, digital discovery and access gather. "Store Management System" is a web application created for all operating systems.

Users maintain and organize their stores virtually. This software is easy to use for beginners to advanced users. This is Familiar, well-thought-out and attractive user interface, powerful search insertion and Report function. The report generation function of the store system can help you find out the differences. The items brought by members make it easy

for users to obtain products. Business paradigm that has been accepted and used. Implementation of websites provided by more and more companies Ability to perform business on the Internet. The shopping process is It has become common place on the Internet. It can help increase profit. It can help organizations do business 7 days per week and 24 hours each day. The purpose of this project is to develop a universal e-commerce store for all products. (Books, CDs, computers, mobile phones, electronic equipment, home appliances, etc.) Home comfort on the Internet. However, for implementation purposes, this article is processed online. E-commerce store

B2B: (Business to business) Business-to-business e-commerce involves a between 2 businesses

B2C: (Business to customer) B2C commerce involves e-commerce between businesses and consumers. This form E-commerce involves the purchase of books and various forms of consumer goods.

II. SYSTEM DESIGN

To design an E-commerce website the method of shaping the coding is done in JSP, HTML5, CSS3, JavaScript and Boot Straps for designs, interfaces and information for a system to satisfy mere needs.

HTML

The **Hyper Text Markup Language (HTML)** is the standard, basic and easy to learn language which helps to build a web site. It provides functionalities, features and marks the information like documents in the web browser. With the use of 'HTML' we can include images, texts, paragraphs, videos, hyperlinks, buttons, search box, lists, check boxes etc in a web site. Which makes HTML language a must to learn for developing or constructing a web page. HTML is the first language which was invented by Tim Berners Lee in 1980 for web development. But it was made standard at 1993 by IETF (Internet Engineering Task Force). HTML language is more of opening and closing tags which are used to include all types of information and document in different format.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for styling the web page. Without using CSS, we can't expect a webpage to look appealing, and doesn't draw any attention from the user. In simple words it makes the page look attractive, creative and beautiful by adding some colours, animations, motions and 3D effects to images, describing the presentation of a document written in a markup language such as HTML. CSS is designed to separate the presentation, content, including the layout, colours, and fonts. CSS improves accessibility which provides more control in the specification of presentation of characteristics in the code which enables multiple web pages to share same style formatting by specifying the CSS in a separate .CSS file which reduces the complexity of the code and repetition in the structural content.

JavaScript

Java Script is often abbreviated as JS, it is an object oriented, is high-level programming language. It has curly-bracket syntax and includes dynamic typing and first-class functions. It is a programming language used both on the client-side and serverside that allows you to make web pages interactive. Every browser has an embedded engine which is also called a JavaScript virtual machine. Different engines have different "codenames". For example, V8 – in Chrome and Opera. Spider Monkey – in Firefox. Java Script was initially called type script.

AngularJS

is an open-source web application framework. It was originally developed in 2009 by MiskoHevery and Adam Abrons. It is now maintained by Google. Its latest version is 1.2.21.

AngularJS is a efficient framework that can create Rich Internet Applications (RIA).

AngularJS provides developers an options to write client side applications using JavaScript in a clean Model View Controller (MVC) way.

Applications written in AngularJS are cross-browser compliant. AngularJS automatically handles JavaScript code suitable for each browser.

AngularJS is open source, completely free, and used by thousands of developers around the world. It is licensed under the Apache license version 2.0.

Overall, AngularJS is a framework to build large scale, high-performance, and easy-to-maintain web applications.

JSP

Java Server Pages (JSP) is a server-side programming technology that enables the creation of dynamic, platform-independent method for building Web-based applications. JSP have access to the entire family of Java APIs, including the JDBC API to access enterprise databases. This tutorial will teach you how to use Java Server Pages to develop your web applications in simple and easy steps. A JSP page consists of HTML tags and JSP tags. The JSP pages are easier to maintain than Servlet because we can separate designing and development. It provides some additional features such as Expression Language, Custom Tags, etc.

II. LITERATURE SURVEY

Existing technology has almost no work in the field of e-commerce chatbots. Gupta, Siddharth, et al. have proposed about a website based ecommerce chatbot that can understand and converse with the user in simple language. This ecommerce chatbot is linked to an ecommerce website that holds a variety of numerous products of various features. This chatbot will help you decide which product is best for you. This becomes very helpful instead of searching and browsing for a product over the website. Chatbots are basically Like an online automatic assistant

In the work proposed by Cui, Lei, et. al., customer service chatbot was discussed that uses large scale publicly available ecommerce data. Traditional people-oriented customer service Chatbots have significant data volume and privacy issues. The Super-Agent takes the data from in-page product descriptions as well as user content from ecommerce websites, It is cost-effective and gives the answer Simplify repetitive questions and enable human employees to conduct more valuable questions and queries. They demonstrate SuperAgent as an add-on utility to web browsers to show its usefulness to the users. Thomas, N. T. pointed out E-commerce has completely changed the way we buy and sell products. But the customer service ecommerce provides is a drawback. In every ecommerce portal user has to wait for a long to get their query resolved from the customer service representative. Especially in the case of a live chat system the representative has to handle multiple customers at a time. The response may be irrelevant as it only copies and pastes pre-made replies. As a solution to these problems the authors propose a chatbot which automatically gives instant responses to users based on the dataset of Frequently Asked Questions

(FAQs) They propose to use artificial intelligence markup language (AIML) and Latent Semantics (LSA). Use AIML etc. to answer greetings and general questions. Use LSA to answer service-related questions. In a patent Ker, David Mentions about an Ecommerce conversation interface to support not only decision making but also delivery, procurement and after sales support as well as allow the user to perform all ecommerce activities. The patent states some methods and practices relating to E-commerce which not only limit to buying and selling but also go beyond sales, such as delivery and after sales support. All perform all other novice e-commerce activities. While our product focuses mainly on selling products, although we will implement some after sales activities such as tracking order, view previous order information, etc..Stoehr, Mark, et al. discusses about methods and apparatus for placing a request of an Internet chat session between a user and chat persona. They state that the client device displays the chat actions determined by multiple chatters and visitors.. In response to the visitor’s selection a chat system server selects one chat persona and at least one chat action. The client device then sends a request to initiate a chat session. After identifying the visitor the chat system server retrieves additional information of that visitor. The chat system server then generates a personalized chat session between the visitor on the client device and selected person on the chat system server. Ontologies are usually developed in a common manner by domain experts. Languages for representing ontologies and related issues are discussed in [7].

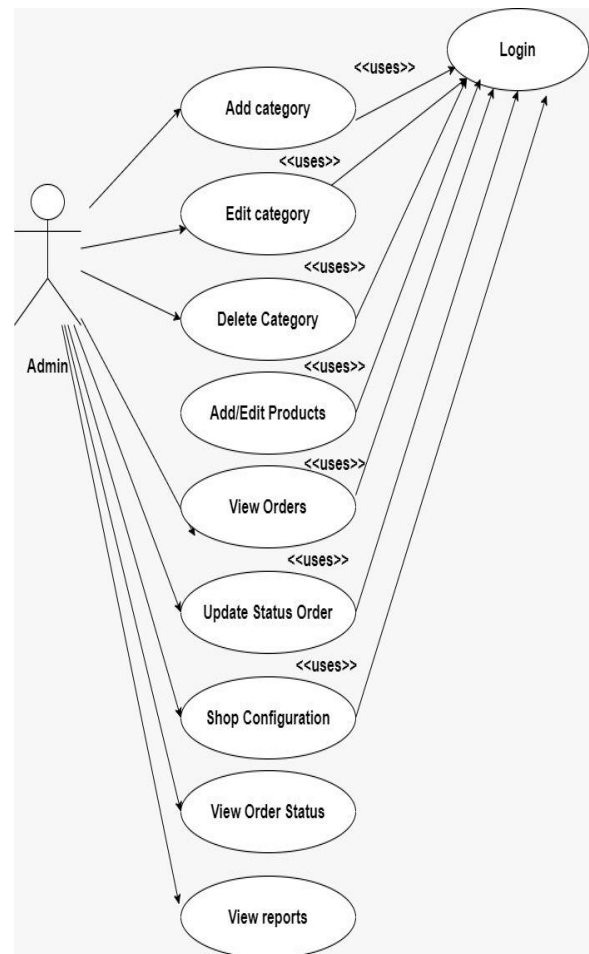


Figure 1. Use Case Diagram (Admin)

1. Logic enables inference - deducing new knowledge from the explicitly stated knowledge and can be used to uncover implicit ontological knowledge
2. Agents are software programs with sets of beliefs (knowledge about world) desires (goals the agent works to achieve or fulfill), intentions (goals or sub goals agent is currently pursuing), behaviors (actions the agent is able to take) that work
3. secretly and proactively on behalf of a user.

The Semantic Web provides the infrastructure needed to publish and parse terms and term ontology descriptions. concept. It also provides the techniques needed to reason and solve these concepts. And the mapping between ontology, thus enabling semantic interoperability of Web Services through the identification (and mapping) of semantically similar concepts.

III. THE PROPOSED E-COMMERCE PORTAL ARCHITECTURE

Admin use case:

Use case diagrams can summarize the details of how the system interacts with users (also called Actors).system. Use a special set of symbols and connectors to build. Effective use case diagram Help the team discuss and express. The scene where the system or application interacts with people, Organization or external system. System or application goals that support these entities (referred to as Actors)

User use case:

This administrator example Provides the following situations:

Create an administrator. How existing administrators create and grant permissions for new administrators This scenario involves three administrators. CA single sign-on default administrator (super user) manager administrator Junior administration

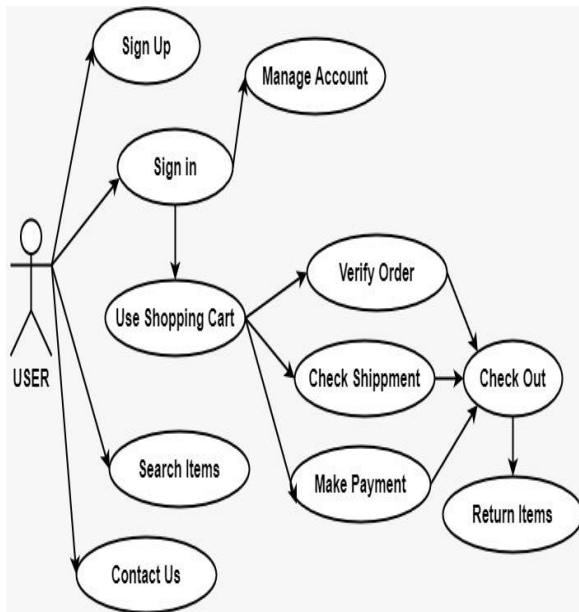


Figure 1. Use Case Diagram (Admin)

IV. CONCLUSION

To model a system, the most important aspect is to capture the dynamic behavior. Dynamic behavior means the behavior of the system when it is running/operating. Only static behavior is not sufficient to model a system rather dynamic behavior is more important than static behavior. In UML, there are five diagrams available to model the dynamic nature and use case diagram is one of them. Now as we have to discuss that the use case diagram is dynamic in nature, there should be some internal or external factors for making the interaction. These internal and external agents are known as actors. Use case diagrams consists of actors, use cases and their relationships. The diagram is used to model the system/subsystem of an application. A single use case diagram captures a particular functionality of a system. Hence to model the entire system, a number of use case diagrams are used.

V. FUTURE SCOPE

The future scope of the project is very broad. In the future, the project will be able to be implemented on the intranet, Project can be updated in near future as and when requirement for the same rise, Because it's very adaptable Expansion With the proposed software of database Space Manager ready and fully functional the client is now able to and hence run the entire work in a much better, accurate and error free manner.

The future scope of the project is:

- Should be added payment gateway
- Can be added inventory management system

- Can be added multiple branches
- Can be added multilingual to this site

REFERENCES

- [1] Albert H., Judd, Rivers, (2006) "Creating a winning E-Business", Wagner Course Technology Thomson Learning, pp. 37-255.
- [2] Alawneh A., and Hattab E, (2007) "E-Business Value Creation: An Exploratory Study, Proceedings of the Seventh International Conference on Electronic Business", Taipei, pp. 181-188.
- [3] Alawneh A., and Hattab E (2009). "International Arab Journal of e-Technology", Vol. 1, No. 2, pp. 1-8
- [4] Amit B. and Steve M. (2007), "How to Plan E-Business Initiatives in Established Companies", Vol. 49, No. 1, pp. 11-22
- [5] Rijayana, I., 2021. Development E-Commerce Applications. Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(8), pp.985-990.
- [6] Hidayati, A. and Nabila, R., 2018, September. E-commerce development using AngularJS framework and RESTful API. In IOP Conference Series: Materials Science and Engineering (Vol. 403, No. 1, p. 012063). IOP Publishing.
- [7] Purnomo, H.D., Saputro, D.A., Somya, R. and Fibriani, C., 2017. The Application of Restful Web Service and JSON for Poultry Farm Monitoring System. JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, VOL 1 NUMBER 1, JUNE 2016, 1(1).
- [8] Waghade, V. and Chaudhari, B.V., 2016. Study of angularJS with other frameworks. International Journal of Research in Computer & Information, 1(2), pp.151-154.
- [9] W. Chansuwath and T. Senivongse, "A model-driven development of web applications using AngularJS framework," 2016 IEEE/ACIS 15th International Conference on Computer and Information Science (ICIS), 2016, pp. 1-6, doi: 10.1109/ICIS.2016.7550838.
- [10] Jadhav, M.A., Sawant, B.R. and Deshmukh, A., 2015. Single page application using angularjs. International Journal of Computer Science and Information Technologies, 6(3), pp.2876-2879.