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DEAL CHECKER A Minor Project Report in partial fulfillment of requirements for the degree of Master in Computer Application Submitted By Chandan Pradhan Regd. No. – 2206151030 Under the Guidance Of Dr. Sucheta Panda Associate Professor Department of Computer Application Veer Surendra Sai University of Technology, Burla, Odisha DEPARTMENT OF COMPUTER APPLICATION VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA, ODISHA - 768018, INDIA

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TECHNOLOGY (Formerly, University College of Engineering) SIDHI VIHAR, BURLA –  
768018 ACKNOWLEDGEMENT The enduring pages of the work are the cumulative  
sequence of extensive guidance and arduous work. I wish to acknowledge and express my  
personal gratitude to all those whom this work could no have been reality. First of all, I  
express my heartiest devotion to “Almighty God” for his graceful blessings at every step  
without which nothing could have been reality. I feel very delighted to get this rare  
opportunity to show my profound senses of reverences and indebtedness to my esteemed  
guide Dr. Sucheta Panda (Project Coordinator) and Dr. Satyabrata Das (HOD CA) for their  
keen and sustained interest, valuable advice, throughout the course of which led my new  
technology analysis, to a successful completion. For this kind act of consideration, I  
beholden to them in special manner and no one can fully convey my feelings of respect and  
regard for them. I can’t express my thanks in words for my parents who given me this  
opportunity and family members for their great support and love. Last but not least I would  
like to thank those who have directly or indirectly helped and co-operated in accomplishing  
this report. Chandan Pradhan

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Abstract Price comparison sites are designed to compare the price of goods and services from a range of providers, which will help consumers in making decision to choose products that will save their money through online. Considering the customers' busy lifestyle especially those who are living in the city area, most of the consumers prefer to buy their needs through the internet because it save their time. Besides, consumers always go for the cheaper price in purchasing products therefore by using price comparison website, customers don't have to travel from shop to shop only to survey the price offered by different shops for the same product. They can just check it from the price comparison website itself and decide where they should buy the products they need. This project, named as PriceWar.com is the place where shoppers could find the great deals on the home groceries products. The best deals will be clearly highlighted. Even though not all consumers are buying online, but it is one of the ways to help consumers increase their price awareness. Consumers have the right to know whether the price they are seeing in the shops are good deals as it is claimed or not. Thus it is an advantage for the consumers who are always aware about the current price of a certain product so that they are not cheated by the big words advertised by the shops. The website also beneficial to

the sellers/retailers as they will be able to advertise their products and promote their shops at the same time. Unlike the giant supermarkets that have their own website, most of the owners of small groceries shop do not have the skills to get their own website or blog to promote their business online. Thus, with this website, the chances are open for the interested groceries shop owners to advertise their products in the website. They just need to provide the price information regularly and the admin of the website will do the rest. Page 0

CHAPTER 1 Introduction 1.1. Background Of Study A price comparison website acts as a platform or medium between the consumers and the sellers. It allows consumers to see different lists of prices for the product chosen by user and it helps consumers to make an informed decision about which to choose in order to save money. It also acts as a tool to help consumers increase their price consciousness so that they will not feel cheated by the advertisement from the retailers that claimed they are offering the cheapest price but the reality happened to be otherwise. Unlike other comparison sites, <https://deal-checker.vercel.app/> (the name of this project) will focus on providing list of prices of home groceries products such as onion, chilies, garlic, potatoes, fish, chicken and others. Due to vast increase of people who are online, <https://deal-checker.vercel.app/> will be a great help for those who are stuck with loads of work in the office and don't have much time to check on the current price of the home groceries products. <sup>4</sup> According to research of Social, Digital and Mobile in Malaysia made by We Are Social, the internet penetration for Malaysia is 59% and the average hours Malaysian netizens spend using the internet every week is 19.8 hours. Meanwhile 21% of Malaysian internet users access the web via mobile devices which means they have internet accessibility anywhere with their smart phones. 77% of Malaysian web users have shared their thoughts on a brand via social media during this research was made in the year 2011. The research shows that how Malaysian people are attached to the internet. Page 1



Figure 1: Percentage of Malaysian Population Online (Source: Malaysiacrunch.com, 2011) Based on the figure above, the statistic is made according to the year 2011, it has clearly shown that more than half <sup>32</sup> of the population in Malaysia is using internet every day and it is believed that the number is increasing from time to time. A survey has been made by Nielsen towards internet users and the results shows that most of the Malaysian internet users spend 20 hours a week online in average. 53% of the respondents go online everyday meanwhile 35% go online on weekly basis. 63% use internet for information, and 94%, which is majority of the internet users, use internet as shopping guideline. Based on the research made by FRS (Financial Reporting Standards) in the year 2009, it clearly shows that the usage of price comparison website divided into two types of users; those who really searching for the best deal possible and the other one is consumers that are simply looking for a convenient and time saving way to get a quote. The 'Modern <sup>5</sup> Sophisticate' are serial switchers and more likely to use several comparison websites for research meanwhile the 'Convenience Seekers' are more likely to be loyal to single price comparison site. More people are using price comparison website as their reference to check on the price compared to the users that trusting the website. Please refer the figure below. Percentage of Population Online People who do not online People who online 38% 62% Page 2

Figure 2: More People Are Likely to Use Comparison Sites than Trust Them (Source: FRS – February, 2009) As what has been mention earlier, a price comparison <sup>7</sup> website act as the medium between customers and retailers so customers can make purchase online for certain retailers that provide such services. On the other words, the price comparison website also <sup>26</sup> has the role to promote the <sup>7</sup> retailer/shop/hypermarket/supermarket to the customers. The pressures on time and money especially in the current economic situation where the living cost increases and there's only little time to do some shopping for household, <sup>7</sup> a price comparison website like <https://dealchecker.vercel.app/> will absolutely become a great help towards

consumers. Besides, users nowadays are very comfortable with the internet that it has grown a wider variety of applications from networking and now provide various references for the users.

### 1.2. Problem Statement

Compared to other countries, in Malaysia there is only few prices comparison website that is accessible until now. Most of them is comparing price for hotel's rate, holiday's package, mobile phone and others. It is important for a web comparison website to return results with the low prices as what the <sup>18</sup> customers want but accurate results also important so that customers can get what they really want. It also depends on how regular the database is being updated otherwise customers will be confused when they compared it from another site. Page 3

Most of the working people do not have time to do shopping for their home groceries. As consumers, they have the right to choose which shop is offering the best price for a certain product that they are interested in. However, to check on price offered by each shop is time consuming and due to limited time that they have, they are not able to compare the prices and end up buying certain product with higher price. Typical mindset of customers nowadays, they see Tesco as the providers for the cheapest product but the reality is, not every product in Tesco offered at the cheapest price. Sometimes, the smaller shop in the neighborhood offers cheaper price. The <sup>3</sup> other problem that occurs to the retailers/seller side, in order for them to promote their products or if there is any promotion going on, usually they will print out pamphlet to distribute it to the customers. It is costly as they have to produce it in lots of copies and if there is any error in the printed pamphlet, they have to make correction on every copy, which is time consuming, so that customers will not confuse with the pricing. Plus, <sup>3</sup> the catalogue or pamphlets given to customers usually end up being thrown away carelessly and it led to pollution. Therefore, by having catalogue that published online the sellers will be able to save cost and support the green campaign too. Moreover, for the sellers/retailers who are operating with the small shops, they usually don't have the knowledge to blogging and website to promote their products online. As compared to the big supermarket like Giant or Tesco that have their own website, owners

of the small shops found it is hard for them to reach out their customers. They do have the basic knowledge about internet but they do not have the skills to have blog/website for their shops. So, this project will be beneficial for them to get people know about them and their products. 1.3. Objectives The objective of this project is to develop **7 a price comparison website** that will have the following functions: 1. To provide customers with a list of price comparison and highlight the Page 4

Internet Users vs Buying Online 20 15 10 2008 2009 2010 2011 2012 cheapest price. 2. To increase price consciousness among consumers. 3. To ensure that the price database is updated regularly so that customers will be able to get accurate results. 4. To provide service for **10 users to find the** product's price 1.4. Scope Of Study The scope of study for this <https://deal-checker.vercel.app/> project will be all internet users and it is narrowed down to those who are using internet for business-related purpose, especially in Malaysia. Humanwebsite.com has provided a statistic for the Malaysian online shopping based on the number of internet users and the internet buyers. Refer to the figure below for the comparison of internet users and the internet buyers. 2008 2009 2010 2011 2012 Internet Users 16 16.2 17.5 18.3 18.9 Buying Online 7.4 8.1 8.9 9.7 10.5 Figure 3: Statistics on Malaysian Online Shopping (Source: Malaysiacrunch.com, 2012) This statistic has been published in the local Chinese newspaper, Oriental Daily News. Based on the statistic, it shows that the number of internet users increasing every year as well as the internet buyer which means every single of them is the potential visitor Million Page 5

of <https://deal-checker.vercel.app/>. For **7 a price comparison website** like <https://dealchecker.vercel.app/>, it only provides with the useful information to the users and

it is up to the users to decide which supermarket or shop they should go. With internet, a price comparison website is accessible anytime and anywhere. The observation made by the author has resulted that people usually go online when they are on the way back from work especially those who are using public transport. Therefore, visiting <https://deal-checker.vercel.app/> can be one of their choices to fill up their free time. They also can share the link of the promotion through social website such as Facebook and Twitter which has the 90% of the Malaysian internet users according to the research made by, We Are Social in December 2011. Meanwhile for the sellers/retailers, the target will be focusing more on the business that operating at the shop lot. Based on the interview done by the author with some of the owners of the shops, they admit that it will be useful for them if there is service for them to advertise their products on the web for free because they don't have much time and insufficient skills to maintain website/blog on their own. 1.5.

Significance Of The Project <https://deal-checker.vercel.app/> 13 act as tool to assist consumers make informed decision before purchasing product by providing the list of prices offered by different retailers/supermarket. Users will use this website as their reference to check on the price of groceries products sold and promote if there is any promotion going on. It also able to help sellers to promote new product by sending emails to the subscribers about it. Instead of taking hours and energy to go to each shop just want to check on the price, <https://deal-checker.vercel.app/> offered better solution by getting all the price and users just need to go online and choose which product they want to know and the list of retailers and the price offered will be shown. Users can check it from anywhere, no matter at home or at work, or even in the train while going back from work, <https://dealchecker.vercel.app/> is accessible anytime as long as there is internet connection. Page 6

Online Consumer by Age Group In millions					51 or above	6.4	46-50	
10.6	41-45	8.8	36-40	16.5				
31-35	18	26-30	19	21-25	14.5	21 or below	4.9	Figure

4: Online Consumer by Age Group (Source: Malaysiacrunch.com, 2012) Based on statistics from Malaysia Crunch's website, most of the consumers who online are contributed by the working adults in the age group of 21 to 40. Meanwhile 60% of online consumers are working as managers or executives and about 13% are students. It shows that most of the working people spend time on the net so a website that provides useful information to help them shopping. A study was conducted by comScore, co-sponsored by Merchandise Commerce and iProspect, resulted as the following; • Shoppers usually consulted about four websites for price and feature information (on average) • Amongst all consumers who are purchasing products offline, roughly twothirds <sup>19</sup> begin their searches online, using a combination of search website and the retailer's own web site. • 70% of shoppers make purchases within one month of their searching from Page 7

the internet and one-third of the shoppers buy within one week of starting their searches. It is clearly shown that online search has clearly become the norm nowadays and most of the customers out there has become more educated and knows how to use the internet. Therefore, it is significance to develop a system that provides information needed for consumers shopping. The development of [Https://dealchecker.vercel.app/](https://dealchecker.vercel.app/) will help consumers to increase their price consciousness, help them making informed decision to save money as well as help the sellers to advertise for free. <sup>4</sup> 1.6. Feasibility

Study Feasibility study is an analysis of the viability idea. The studies provide thorough analysis of the system. The outcome of the feasibility studies will indicate whether can proceed or not to develop the system.

1.6.1 Technical Feasibility The tools that will use for this system are: • NEXT js, Axios, Cheerio • Another language such as tailwind 1.6.2

Operational Feasibility This feasibility study mainly concerned whether this system will be used if it is developed and implemented. If this system meets the requirements and needs of customers and sellers, it can be proposed to them to be used in the future. Page 8

CHAPTER 2 Technologies Used 2.1. Next.js for Dynamic UI: Description: Next.js, a

React framework, is chosen for its ability to create dynamic and server-rendered web applications. Features like server-side rendering (SSR) and efficient client-side routing contribute to a seamless user experience.

### 2.1.1. Why Next.js:

- **React Framework:** Next.js is a React framework that simplifies the development of React applications by providing a set of conventions and tools.
- **Server-Side Rendering (SSR):** Next.js supports SSR out of the box, enabling faster page loads by rendering pages on the server and sending the fully rendered page to the client.
- **Static Site Generation (SSG):** It also supports SSG, allowing you to pre-render pages at build time, resulting in highly optimized static assets that can be served by a CDN.
- **Automatic Code Splitting:** Next.js automatically splits code into small, optimized chunks, which are loaded only when needed. This helps reduce initial loading times and improves performance.
- **Routing System:** Next.js has a powerful and intuitive routing system that simplifies the creation of dynamic routes and nested routing structures.
- **Zero Configuration:** Getting started with Next.js is easy, thanks to its zero-configuration setup. You can start building a React application without the need for complex configurations.
- **Customizable Head and Document:** Next.js provides a customizable







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"^1.6.0", "cheerio": "^1.0.0-rc.12", "next": "14.0.0", "react": "^18", "react-dom": "^18", "react-icons": "^4.11.0" },  
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