

Rabona: A Mobile Application for Online Auction System

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ABSTRACT

The name of the mobile application that will be used to conduct online auctions is RABONA. Nowadays, a lot of people like to shop for and purchase goods online from the convenience of their homes, which has made online retail websites rather popular. Nevertheless, because of these, several websites or app-based businesses have appeared online. Amazon is another well-known website used for online shopping, in addition to websites like eBay. Auctions have become very popular in recent years. Anybody can take part in an auction. In the past, only antique items which sold for very high prices were eligible for auctions. Only participants with significant financial resources were allowed in the auction. But they also host auctions for a range of items, and anybody with the means to participate is welcome. In the past, everyone who wanted to put a bid had to go to the location where the auction would take place. Recently, a few websites have been created that let users conduct these auctions online while seated anywhere. However, this project's objective is to create an application for this auction so that both the buyer and the seller can participate in it using a smartphone. There is no longer a need for them to look for auction websites. To put bids, they only need to use the program. The waterfall approach will be employed in this project after analyzing and contrasting four different types of methodology. This project will include several planning tasks to construct this application. The project will also include the implementation of the application. The application will be made with Android Studio.

Introduction

An online actuation system is called RABONA. The program is a finished item that performs some functions. It's meant to accomplish something. Typically, the objective is determined by what the market wants or needs. In this case, the market consists of vendors, buyers, and the people who will use the products. As developers, our goal is to create mobile applications that accomplish a goal while also being accessible to a broad user base. It cannot be assumed that someone is accustomed to web browsing. As a result, it must provide a mobile application with an attractive and self-explanatory user interface. There are several online auction sites like eBay and Listia, but security measures are not being used. Consequently, the main factor for user trust is necessary.

Literature Review

According to Alijaf's research, the Latin word "AUCUS," which means "I augment," is the source of the English word "auction." This method of acquiring and disposing of commodities via bids goes to the highest bidder. Typically, bidders who are competing for the same auction item will raise their prices to outbid one another. Up until the highest offer is made, prices continue to rise. There are many distinct sorts of auctions, and each form has its own guidelines and requirements. the process of auctioning off the goods and selling

them to whoever offers the greatest price. Depending on the availability of the products, a public auction may get a variety of bids, which might lead to a surprise high price for an item. Either at auction houses or other specified sites, the auction sales take place. When participants at auction houses wish to sell their goods at an auction, they list them for sale. Furthermore, it takes time to travel to the auction sites where buyers are required to be present. The seller in auction sales pays the auctioneer a certain amount for conducting the auction by accepting bids and declaring the items being sold.

This article demonstrates how the design of the auction system allows for the performance of many auction kinds. A new method for online auctions has been developed. In the first section, they discuss the initial price bidding. This style of auction differs from English auctions in that purchasers cannot see one another's offers. It will be kept a secret up until the end of the auction. At contrast, at an English auction, all bidders may see and view the bids. Moving on to the second section, they talk about second price bidding, sometimes referred to as "Vickery". It functions in a way that is quite similar to a first bid auction. It functions in a way that is quite similar to a first bid auction. The only difference between this type of auction and first bid auctions is that the winner pays the second highest bid rather than his own. In a Dutch auction method, the starting bid price is high and progressively decreases to a price that the bidder thinks reasonable. According to the contrary of the English auction, the price is rising. The Dutch auction typically applies the uniform-price approach in a single unit auction. Bidders are hesitant to place bids because the majority of items up for Dutch auction online sell for more money than they were initially offered. The buyer or the auctioneer makes the English auction bid announcements. It is the most common type of online auction since it is simpler to use than other options. The structure of the bid auction is changing. The bids are visible to everyone. The bidder who puts out the highest price is the winner. The English auction that is held online is popular. Since it follows a simple process, people are familiar with it. Online English auctions have become more popular since traditional English auctions demand that bidders be present in person.

Methodology

Methodology is an examination of the procedures used in any application or research field. It is a meticulous, theoretical procedure that thoroughly considers all the approaches and concepts related to the knowledge issue. This method carefully assesses the available data and information on the problem at hand before doing an analysis and developing a solution. The user is completely aware of the procedure since everything is described and explained in detail. The collection of guidelines or regulations that steers the development team toward the effective completion of the project is known as a software development methodology or process, sometimes referred to as the software development lifecycle.

For the development of this application, the waterfall technique will be used based on my expertise and the comparative study that is done above. For several reasons, this technique was chosen. It's fairly simple to employ the waterfall process. The waterfall process requires that each phase be completed before moving on to the next. The waterfall technique may be used after the requirements are precise and established. Since every requirement is clear, developing the application won't be complicated. It has been demonstrated that using this strategy is advantageous by doing a thorough study of the technology. This application's project is short and only uses a tiny cast. The most effective technique to apply a methodology when there is little to no risk.

It is feasible to follow advancements relying on later phases thanks to the waterfall model, a sequential process paradigm. The development phase's several project phases are broken down into linear process steps using the waterfall paradigm. Unlike iterative models, every step is only executed once. Each step that comes after it is predicated on the findings of the phases that came before it. In the field of software development, the waterfall paradigm is particularly well-liked.

Winston W. Royce, a computer scientist, is credited with creating the traditional waterfall model. Royce, however, is not the author. He severely evaluates linear process approaches in his 1970 article "Managing the Development of Large Software Systems," in comparison. Royce proposes an alternative: iterative-incremental paradigms, where each phase progressively builds on the outcomes of the one before it.

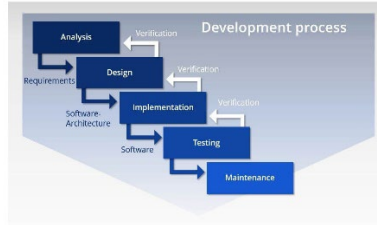


Figure 1. Waterfall methodology

Feasibility Study

A feasibility study's objective is to assess and determine the benefits and drawbacks of any proposed or current project considering potential hazards and lucrative business opportunities. The needed values must be considered for any necessary expenses for any of the two requirements to be judged practical.

Commercial Feasibility Study

Every aspect of the project, including the legal, technical, scheduling, and financial components, is examined and taken into account by the feasibility study. You may analyze the benefits and drawbacks of implementing the project before investing a lot of time and money into it. The feasibility project manager aids in this process.

Legal Feasibility Study

A legal feasibility analysis decides if a plan satisfies ethical and legal requirements. As a result, before the project can begin, all requirements must be met, including those for a business license, a copyright license, certificates, health and safety guidelines, tax identification numbers, commercial insurance, etc. There are only a few goals listed: Verify the project's legal viability. This covers issues like privacy, accountability, and computer-related worries, all of which need to be taken into account.

Economic Feasibility Study

My proposal qualifies as an economic feasibility project since it includes both costs and benefits. It also strengthens the project's credibility and makes it much easier to justify the benefits of the educational goals it pursues.

Qty	Items	Price (OMR)
1	Laptop	170/- RO
1	Graphic Card	50/-

1	RAM	20/-
1	Android Phone	8/-
2	OTG	10/-
	Total	263/-

Figure 2. Analyzing cost for hardware.

Software	QTY	Cost
MS word	1	Free
MS Studio	1	Free
Android Studio	1	Free
Microsoft Office	1	free

Figure3. Analyzing Cost for Hardware

Diagram

In DFD level 0 diagram. It has one process called the Online auction system and three entity those are the admin, user as a seller and user as a buyer. The admin is allowed add or delete any type of product he or she wants for the auction. The admin can log in to the system and can make any changes required or any update required. The user as a seller can provide the information of the items, they want to sell also with their account details and the information regarding auction. The seller can receive the outcome of the auction from the application and get the confirmation of the sale. On the other hand, the entity User as a buyer can sign up as a new user and can select the item they want to bid for. And they will receive the outcome of the auction from the application.

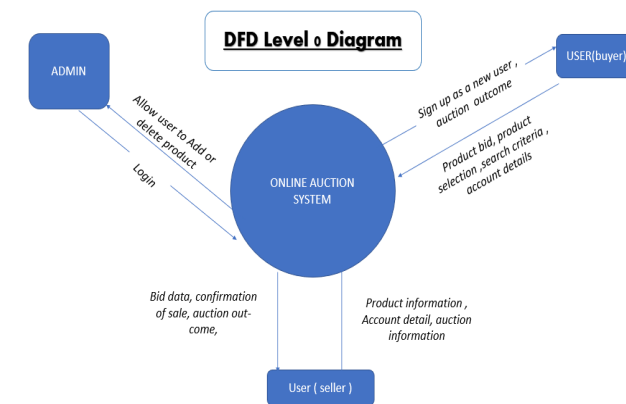


Figure4. DFD Level 0 diagram

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