DYNAMIC COST ESTIMATION FOR CONSTRUCTION SITE USING ANDROID APP

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Abstract— *An accurate cost estimating is really critical for the success of any construction. Cost estimating by hand is time consuming. This application is to provide information of cost estimation for a building using functional elements and integrated industries dynamically in it . It considers sample parameters like floor measurements, no of rooms, areas and selecting the quality of materials needed. The application calculates the cost of construction materials and provides the total amount information of various industries which are dynamic input given in Admin panel. This application enables the user to start the estimate by choosing the land layout from hard copy or from image of land. Thus, an Android app is made to support the construction industry to access well in advance the cost estimation of the total project with various qualities of construction products available in industry.*

Keywords— *Dynamic , functional Elements, Admin panal*

Introduction

Estimates of materials, time, and costs provide information to some construction decisions in a similar way that financial accounting information provides to others [1]. Financial statements are required to comply with generally accepted accounting principles, described in accounting literature, to ensure information is accurate and useful to decisions. This paper suggests general estimating principles that similarly guide good estimating practice [2]. An estimate must be an accurate reflection of reality. An estimate should show only the level of detail that is relevant to decisions. Completeness requires that it include all items yet add nothing extra [3].

Documentation must be in a form that can be understood, checked, verified, and corrected. Attention must be given to the distinction between direct and indirect costs and between variable and fixed costs [4]. Contingency covers possible or unforeseen occurrences, both the expected value of possible identified events and the expectation that events will occur that cannot be identified in advance. While choosing the material quality the user can select the quality of material they need. The cost estimating information is provided based on choices low, medium and high quality [5]. Making calculations in the report window the entire information of materials is displayed. The user can also share the information to other people.

2. Existing System:

Present industries app has provided various features like purchasing industrial tools in online, provides industry online support app where you can have access over 3,00,000 documents about industry products and some of the industries app allows the user to buy a home online. Various industries app has been built just to help users to select the products they need to buy. Most of the existing application of this project just provided the details of information of various industries across the environment. The previous integrated system was used for the purpose of business not for the purpose of industrial information. The previous system was simple with just providing the location, terms and goals of the industry. Earlier the calculations for purchasing a material for building are manually calculated. That seemed to be really a mess in today's human race. Most of the industries app even exists having information about industry's manufacturers, suppliers, wholesalers, exporters and importers.

3. Proposed System:

The proposed system provides lot of facility to the user to know information of the industrial cost estimation of building which was given input as design input in the admin panel. In proposed system the user can specify the number of floors to be built, no of rooms and square feet of the building.

This application allows the user to select the quality of material they needed. The choice is made between low, medium and high. On selecting the quality of material the total cost of the building materials like bricks, steel, cement, plywood, paint is calculated and total cost information is provided from various industry. The application helps the user by providing option of 'sharing' the information in other platforms like WhatsApp, Gmail, share it etc.

4. Methodology:

The Input design is mainly concerned with an input screen in the software. In the input design, user-oriented inputs are converted into a computer based system format. User can also select desired options from the menu, provides all possible facilities. Also the important input format is designed in such a way that accidental errors are avoided. The user has to input only just the minimum data required, the also helps in

avoiding the errors that the users may make. Accurate designing of the input format is very important in developing efficient software. The input screen of this application consists of choose an image from gallery or take a new picture, materials form and choose material quality.

The major inputs to the form are:

• Choose an image from gallery or take a new picture.
• Number of floors and number of rooms
• Square feet.
• Choose material quality – Low quality, Medium quality, high quality.

Outputs from computer systems are required primarily to communicate the results of processing to users. The outputs are needed to be generated as a hard copy and as well as queries to be viewed on the screen. Keeping in view these outputs, the format of the output is taken from the outputs, which are currently being obtained after a processing. The main objective of output design is to interrupt and communicate the result of the computer part of the system to user in a form, which they meet their requirements and also to communication the output specification to the programmers in a way, this is unambiguous, comprehensive.

This application gets an input from user for number of floors, number of rooms and square feet and when the user selects for quality of material they need, application initiates the calculation, perform, finalize and generates the report to user.

The app makes the computation based on the inputs given by the user and fabricate the information of cost of materials like:

• Bricks and crushed stone
• Steel
• Cement
• Plywood
• Paint
• Wire cable

5. Experimental Result:

Result of our proposed work is shown here:
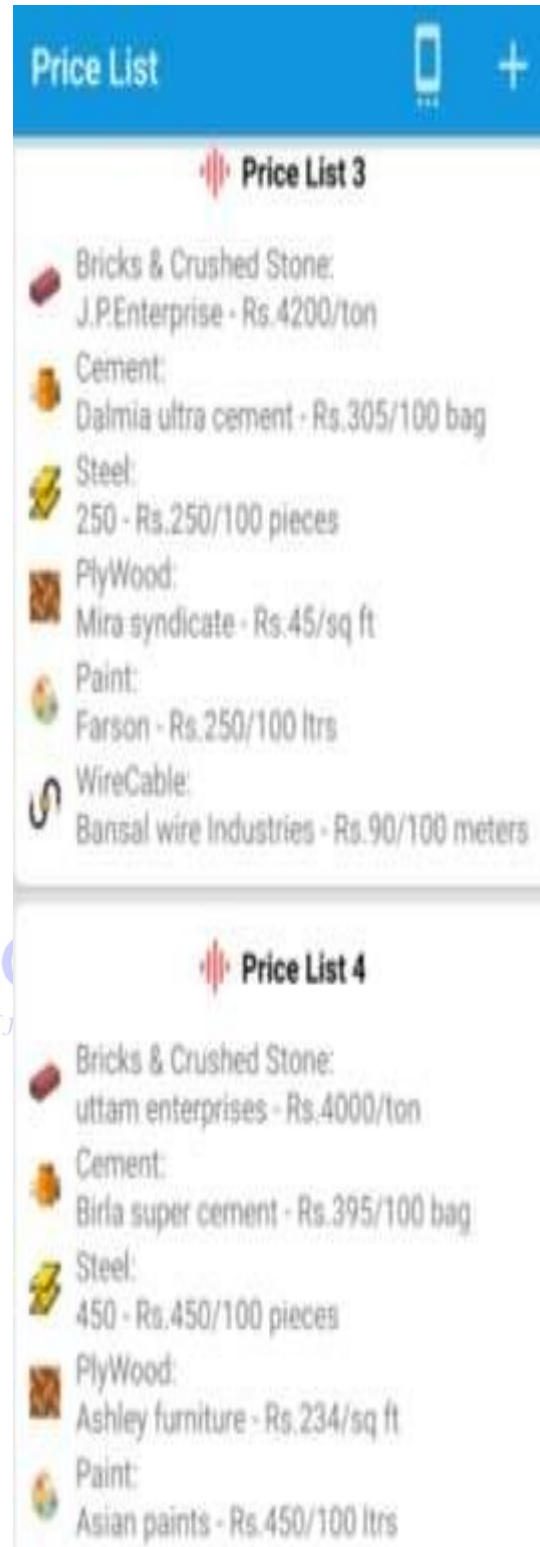
6. Conclusion:

The Integrated industries app that provides information and support to multiple industries (Department of industrial policy and promotion) is a great improvement over the existing system. The Integrated industries app that provides information and support to

multiple industries (Department of industrial policy and promotion) is thoroughly checked and tested with dummy data and thus it is checked for reliability. The advantages are in the proposed app are as follows

• Accessibility-allows any users to access

• Doesn't require any internet access

• Doesn't require signup for access

• Allows the user to enter their own input for Number of floors, number of rooms and square feet.

• Allows the user to select the quality of material needed.

• Provides the entire cost estimation of materials needed for building.

Capabilities are easily maintained database for Users and engineers. The database can be accessed at any time the management needs.

7. SCOPE FOR FUTURE ENHANCEMENT

In future following enhancements can be made:

• The performance of the system should be evaluated to determine whether system achieves the results that are expected and whether the predicted benefits of the system are realized.

• There are also possibilities for enhancing and further developing the application with customized reports according to the latest information and needs of the company.

• The rates of the materials should be updated periodically for various qualities of materials.

• The app can also be updated with new industry information for the users to choose.

• The app can also make a possibility of purchasing a material after viewing the total cost.

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