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SMART SCHOLARSHIP WEB APPLICATION

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ABSTRACT

The Smart Scholarship web application is a revolutionary platform that streamlines the scholarship application process for students. With an intuitive interface and advanced algorithms, Smart Scholarship matches students with the most suitable scholarships based on their qualifications and interests. The application also provides resources and guidance to help students navigate the complex scholarship landscape and increase their chances of success. By leveraging the power of technology and data, Smart Scholarship empowers students to achieve their academic goals and unlock their full potential. The Smart Scholarship web application streamlines the scholarship application process for students. With an intuitive interface and advanced algorithms, Smart Scholarship matches students with the most suitable scholarships based on their qualifications and interests. The application also provides resources and guidance to help students navigate the complex scholarship landscape and increase their chances of success.

INTRODUCTION

This project outlines the creation of a new software system for a pilot project on scholarship applications. This new system's key features are effective processing and multi-user interactivity inside a highly secure networking environment. Along with introducing more functions and approaches for resolving the previously described problems, the document also discusses some of the difficulties faced during each stage of the development life cycle. Numerous scholarships are available for the students to apply to. They must clearly state in their scholarship applications how they meet the requirements and are eligible for the scholarships they are applying for. When a student applies for a

scholarship, they must meet a number of requirements. Additionally, some grants could stipulate that students choose a certain major or take a certain set of courses. This project keeps track of scholarship information, processes applications, and ultimately awards or rejects scholarship requests.

EXISTING SYSTEM:

The existing systems which deliver the weather information to the user, adopt several innovative strategies has been established.Developers are enforced to either construct the same application numerous times for various OS (operating systems) or accept a low-quality similar solution that trades native speed and accuracy for portability. Flutter is an open- source SDK for developing high- performance and more reliable mobile applications for operating systems like iOS and Android. Existing systems are compatible only with certain platforms. There are several strategies which work as similar as this project but using Flutter technology for the better performance is mainly focused here.

Drawbacks

Current weather applications will work only on the specified platform. Requires different code base for different platforms Not that much attractive UI are designed in the existing systems High response Time Inaccurate weather updates High usage of storage and data Other Methods of weather forecasting

Weather forecasting to exist effectively; there must be methods on which it is done. These methods areas follows:

1. Persistence forecasting

Persistence forecasting is the easiest method of forecasting which assumes a continuation of the present. It relies upon today's conditions to forecast the weather when it is steady state, such as during the summer season in the tropics. This method of forecasting strongly depends upon the presence of a stagnant weather pattern. It can be useful in both short- range forecasts and long range forecasts. Persistence forecasts are used by local forecasters in determining such events as the time of the arrival of a thunderstorm that is moving toward their region. Persistence forecasts do not account for changes that might occur in the intensity or in the path of a weather system, and they do not predict the formation. Because of these limitations and the rapidity with which weathersystem change in most geographical regions, persistence forecasts break down after twelvehours, or a day at most.

2. Climatology forecasting

Whereas persistence forecasting is most accurate over short periods (before factors for change have had time to operate), the best estimate of the weather a long time ahead is the average value of past measurements there at that time of day and year. Climatology forecast relies on the observation that weather for a particular day at a location does not change much from one year to the next. As a result, a longterm average of weather on a certain day or month should be a good guess as the weatherfor that day or month.

3. Looking at the sky

Along with pressure tendency, use of the sky condition is one of more important weather parameters that can be used to forecast weather in mountainous areas. Thickening of cloud cover or the invasion of a higher cloud deck is indicative of rain in the near future. Morning fog portends fair conditions, as rainy conditions are preceded by wind or clouds, which prevent fog formation. The approach of a line of thunderstorm could indicate the approach of a cold front. Cloud free skies are indicative of fair weather for the near future. The use of sky cover in weather prediction has led to various weather lore over the centuries.

4. Use of a barometer

Barometric pressure and the pressure tendency (xthe change of pressure over time) has been used in forecasting since the late 19th century. The larger the change in pressure, especially, if more than 2.54mmHg, the larger the change in weather can be expected. If the pressure drop is rapid, a low-pressure system is approaching, and there is a greater chance of rain. Rapid pressure rises are associated with improving weather conditions, such as clearing skies.

5. Nowcasting

The forecasting of the weather within the next six hours is often referred to as nowcasting. In this time range, it is possible to forecast smaller features such as individual showers and thunderstorms with reasonable accuracy, as well as other features too small to be resolved by a computer model.A human given the latest radar, satellite and observational data will be able to make a better analysis of the small scale features present and so will be able to make a more accurate forecast for the following few hours. Severe weather is typically short-lived (less than two hours) and, due to its mesoscale character (less than one hundred kilometers), it affects local/regional areas necessitating site-specific forecasts. Included in this category are thunderstorms, gust fronts, tornadoes, high winds especially along coasts, over lakes and mountains, heavy snow and freezing precipitation.

6. Use of Forecasting Models

In the past, the human forecasters were responsible for generating the entire weather forecast based upon available observation. Today, human input is generally confined to choosing a model based on various parameters, such as model biases and performance. Using a consensus of forecast models, as well as ensemble members of the various models, can help reduce forecast error. However, regardless how small the average error becomes with any individual system, large errors within any particular piece of guidance are still possible on any given model run. Humans can use knowledge of local effects, which may be too small in size to be resolved by the model to add information to the forecast.

7. Analogue Forecasting

The analogue method is a complex way of making a forecast, requiring the forecaster to remember a previous weather event which is expected to be mimicked by an upcoming event. The analogue forecaster's task is to locate the date in history when the weather is a perfect match, or analogue, to today's

weather. Then the forecast for tomorrow is simple – whatever happened in the day after the analogue will be the weather for tomorrow. The forecast for the day after tomorrow is whatever happened in the second day after the analogue, and so forth

8. Ensemble Forecasting

A forecast model will predict weather features evolving realistically into the distant future, the errors in a forecast will inevitably grow with time due to the chaotic nature of the atmosphere and the inexactness of the initial observations. The detail that can be given in a forecast therefore decreases with time as these errors increase. These become a point when the errors are so large that the forecast has no correlation with the actual state of the atmosphere.

PROPOSED SYSTEM:

Android application, some exciting features has been added such as managing and handling exception error directly by the system which will be not visible by the user to make it bug free.This application allows better UI interaction to the user. Better designing tools and make the interface more attractive.

This system providethe user to access the Open weather map API for the efficient knowledge of the real time weather update.

User will be able to know about the current weather(temperature, wind speed, humidity), hourly update and the weather update for the next 7 days.No user credentials are used by the app apart from the location. The user can allow the access for location only while using the app.

FEASIBILITY STUDY

The main aim of the feasibility study activity is to determine whether it would be financially and technically feasible to develop the product. The feasibility study activity involves analysis of the problem and collection of all relevant information relating to the product such as the different data items which would be input to the system the processing required to be carried out of these data, the output data required to be carried out of these data, the output data required to be produced by the system, as well as various constraints on the behaviourof the system.

In our software we would find the actual requirements of this software and add that features Such as monitoring, process scanning etc. For adding this feature we will like take different ways to solving this last find the best way to complete this features.

Feasibility studies aim to objectively and rationally uncover the strengths and weakness of the existing business or proposed venture, opportunities and threats as presented by the environment, the resources required to carry through, and ultimately the prospects for success.

The feasibility study to be conductedfor this project involves.

1.Technical Feasibility 2.Operational Feasibility 3.Economic Feasibility

Technical Feasibility

The assessment is based on an outline design of system requirements in terms of Input, Processes, Output, Fields, Programs, and Procedures. Our system quantified in terms of volumes of data, trends, frequency of updating, etc. in order to estimate whether

the new system will perform adequately or not. Technological feasibility is carried out to determine whether the company has the capability, in terms of software, hardware, personnel and expertise, to handle the completion of the project when writing a feasibility report, the following should be taken to consideration. A brief description of the business the part of the business being looked towards the human and economic factors are the possible solutions to the problems. The system is technically feasible.

Operational Feasibility

Operational analysis is the most frequently used method for evaluating the effectiveness for our system. More commonly known as cost/benefit analysis, the procedure is to determinethe benefits and saving that are expected from a candidate system andcompare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system. An entrepreneur must accurately weigh the cost versus benefits before taking an action. Cost-based study: It is important to identifycost and benefit factors, which can be categorized as follows:

1. **Development costs**.
2. **Operating costs**:

This is an analysis of the costs to be incurred in the system and benefits derivable out of the system. Time- based study: This is an analysis of the time required to achieve a return on investments the future value of a project is also a factor. The system is operationally Feasible

Economic feasibility

To decide whether a project is economically feasible, we have to consider various factors as:

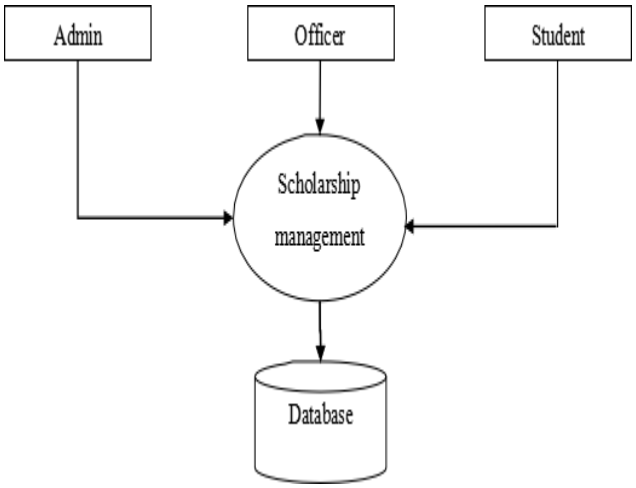
Cost benefit analysis
Long term returns
Maintenance cost

This system is an android applicationIt requires average computing capabilities and access to internet, which are very basic requirements andcan be afforded by any organization hence it doesn't incur additional economic overheads, which renders the system economically feasible.

DATA FLOW DIAGRAM

A two-dimensional diagram explains how data is processed and transferred in a system. The graphical depiction identifies each source of data and how it interacts with the other data sources to reach a common output. Individuals seeking to draft a data flow diagram must identify external inputs and outputs, determine how the inputs and outputs relate to each other, and explain with graphics how these connections relate and what they result in. This type of diagram helps business development and design teams visualize how data is processed and identify or improve certain aspects.

Symbol	Description
	An entity is a source of data or a destination for data.
	A process or task that is performed by the system.
	A data store, is a place where data is held between processes.
→	**A data flow, is a route that data takes between the external entities.**

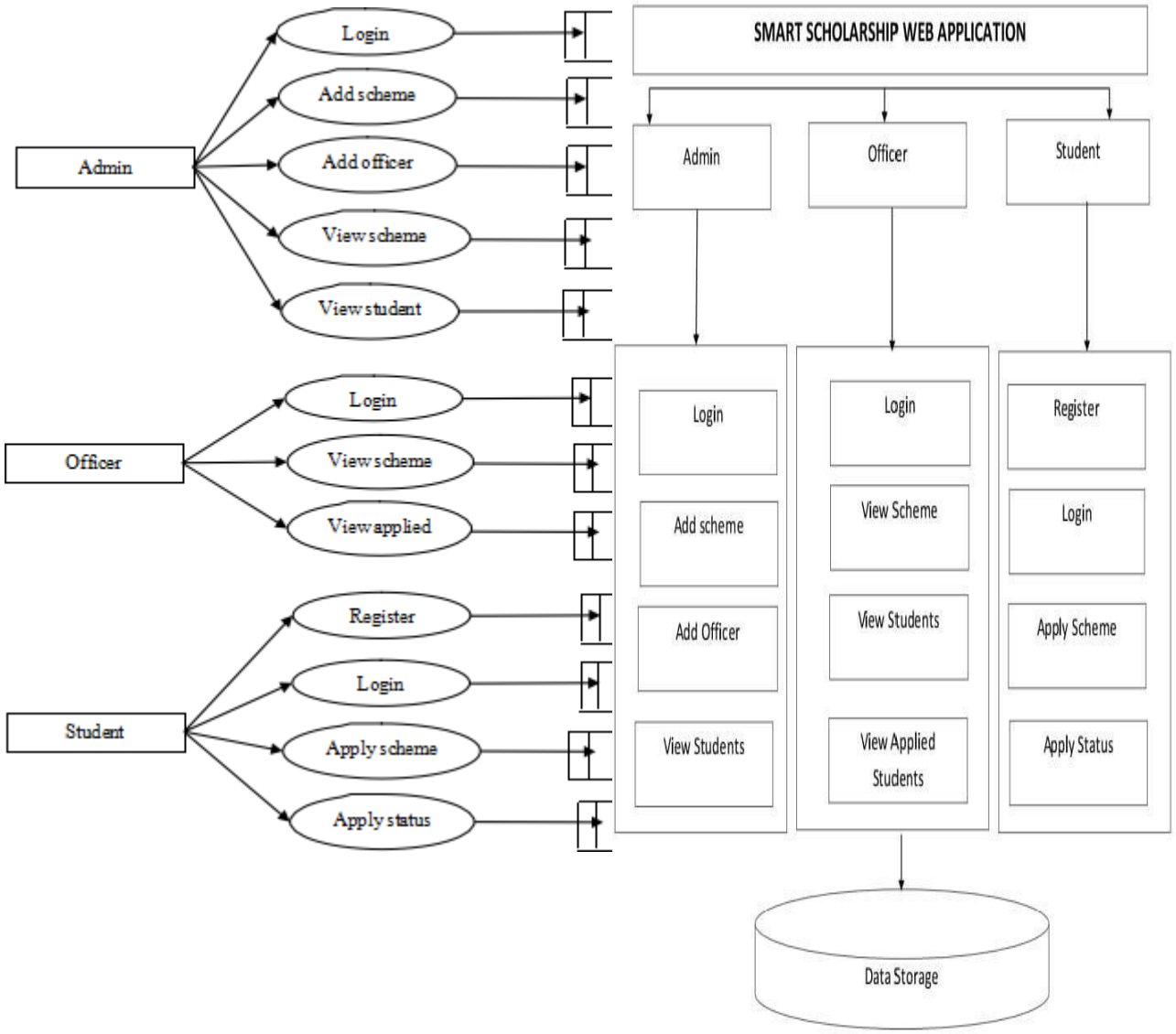


LEVEL 0:DFD Level 0 is also called a Context Diagram. It's a basic overview of the whole system or process being analyzed or modeled. It's designed to be an at-a-glance view, showing the system as a single high-level process, with its relationship to external entities. It should be easily understood by a wide audience, including stakeholders, business analysts, data analysts and developers.

LEVEL 1:

DFD Level 1 provides a more detailed breakout of pieces of the Context Level Diagram. You will highlight the main functions carried out by the system, as you break down the high- level processof the Context Diagram into its sub –

processes. A level 1 data flow diagram(DFD) is more detailed than a level 0 DFD but not as detailed as a level 2 DFD. It breaks down the main processes into sub processes that can then be analyzed and improved on a more intimate level.



ARCHITECTURE DESIGN

Architectural diagram is a visual model of a system, components, and their interactions, with the supporting documentation, It can capture all the essential information of a system's design.

SYSTEM DEVELOPMENT

This project was created for a college's financial aid office. The department in charge of scholarships administers the awards given by the government to various college students. It computerizes all of the scholarship department's operations, including adding schemes, submitting forms, requesting schemes, and accepting requests. With this effort, we hope to lessen the manual system's excessive paperwork burden. Reports of various types are produced. Currently, the

college keeps manual records registers, files, etc. to save the information about the students' scholarships. To be awarded new scholarships requires a lot of paperwork. We are creating this Scholarship Information System to address all of these issues. This application offers users the widest rangeof services.

MODULE SPECIFICATION

- Admin login
- Add scheme
- View scheme
- Add officer
- View student
- Officer login
- View schemes
- View applied schemes
- Student register & Login
- Apply schemes
- Apply status

MODULE DESCRIPTION

Admin Login

- Admin will login using user name and password for authentication purpose.
- Admin will have all the rights to add and delete the schemedetails. Admin is thehead

Of the scholarship web application.

Add Scheme

Admin will be adding the new schemes in this application for user use. The new scheme added with the mandatory fields like scheme category, scheme name, time limit, eligibility and required documents for applying to that scheme.

View Scheme

Admin will be managing the scheme he added previous module. The admin have rights to delete the scheme. Any updates made by admin display in all users page.

Add Officer

Admin will add the officer details according to the scheme category. The officer is responsible for user scheme application.

View Student

Admin will add the student details which is uploaded while user registration. The student information are stored in the database and retrieved in this page.

Officer login

Officer proceeds further actions for user application after login. He will login with username and password which are created while admin adds the officer details.

View Scheme

Officer will view the user scheme application request.they will verify the documents uploaded by the student, After verification they will approve the user's scheme.

View Applied Scheme

Officer will view the approved schemes details. The schemes are listed approved date wise. The detail includes scheme name, category, student name, document which are uploaded by student.

Student Register & Login

The student can use these web application for entering all the personal information .When the student completes the registration process they will get an unique user name and password for the login session.

Apply Scheme

In this module, student can view all schemes details added by the admin. One can get scheme updates from admin via this module. If the students are eligible for the scheme they can apply for the scheme. They should upload mandatory the documents for appropriate scheme.

Apply Status

In this module, students will view the scheme application status. The status will be updated by the concerned officer. The officer makes acceptance or rejection to the user scheme application

CONCLUSION

Education has emerged as one of the most valuable and costly things in the modern world. Most high school graduates who want to pursue a career that requires several years of schooling look for financial aid. Scholarships emerge as the most requested type of financial aid in such a situation. It helps you to avoid debt Numerous students leave college with large loan burdens. Their education is limited by the prospect of paying back the entire loan. Additionally, it puts a lot of pressure on them to land desirable positions. Due to this, even those students who are interested in occupations with low starting incomes are generally unable to do so. A scholarship, on the other hand, is free money that enables students like you to pursue your aspirations. By reducing the financial obstacle, it aids in empowering your academic and professional ambitions. Performance is improved since receiving a scholarship eliminates any financial worries. As a result, you have more time to study, learn, and earn higher marks. You have plenty of time to explore for chances to improve your knowledge and expand your skills. By offering simpler application filing and application acceptance, it simplifies the system's entire procedure.

SCOPE FOR FUTURE ENHANCEMENT:

Scholarship delays can occur due to faulty or missing paperwork, delays in approvals, and many other factors. A scholarship management software streamlines the scholarship process to such an extent, that applicants, as well as approvers, can't just submit, organize, edit, approve & share

documents with ease, they can also track their application's status, make changes to the application, and add missing documents with a single click.

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