

Analysis

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Criterion B: Analysis

Proposed solution:

(Note : ¹ The text in the Proposed Solution is NOT included in the word count)

The solution we have thought of choosing are

1. Web-based application
2. Mobile application
3. Offline database application

The IT product we have chosen for this solution is the offline database application which will be a desktop-based application. This IT solution suits the best according to the situation of the problem as it is required to organise the data.

Requirement specification

IT system requirements

¹
(Note : IT system requirements are listed with details about hardware, software including any IT systems and online services required for the IT Product. Where an online service is used to develop/host the IT product, it must be indicated.)

- **Hardware-** Desktop computer or Laptop with minimum 1 GB RAM, 32 GB Hard Disk, and 1 gigahertz processor.
- **Software-** Windows 10 OS, Microsoft Access 2016, Visual basic.net, visual basic 6, Direct X 11.

System Interaction

¹
(Note : System interaction refers to the interaction that must work properly between the various hardware, software, IT systems and online services. It refers to two components (i.e. hardware, software, network services, online services) and how they must interact in order for the product to function.)

For example, if an image is edited in Adobe Photoshop CS 6, then the image needs to be able to load quickly on the website hosted in Google sites. This means that a jpg format will be used with appropriate resolution.)

- **The database application will Only function when Microsoft Access has been installed in the Operating System.**
- **To function the database application without malfunction, Microsoft services and applications should work properly without any errors.**

Input / Output Requirements

- **Input requirements**

¹
(Note : Input is briefly described and refers to the specific information (i.e. text, images, video and any other content) required to develop the IT solution and what input will be required to use the IT solution.)

- The gym logo
- Any frequent use of colours or images you would like to have
- Any specific style which you want me to follow while developing the application
- Information about the tables where the information is stored. (how many tables do you use for maintaining the data such as a table for members, equipment, their dates)
- Information that is being stored in the table (Information like phone number, Activation date. Detailed field names in which the data is stored)
- Information about the relationship between tables. (information like where specifically the data is repeated like the consumer name when they are buying something)
- Information about calculations performed (date calculation or subscription calculation)
- Information about different types of subscriptions you offer (Like subscription A for a year and b for 6 months)
- Sample data for tables

¹ **Output requirements**

(Note : Output is briefly described and is consistent with the client's requirements in Criterion A. It refers to the information that will be displayed and/or how it is displayed.)

- Displaying gym logo on the Main-Menu of the application
- Using colours and images in Interface Like background colour, buttons colour.
- The style for designing the layout of the application like tabular, column, Portrait and landscape.
- The tables and their data field will be used for creating the functionality of the application like for displaying forms fields, creating reports.
- Relationships will allow using that field in the table to use in the foreign table like when the in the customer table the name field is stored using relationship it can be used in diet which will allow the user to select from existing customers in the dropdown.
- To make an application make automatic calculations like calculation of dates Bmi and Ideal weight.
- Sample data for testing the application like to test that it is giving desired results or not. Application is fitting with the data.

Processing requirements

¹
(Note : A list of processes needed to make the Product. For example, a process could be a music loop that will be created in Audacity for the video introduction. A list of processes in the Product to make it function properly. For example, clicking on the email link will generate a blank email that will be sent to the client.)

- Clicking on the buttons to open the forms
- Giving input values to get the automatic calculations
- Clicking on buttons to delete, add and search the data
- Clicking on buttons to view reports

Security

¹
(Note : prevent access to the product or

protect access to the information contained in the product.

For example, a composite image is saved in jpg format instead of an Adobe Photoshop file so that the layers used to create the images cannot be accessed.)

- The application is offline so the security will be higher as there will be a connection with the internet. There are very few chances of getting the data stolen.
- There will be a recovery option in the application when the data is deleted it will not get deleted immediately but it will be permanently deleted in 10 days. This will prevent data loss.

1

Specific performance Criteria

(Note : Specific performance criteria (SPC) are clearly stated and make it possible to evaluate/measure the success of the product in Criterion F and provide a basis for the testing in Criterion D. The SPC are used to test specific features, content or functionality of the Product in Criterion D. The SPC are stated so that they can be evaluated in the feedback from the client and evaluated in Criterion F.

This means each performance criterion is stated so that the success or failure of each criterion can be measured/tested/evaluated.)

Note: When SPC is not carefully considered in Criterion B, this has a negative effect on Criterion D, the Feedback from the client in Criterion F.

The text in the Requirements Specification is NOT included in the word count.

- Interactive Graphical user interface with navigation buttons.
- Interactive forms for different tables
- Automatic calculations of dates basis on given input on forms for gym equipment and subscription.
- Display report of Expired subscription. and Pending Maintenance.
- The backend is inaccessible to prevent malfunctioning in the application.
- Different buttons to perform tasks such as Deleting, adding, and searching.
- Realtime Calculator of BMI and Ideal weight with parameter input.
- Display a particular person's progress report with a Graphical chart.

- Extra forms and reports to increase application flexibility
- Report of BMI and Ideal weight of Existing customer.

Justification of chosen solution

¹
(Note : The proposed solution is justified with a detailed explanation that includes relevant considerations such as:

- the proposed Product addresses the client's requirements for the IT solution
- why alternative solution(s) are not as feasible as the one that is chosen
- the client's hardware and software is compatible with the IT solution
- all of the necessary IT resources (i.e. hardware, software, network systems, online services) needed by the student and the client are available
- the Product can be created within the time constraints
- student has the skills or can acquire the skills that are required for creating the product
- content/data is available or can it be created to make a fully functional product
- financial considerations for development or access to /distribution of the Product
- security/privacy implications for the development and operation of the IT solution can be resolved.
- the training necessary for the client to use and maintain the proposed IT solution can be provided
- the product can be made available, accessed or distributed as required.
- Other considerations include: the client specifically wanted this type of IT solution, limitations In the IT systems available determined the solution that was chosen, etc.)

The Justification of the Proposed Solution section is approximately 350 words.

The word count must appear at the end of this section.

The client requirement is clearly specified that it needs to organise the data to make the work easier for the client. This requirement can be fulfilled by a data manipulation tool that can calculate the data, make relationships between tables and can store the data in the database which can be done by Microsoft Access 2016. The other solutions such as a web application and mobile

application do not suit the client requirement. There is no such need of accessing the data remotely and having enormous people to access it which removes the web application from the list as a solution. Mobile applications can be really portable but there's not such a specific requirement. The offline database solution can be very feasible according to the client requirements. A database application can store large amounts of data efficiently. The data can be added and deleted. From the data, the reports and calculations can be done. The database application will minimize data inconsistency, give faster access to desired data, and mainly increase end-user productivity. The hardware and software specifications required to use the database application are fairly compatible with the client's device. Developing Microsoft access applications is possible to create in the available time. Microsoft database applications are flexible and adaptable. The resources for developing skills to create Microsoft access applications are widely available, which makes me learn the skills faster because of the variety and it will allow me to develop all the functionality of the database application. The distribution and implementation of the product can be done with ease, it's just going to need the Microsoft Access application. The application will be able to solve the main problem of my client which needs to display the pending maintenance and expired subscription which can be done by the database application. There is not a large amount of training required to use this application. The application will be user-friendly and self-explanatory.

Analysis

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