

Haroon Rashid

Reg#: 16549

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Sessional Assignment: Human Computer Interaction

Submitted To: Sir SHAHAB UL ISLAM

Task 01

Calculator: Easy to Use

Question1 Part(a):

For the product you find easy to use, describe or answer the following (each in a few sentences):

- What is the product?
- What task does the product perform?
- Present one way in which this product is easy for you to use
- How would someone else find this product difficult to use?
- How could this difficulty be resolved?

Answer:

- **What is the product?**

A: Calculator: A calculator is a device that performs arithmetic operations on numbers. The simplest calculators can do only addition, subtraction, multiplication, and division.



- **What task does the product perform?**

A: A calculator is a device that performs arithmetic operations on numbers. The simplest calculators can do only addition, subtraction, multiplication, and division. More sophisticated calculators can handle exponential operations, roots, logarithms, trigonometric functions, and hyperbolic functions.

1. Exponents, unknown numbers

Along with negation, you can also raise numbers to another power and find a square root of a number or formula.

Exponents are used in almost any math course past grade school, but only a scientific calculator can perform any algebraic function.

In addition to using your calculator to solve for a known number, you can use it for an unknown number. This is useful for algebra or any other more advanced math you may be studying.

2. Logarithms

Once you have increased your knowledge and you're learning new concepts related to calculus and trigonometry, it's likely that you will have to learn about logarithms. These formulas help you to calculate speed, area, and much more.

In the past, these were done almost completely by hand. Now it takes only a moment to input the proper information and solve the problem using a calculator.

3. Trigonometric

First a person has proper knowledge of the angles then they can calculate the trigonometric function and also of the scientific calculator. Calculator is set to use different units for measuring angles. To set your calculator to work in degrees, use the key sequence (SETUP) (Deg). To calculate the sine, cosine or tangent of an angle, press the or key and then type in the size of the angle.

Question1 Part(b):

For the product you find difficult to use, describe or answer the following (each in a few sentences):

- What is the product?
- What task does the product perform?
- Present one way in which this product is difficult for you to use
- How could this difficulty be resolved?
- How would someone else find this product easy to use?

Answer:

- **What is the product?**

A: Database system:

The database management system (DBMS) is the software that interacts with end users, applications, and the database itself to capture and analyze the data.

- **What task does the product perform?**

A: Typical database administration tasks supported by the DBMS include change management, performance monitoring and tuning, security, and backup and recovery. Many database management systems are also responsible for automated rollbacks and restarts as well as the logging and auditing of activity in databases.

- **Present one way in which this product is difficult for you to use?**

Answer:

1. Increased costs:

- Database systems require sophisticated hardware and software and highly skilled personnel.
- The cost of maintaining the hardware, software, and personnel required to operate and manage a database system can be substantial. Training, licensing, and regulation compliance costs are often overlooked when database systems are implemented.

2. Management complexity:

- Database systems interface with many different technologies and have a significant impact on a company's resources and culture.
- The changes introduced by the adoption of a database system must be properly managed to ensure that they help advance the company's objectives. Given the fact that database systems hold crucial company data that are accessed from multiple sources, security issues must be assessed constantly.

- **How could this difficulty be resolved?**

A: Maintaining currency:

- To maximize the efficiency of the database system, you must keep your system current.
- Therefore, you must perform frequent updates and apply the latest patches and security measures to all components.
- Because database technology advances rapidly, personnel training costs tend to be significant. Vendor dependence.
- Given the heavy investment in technology and personnel training, companies might be reluctant to change database vendors.

- **How would someone else find this product easy to use?**

A: If someone find this product easy, they must have the following abilities:

Strong leadership skills. Understanding of structured query language (SQL) Knowledge of 'relational database management systems' (RDBMS), 'object-oriented database management systems' (OODBMS) and XML database management systems. It is important for Database Developers to possess strong analytical, problem solving, organizational and problem-solving skills. Oral and written communication skills are also a must. The following knowledge must be they have,

- Knowledge of database queries.
- Knowledge of database theory.
- Knowledge of database design.
- Knowledge about the RDBMS itself, e.g. Microsoft SQL Server or MySQL.
- Knowledge of structured query language (SQL), e.g. SQL/PSM or Transact-SQL.

Question1 Part(c):

With a few sentences, summarize an important difference between the two products that affected your answers.

Answer: Summary

Calculator is a device which we use easily in our daily life for counting. From school to business level it is a device which is used in a small shop to high level companies. While Database systems is used in the for-data entry or record saving which use by the professional are well knowledge person which know about database system because it is difficult in operating. It is only used in large companies, institution and on that place, which have large number of data.

Difference between Calculator and Database System:

Calculator: To reduce the complexity of solving problems and for quick learning of subject in students, the calculator is allowed to use in schools and colleges. Accurate counting of a number can be brought out by using calculator. Since they eliminate tedious computations and algebraic manipulations that discourage many students, calculators allow more students to solve problems and appreciate the power and value of mathematics in the world today. When used appropriately, calculators enhance learning and thinking, they do not replace it.

Database Systems: Proper database management systems help increase organizational accessibility to data, which in turn helps the end users share the data quickly and effectively across the organization. A management system helps get quick solutions to database queries, thus making data access faster and more accurate. A major purpose of a database system is to provide users with an abstract view of the data. That is, the system hides certain details of how the data are stored and maintained.

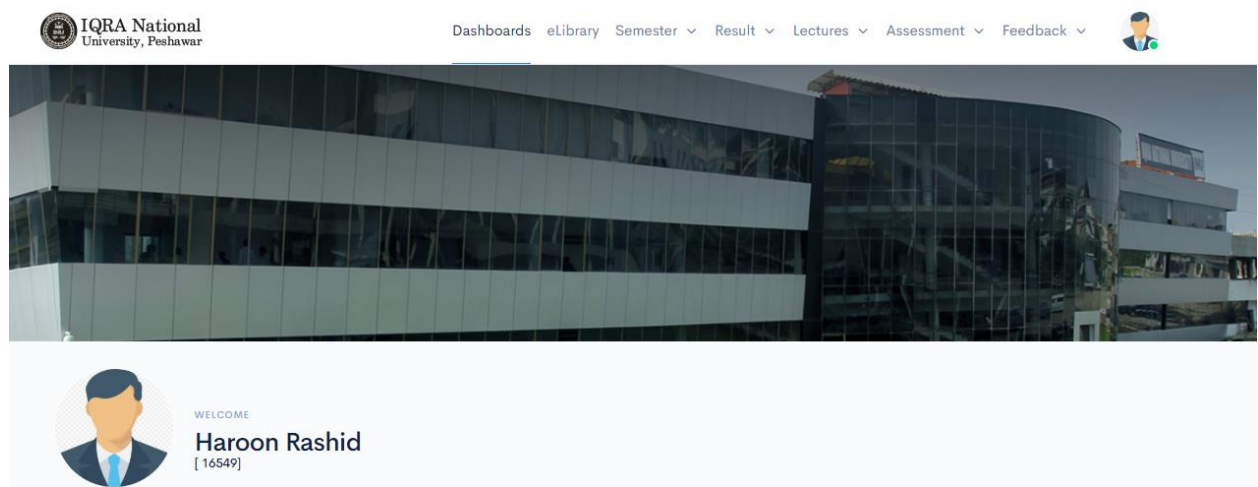
Task 02

Visit your SIC. Identify all the features and write down. After analyzing the whole application mention what is wrong in the application how it can be improved. What feature should be added, also mention it in your documents.

Redesign mockups for SIC using any application of your expertise (Abode XD, Sketchup etc.

Answer:

1. When we open the SIC portal so first of all we sign in the portal which need Student ID and password. When we open portal, it shows menu bar.



2. **Dashboards:** This is the front page of the portal which have Name of the student and Registration number and fee Payment details.
3. **Elibrary:** This is the electronic library on portal which have hundreds of books of all departments.
4. **Semester:** This is the current semester of student in which multi option which have
 - 1.Register subjects
 - 2.Timetable
 - 3.Class Discussion (Chat)
 - 4.Mid exam datasheet
 - 5.Final exam datasheet
5. **Result:** In the result there are two option mid result and final result.
6. **Lectures:** In the lectures we download and check assignments.
7. **Assessment:** In this we doing Teacher Assessment

8. **Feedback:** In this option we give our feedback.

9. **Photo Frame:** In last there is frame from profile picture on right top corner.

Addition:

1. **Video option for online classes (In which all the students must be at one platform)**
2. **Online Quiz**
3. **Online Paper**
4. **Teacher chatbot in which student access to the teacher 24/7**
5. **Fee Details**

Design:

