

TASK 4:
Design of Database

INFORMATION TECHNOLOGY
COURSEWORK

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Advantages of Database

The software used to produce a suitable database is Microsoft Access, this software is used because it consists of all the database functions thus giving clear access to storage of information.

Tables

Tables are used in Database to collect and store data in a orderly manner, tables need to be used because when a field is put in Microsoft analyzes the data and puts in the appropriate format, the format can be altered depending on the field this can be don manually. It is possible to use make-table queries to archive old records, to make backup copies of tables, to select a group of records to export to another database, or to use as a basis for reports that display data from a specific time.

Data Relationship

In Microsoft access, the database lets the user have One to Many or Many to Many or One to one relationship of their tables, this is useful because then the table data can be gathered and used in different functions e.g. queries, forms, reports to display information from several tables at once.

Forms

A form is a type of a database object that is primarily used to enter or display data in a database. Forms can be used as a custom dialog box that accepts user input and carries out an action based on the input. These are useful because they can easily collect the data and transfer it to the table in View Form, this would let the user see the different types of data and this data inputted from the form can be used in reports and queries.

Queries

Queries are used to view, change, and analyze data in different ways. It can also be used as a source of records for forms, reports. There are several types of queries in Microsoft Access.

Data Dictionary

Field Name	Data Type	Format	Description
First Name	Text	30 Characters	This is the First Name of the Member
Last Name	Text	30 Characters	This is the Last Name of the Member
Date of Birth	Date/Time	Short Date	This is the Date of Birth of the Member
Sex	Boolean	M/F	This is the Gender of the Member
Home Telephone	Number	Auto Number	This is the Home Contact number of the Member
Mobile	Number	Auto Number	This is the personal Mobile Number of the Member
Address	Text	50 Characters	This is the Home address of the Member
District	Boolean	Hong Kong/Kowloon	This is the District which the Member lives

		/ New Territories	
HK ID Card#	Number	Auto Number	The Hong Kong ID Card Number of the Member
Email Address	Text	30 Characters	The Email address of the member
Credit Card Number	Number	Auto Number	The credit card number of the Member
Expiry Date	Date/Time	Short Date	The expiry date of the Member's Credit Card
Date	Date/Time	Short Date	This is the Date the Customer Became a Member
Membership Number	Number	Auto number	This is the unique Membership number given to each member
Course Number	Number	Auto Number	This is the unique Course Number which Identifies each course
Start Date	Date/Time	Short Date	This is the Date in which the member started the Course
Report Date	Date/Time	Short Date	This is the time in which the report is produced
Weight Before/After	Number	Auto Number	This is the result of the weight before the course in Kilograms
Fat Percentage Before/After	Number	Auto Number	This is the resultant Fat percentage of the member before/after the course
Flexibility Before/After	Number	Auto Number	This is the flexibility of the member a before/after the course
Height Before/After	Number	Auto Number	This is the Height of the member before/after the course in cm
Weight Before/After	Number	Auto Number	This is the result of the weight before/after the course in Kilograms
Course Name	Text	30 Characters	This is the name of the Course
Days	Boolean	Monday/Tuesday/Wednesday/Thursday/Friday/Saturday/Sunday	This is the days in which the course takes place
Time	Date/Time	Short Time	This is the Time which the course starts
Instructor Name	Text	30 Characters	This is the Name of the Instructor who leads the Course
Instructor Gender	Boolean	M/F	This is the Gender of the Instructor who leads the Course
Description	Text	50 Characters	This is the Description of the Course
Course Data	Date/Time	Short Time	This is the Date the course is on

Data Flow Diagram

