

GCSE ICT Coursework:

The Creation and Manipulation of Databases

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Identification

Mr. Amir Khan has begun his own weekend tuition along with his partner Mrs. Cassie Williams. The tuition is called Amir's Saturday Tuition and is for GCSE students between the ages of 14-16 of all abilities who wish to learn Mathematics, Sciences, English Literature and English Language. The tuition will run between 11am to 6pm on Saturdays. Approximately 60 students have currently enrolled and they will begin from September 2007. There are approximately 10 teachers who will teach the above stated subjects to small groups of 6 to students of different levels. Classes will be conducted in different rooms belonging to the teacher.

The Problem

There is no current registering system or database to file the student's details. In an emergency, student's details need to be found immediately. Mrs. Cassie Williams is very firm about students keeping a good attendance. Therefore, it is her wish that a register be included in the database. Details of all students have been requested and these details need to be put into the database. The details include their full name, date of birth, address, telephone number, mobile number and emergency contact information. Two registers need to be created for both the Mathematics teacher, Mr. Juelz Santana and the Science teacher, Mr. Chris Brown. Mr. Amir Khan has asked me to assist him in creating these two databases. He wishes for the database to include:

- The student's full name, address, date of birth, telephone number and emergency contact information to be present in the database
- An attendance record for all students for every week in each term.
- A database with teacher's details
- Search tool
- Password protection

Alternative Solutions

An alternative solution to database is word processor or spreadsheet. Tables could be created to store the details of students. The logo could be placed on the document too. Searches could be performed and the document could also be password protected. However, mistakes can be made since there are no validation rules.

Database is ideal to make the registers on for many reasons. Firstly, validation checks like presence checks, length checks and character type checks limit the users' mistakes. Queries can be made to search for data meeting a certain criteria. Forms and reports can be prepared almost instantly. Files can be linked together so that if one file is updated the other files dependant on that file will also automatically be updated. The addition, deletion and editing of data is simple. The database can be password protected to allow certain people to access the database tables.

Why ICT is a sensible way of solving this problem

ICT is a sensible way of solving this problem for many reasons. Instead of a computerised filing system, filing cabinets would have to be used. This wastes space and delays time since searching can take time. Duplicates of Mistakes on a hand written system are likely and the system would have to be rewritten, which will waste time or correction fluid will be have to used making the system look messy and unprofessional. This is not a problem on a computerised system, since things can simply be deleted. A computerised system would save time, would look far more presentable than a paper based one and be more accurate. Saving a computerised system is fast and easy. However, a paper based system would need to be filed away safely. Changes would be easier on a computerised system instead of using correction fluid on the paper based one. Illegible handwriting would be hard to read and could create errors and confusion.

Quantitative Objectives

My objectives of this task are the following.

1. To create a database, which stores student's details
2. To create a database, which also acts as an attendance record.
3. To make the database password protected
4. To enable the user to create reports
5. To enable the user to run forms
6. To enable the user to create queries
7. To link tables so that if changes are made in one table, the changes are clear in the other too.
8. To make the system easy to read and clear
9. To save the database on the appropriate backing storage.
10. To include the tuition logo in the system
11. Searching on the system should be easy
12. To make the forms include buttons linking from one record to another.

Analysis

Input

I will create data capture forms to require the following information:

- ✓ Student's first name
- ✓ Student's last name
- ✓ Student's address
- ✓ Student's postcode
- ✓ Student's home telephone number
- ✓ Student's mobile number
- ✓ Student's email address
- ✓ Student's predicted results
- ✓ Student's current results
- ✓ Teacher's first name
- ✓ Teacher's surname
- ✓ Teacher's telephone number
- ✓ Teacher's email address
- ✓ Teacher's subject

These forms will be handed to all the students enrolled for the tuition and the teachers too. Once completed, the information will be typed in the database using a keyboard. To save memory, codes will be used when entering the data into the database to shorten long words. For example 'Rd' will be used instead of Road and 'St' instead of Street. The information will be verified by the person who typed in these details by checking the data entered against the forms.

Process

The database would validate the information by using range, format and presence checks. These checks would make sure that the right type of information is entered, that it is in the right format and that it is even entered. However, it will not check the accuracy of the data and this can only be done by proof reading the data entered against the forms. The computer will process the information in design view by changing it to the database view. It will also set up relationships between the tables, create forms, queries and also create reports.

Output

The output of the database would be viewing the tables, forms, query results and reports on the monitor. Also, the student reports will be printed off and read as a hard copy. These will be printed on A4 white paper in landscape view. After printing off the student's reports and creating the database, I will create another data capture form to highlight any mistakes I have made or any improvements I could make to the database. This form would be sent to the management and teachers as a means of feedback.

Backup

The user of the database should save the database as soon changes are made to avoid the loss of data. The database would need to be saved on the hard disk of the computer. Apart from saving on internal memory, it should be saved on external memory like USB memory stick and CD-RW's. USB memory sticks come with a range of memories like 512MB or 1GB. I would recommend for the user to make use of the 1 GB memory stick since there is more memory on it and therefore more data can be saved on it. A CD-RW is preferable to use because it can save 700MB of data and this data can be deleted and changed unlike a CD-R. The USB memory stick and CD-RW should be kept safely and away from the original system. As soon updates are available, the database should be saved on both the internal and the external memory. The updated database should also be emailed to the company's email address as soon as possible as a means of backup.

Security

The users should be asked for their usernames and passwords when accessing the computers. These passwords and usernames should be changed after every three months to avoid hackers. The database should be password protected too. Hard copies of reports on students should be kept in a locked filing cabinet away from the computers. The rooms with the computers and filing cabinet should have a security and fire alarm in it. The doors should be kept locked when there is no teacher present there. The hardware should have security labels on them in case of a theft. An antivirus software should be installed in the computer to prevent viruses from entering the computer system. A network monitoring system should be installed to protect the network.

Software

To create and use the database, the following software will be required:

1. Microsoft Access
Access is the preferred software over other types of software because of its capability to create complex searches called queries, produce reports, and convenient data entry forms. The database created on Access can also be made relational to link files together and further improve it. Mistakes are limited because of the many and useful validation checks like presence checks, length checks and character type or format checks. The database can also be made password protected to ensure its security.
2. Symantec Norton Antivirus Software and Firewall 2007
This software helps prevent viruses which can corrupt data from coming on to the computer system.
3. The Multi Router Traffic Grapher
This software monitors the traffic load on network links

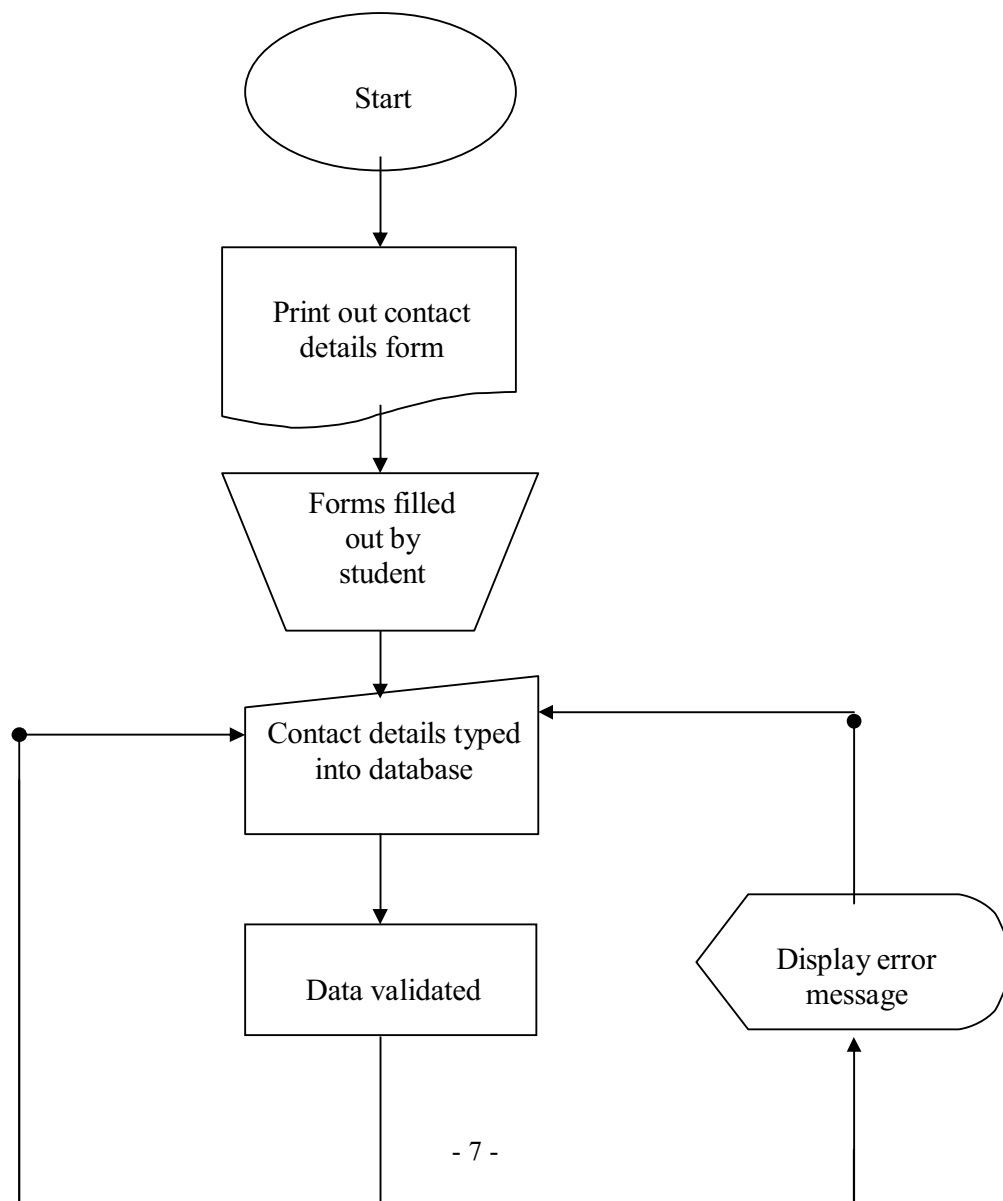
Hardware

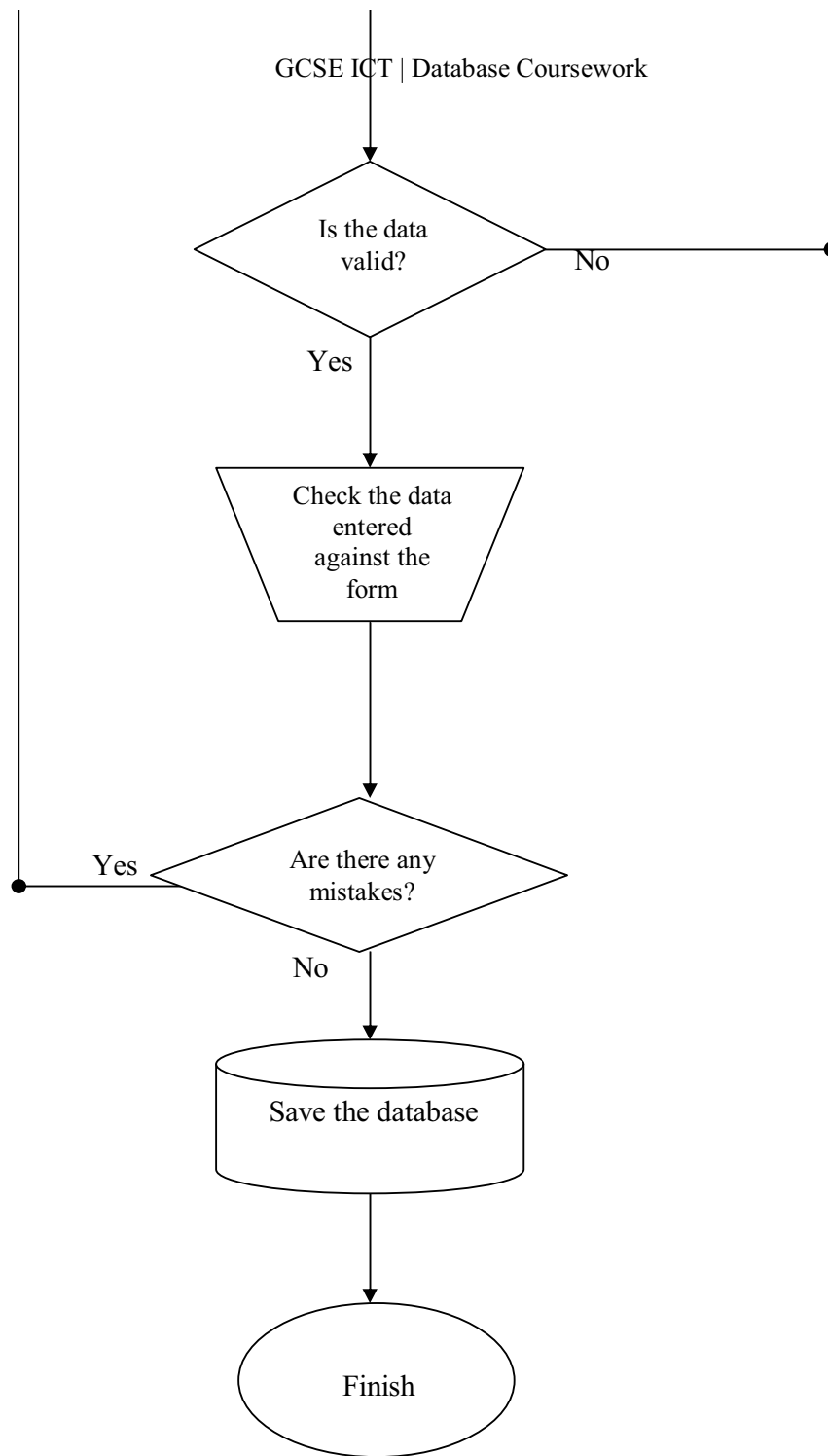
To create and use the database, the following hardware will be required:

1. 3 Packard Bell Istart 1360 desktop PC - AMD Athlon 64 3200+ processor (with Microsoft Windows XP Home Edition, 512MB DDR RAM, 80GB hard disk drive)
2. 3 17" Sony Flat Panel Monitor
3. 3 keyboards
4. 3 mice
5. Inkjet printer
6. Hub
7. Cables

A large memory of the computer is needed to save the database. Three computers will be needed for both teachers and receptionist or network manager and will be networked together. To network the computers, a hub and cables are needed. Since all the computers will be networked, only one printer is needed. This printer should be an inkjet one because it produces decent quality printouts at a reasonable price.

Flow Chart





Design**Subtasks**

Below is a list of subtasks together with the estimated duration and start dates.

Tasks	Start Date	Duration
Interview manager and real users, the teachers	1/12/2006	1 day
Create forms for students to fill in with their details	2/12/2006	2 days
Disperse forms to those enrolled	4/12/2006	1 day
Design reports and forms	5/12/2006	5 days
Create logo	10/12/2006	1 day
Discuss designs with manager	11/12/2006	1 day
Using user's feedback, change the design as asked	12/12/2006	3 days
Collect forms from students	15/12/2006	1 day
Create database	16/12/2006	10 days
Discuss the database creation with manager	26/12/2006	1 day
Using user's feedback, change the database as asked	27/12/2006	2 days
Show the final version of database and discuss any areas that could be improved with manager and real user	29/12/2006	1 day

The database should have 3 tables. One table should store the student's details. The other, the teacher's details and the last should act as an attendance record.

This is the design for the Student Details table.

Field Name	Field Type	Field Length	Notes/Validation
Pupil ID Number	AutoNumber		Primary Key
First Name	Text	25	To allow long, foreign names
Last Name	Text	25	To allow long, foreign surnames and double-barreled surnames
Date of Birth	Date/Time		Short date
Address	Text	35	
Town	Text	20	
Postcode	Text	8	8 characters in a postcode including space
Telephone Number	Text	11	Phone Number; 11 characters in a telephone number
Mobile Number	Text	11	Phone Number; 11 characters in a telephone number
Mother's Name	Text	25	To allow long, foreign names
Father's Name	Text	25	To allow long, foreign names

The field length of a field is valuable since it is a waste of memory even if not used. Validation helps to ensure fewer mistakes are made in the database.

Below is the design of the Teacher Details table.

Field Name	Field Type	Field Length	Notes/Validation
Teacher ID Number	AutoNumber		Primary Key
Title			Dropdown menu displaying titles
First Name	Text	25	To allow long, foreign names
Last Name	Text	25	To allow long, foreign surnames and double-barrelled surnames
Classroom Name			Dropdown menu displaying classroom names
Subject			Dropdown menu displaying subjects

The field length of a field is valuable since it is a waste of memory even if not used. Validation helps to ensure fewer mistakes are made in the database. Dropdown menus save the user time for typing data over again. It also ensures fewer mistakes are made.

This is the design of the Attendance Record (Term 1).

Field Name	Field Type	Field Length	Notes/Validation
Pupil ID Number	AutoNumber		
First Name	Text	25	
Last Name	Text	25	
03 09	Yes/No		Attendance record
10 09	Yes/No		Attendance record
17 09	Yes/No		Attendance record
24 09	Yes/No		Attendance record
01 10	Yes/No		Attendance record
08 10	Yes/No		Attendance record
15 10	Yes/No		Attendance record
22 10	Yes/No		Attendance record
29 10	Yes/No		Attendance record
05 11	Yes/No		Attendance record
12 11	Yes/No		Attendance record
19 11	Yes/No		Attendance record
26 11	Yes/No		Attendance record
03 12	Yes/No		Attendance record
10 12	Yes/No		Attendance record
17 12	Yes/No		Attendance record
24 12	Yes/No		Attendance record
31 12	Yes/No		Attendance record

The field type 'Yes/No' creates a tick box, where the teacher can tick the box to indicate the pupil is present in class and can leave it blank if absent.

Student Details Form:

Teacher Details Form:


Student Details Report:

Teacher Details Report:

Relationship Diagram:

User Comments

This is what Mr. Amir Khan thought of the initial design of the database.

	
123 Yell Road Streatham London SW16 9KA	234 Kent Close Pollards Hill London SW16 7VX
	12/12/06
Dear,	
<p>I would like to firstly thank you for your effort and time to help create this database. The design of the database seems very good to me. The forms' design seems well thought out and well structured too. The use of control buttons was a good idea since it makes the database easier to use. The reports seem presentable and well structured. The relationships diagram was easily understood.</p>	
<p>However, I would like to see some improvements to the database design. I think that on the Student Details form, the telephone and mobile number should be situated above mother and father's name. On both forms, the font size should be changed to 12 instead of 10. The logo of the company should be at the top in the centre of the page and the title should remain below it. The title font size should change from 16 to 20. For both reports, the logo of the company should be at the top in the centre of the page and the title should remain below it. Also, the font size should change for the data from 8 to 9 and for the subtitles, from 9 to 10. The footer, where the date is present, has a font size of 9 and should be changed to 10. I would be grateful in seeing these changes made to the database design.</p>	
Thank You,	
Mr. Amir Khan	

The changes made to the initial design were made in green pen to make it the final design.

Test Plan

A test plan was designed. Once the database is created, these tests need to be carried out to ensure the database works correctly.

Test Number	Test Description	Reason for Test	Expected Outcome
1	Enter more than 25 characters in first name	Check if this is allowed	Inability to type more than 25 characters
2	Enter more than 25 characters in last name	Check if this is allowed	Inability to type more than 25 characters
3	Enter letters in 'Telephone Number'/'Mobile Number' field	Check input mask working correctly	Inability to type letters
4	Enter letters in 'Date of Birth' field	Check input mask working correctly	Inability to type letters
5	Open database	Check password protection	Asks for password to be entered
6	Check form opens with correct layout i.e. logo at the top and control buttons below	Check design of form is correct	Form with correct layout
7	Click on the control button - next record	Check control buttons are working	Next record should open
8	Change made in form - type address '212 Rowan Road' for Pupil ID number 1	Check if changes made in form effect tables	Address changed '212 Rowan Road' for Pupil ID Number 1
9	Select subject from list in subject field on form	Check if dropdown menu opens	Dropdown menu appear and subject can be chosen
10	Changes made in Student's Details table to Attendance Record	Check if relationships work	Changes appear in Attendance Record as well as the Student Details Form
11	Print Student Details Report	Check if reports print on A4 paper presentably	Hardcopy of report created on A4 paper
12	Run query - last name: "ali"	Check if queries work	All students with the last name of "ali" to appear

Implementation

Evidence of Error Correction

The screenshot below is of the 'Student Details' form. The error I found on it was that the text boxes were too small to fit the text into. For this reason, I made all the text boxes larger so that the text would be able to fit into them.

Microsoft Access - [Student's Details Form]

Amir's Saturday Tuition

Student Details

Pupil ID Number

First Name Last Name

Date of Birth

Address

Town Postcode

Telephone Number Mobile Number

Father's Name Mother's Name

Record: 1 of 34

Form View

NUM

6:03 PM
Monday
3/5/2007

This screenshot shows the Teacher Details form. The same mistakes were found on it. The text boxes were all too small for text to be read in.

Microsoft Access - [Teacher Table]

Amir's Saturday Tuition

Teacher Details

Teacher ID Number: 1

Title of Teacher: Ms.

Teacher's First Name: Joanne

Teacher's Last Name: Havish

Classroom Name: G2

Subject: Science

Record: 1 of 8

Form View

NUM

8:03 PM
Monday
3/5/2007

This screenshot shows the layout of the Student Details form after I made the changes to it. I made all the text boxes larger so that the data can fit within it. The name box was made extra large so that long, foreign names will also be able to fit within it.

Microsoft Access - [Student's Details Form]

Amir's Saturday Tuition

Student Details

Pupil ID Number

First Name Last Name

Date of Birth

Address

Town Postcode

Telephone Number Mobile Number

Father's Name Mother's Name

Record: 1 of 34

Form View

NUM

start Database CWK... Microsoft Excel... ICTGCSE - The ... 11 : Database ... Student's Detai... 8:14 AM

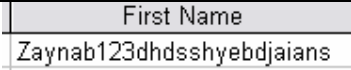
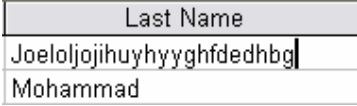
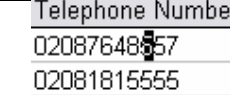
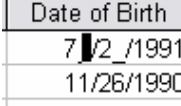


I also corrected the Teacher Details form because it had the same mistakes.

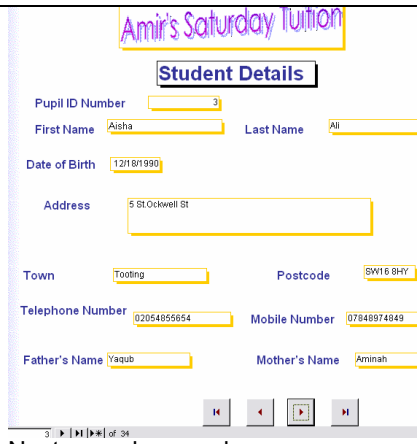
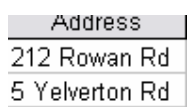
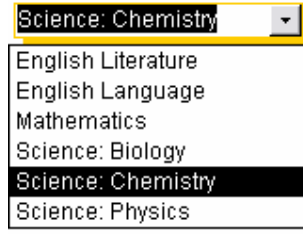
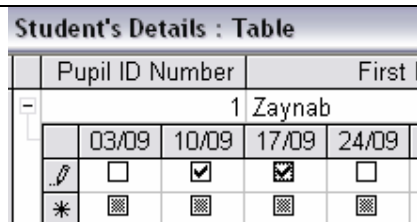
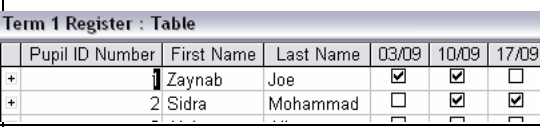
The screenshot shows the Microsoft Access application window titled "Microsoft Access - [Teacher Table]". The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The toolbar contains various icons for database operations. The main form area has a title "Amir's Saturday Tuition" in a stylized font, followed by a "Teacher Details" header in a box. The form contains the following fields:

- Teacher ID Number: 1
- Title of Teacher: Ms. (dropdown menu)
- Teacher's First Name: Joanne
- Teacher's Last Name: Havisham
- Classroom Name: G2
- Subject: Science: Chemistry (dropdown menu)

At the bottom of the form are four navigation buttons: a back button, a previous record button, a next record button, and a forward button. The status bar at the bottom shows "Record: 1 of 8" and "Form View". The Windows taskbar at the very bottom shows the Start button and several open applications, including "Database ...", "Microsoft ...", "ICTGCSE - ...", "11 : Datab...", "Student's ...", and "Teacher T...". The system clock shows "8:20 AM".

Test Plan

Test Number	Test Description	Reason for Test	Expected Outcome	Evidence
1	Enter more than 25 characters in first name	Check if this is allowed	Inability to type more than 25 characters	  Inability to type more than 25 characters
2	Enter more than 25 characters in last name	Check if this is allowed	Inability to type more than 25 characters	 Inability to type letters
3	Enter letters in 'Telephone Number'/'Mobile Number' field	Check input mask working correctly	Inability to type letters	 Inability to type letters
4	Enter letters in 'Date of Birth' field	Check input mask working correctly	Inability to type letters	 Asks for password to be entered
5	Open database	Check password protection	Asks for password to be entered	
6	Check form opens with correct layout i.e. logo at the top and control buttons below	Check design of form is correct	Form with correct layout	 Form with correct layout

7	Click on the control button - next record	Check control buttons are working	Next record should open	 <p>Next record opened</p>
8	Change made in form - type address '212 Rowan Road' for Pupil ID number 1	Check if changes made in form effect tables	Address changed '212 Rowan Road' for Pupil ID Number 1 in table	 <p>Address changed to '212 Rowan Road' for Pupil ID Number 1 in table</p>
9	Select subject from list in subject field on form	Check lookup wizard works	Dropdown menu appear and subject can be chosen	 <p>Dropdown menu appeared and subject can be chosen</p>
10	Changes made in Student's Details table to Attendance Record	Check if relationships work	Changes appear in Attendance Record as well as the Student Details Form	 <p>Changes appeared in Attendance Record as well as the Student Details Form</p> 
11	Print Student Details Report	Check if reports print on A4 paper presentably	Hardcopy of report created on A4 paper	Hardcopy of report created on A4 paper

12	Run query - last name: "ali"	Check if queries work	All students with the last name of "ali" to appear.	<div><div>Student's Details Query : Select Query</div><div><div>Student's ...</div><div><div>* Pupil ID Number First Name Last Name Date of Birth</div></div></div><div><table><tr><td>Field:</td><td>Pupil ID Number</td><td>First Name</td><td>Last Name</td></tr><tr><td>Table:</td><td>Student's Details</td><td>Student's Details</td><td>Student's Details</td></tr><tr><td>Sort:</td><td></td><td></td><td></td></tr><tr><td>Show:</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>Criteria:</td><td></td><td></td><td>"ali"</td></tr><tr><td>or:</td><td></td><td></td><td></td></tr></table></div></div> <div>All students with the last name of "ali" appeared</div> <div><div>Student's Details Query : Select Query</div><div><table><tr><th></th><th>Pupil ID Number</th><th>First Name</th><th>Last Name</th></tr><tr><td>▶</td><td>3</td><td>Aisha</td><td>Ali</td></tr><tr><td></td><td>7</td><td>Hajrah</td><td>Ali</td></tr><tr><td></td><td>9</td><td>Tahir</td><td>Ali</td></tr><tr><td></td><td>21</td><td>Asim</td><td>Ali</td></tr><tr><td></td><td>22</td><td>Aisha</td><td>Ali</td></tr><tr><td>*</td><td>(AutoNumber)</td><td></td><td></td></tr></table></div></div>	Field:	Pupil ID Number	First Name	Last Name	Table:	Student's Details	Student's Details	Student's Details	Sort:				Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Criteria:			"ali"	or:					Pupil ID Number	First Name	Last Name	▶	3	Aisha	Ali		7	Hajrah	Ali		9	Tahir	Ali		21	Asim	Ali		22	Aisha	Ali	*	(AutoNumber)		
Field:	Pupil ID Number	First Name	Last Name																																																					
Table:	Student's Details	Student's Details	Student's Details																																																					
Sort:																																																								
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																																					
Criteria:			"ali"																																																					
or:																																																								
	Pupil ID Number	First Name	Last Name																																																					
▶	3	Aisha	Ali																																																					
	7	Hajrah	Ali																																																					
	9	Tahir	Ali																																																					
	21	Asim	Ali																																																					
	22	Aisha	Ali																																																					
*	(AutoNumber)																																																							

Evidence of Problem Solutions

This screenshot shows the Student Details Report.

Microsoft Access - [Student's Details]

File Edit View Tools Window Help Type a question for help

85% Close Setup

Student's Details

ID Number	First Name	Last Name	of Birth	Address	Town	Postcode	Telephone	Mobile N	Mother's Na	Father's Na
1	Zynab	Joe	7 /2 /1991	22 Rowan Rd	Streatham	SW16 9KO	02087648557	0795687610	Naureen	Adnan
2	Sidra	Mohammad	1/26/1990	5 Yekerton Rd	Battersea	SW15 8JU	02081815555	0787198751	Azzifah	Iqbal
3	Aisha	Ali	2/18/1990	5 St.Odovell St	Tooting	SW16 8HY	02054855654	0784897484	Aminah	Yaqub
4	Aminah	Amjad	6 /7 /1991	5 Riverwell St	Springfield	SW16 5HS	02154845845	0729125885	Macbetha	Romeo
5	Shahmuj	Begum	5 /2 /1991	67 Norbury St	St.Odovell	SW18 5D	02048484848	0719485485	Juliet	Hanuket
6	Aishabibbi	Mangera	11/9 /1990	56 Terrace Ave	Brixton	SW17 4SE	02787487826	0798485485	Safia	Rashid
7	Hajrah	Ali	1 /28 /1991	4 Starbucke Rd	Tooting	SW18 5CD	02054854987	0715443291	Aminah	Daryal
8	Umar	Mohammad	2 /9 /1990	46 Kensington Rd	Battersea	SW16 5SC	02484845489	0721985495	Debbie	Sam
9	Tahir	Ali	3 /8 /1991	77 Norbury St	Tooting	SW15 3NJ	02484848854	0712854855	Sana	Azra
10	Nadia	Hassan	2 /6 /1990	569 Terrace Ave	Baham	SW18 6SD	02081485911	0724878784	Mariam	Adam
11	Safaz	Joe	2 /4 /1990	3 St.Odovell St	Norbury	SW15 4HJ	02084818945	0726932393	Meriam	Azif
12	Umar	Baig	2 /5 /1990	33 Ottomson Rd	Norbury	SW17 5DE	02058954941	0717481817	Sandra	Jubair
13	Usman	Baig	1 /21 /1990	547 Kensington Rd	Tooting	SW16 3HJ	02018551545	0759789859	Hollie	Mohammad
14	Maria	Malik	1 /12 /1990	87 Unto St	Croydon	SW15 9JU	02024885748	0712341515	Beth	Tom
15	Sophia	Malik	1 /12 /1990	25 Starbucke Rd	Croydon	SW16 2CF	02015851515	0728878979	Safia	Harry
16	Mariam	Zuberi	9 /2 /1991	876 Unto St	Norbury	SW17 4HU	02015814584	0729606529	Azma	Ali
17	Furh	Zuberi	9 /5 /1990	5 Terrace Ave	Tooting	SW18 4W	02024854185	0729465456	Aisha	Haris

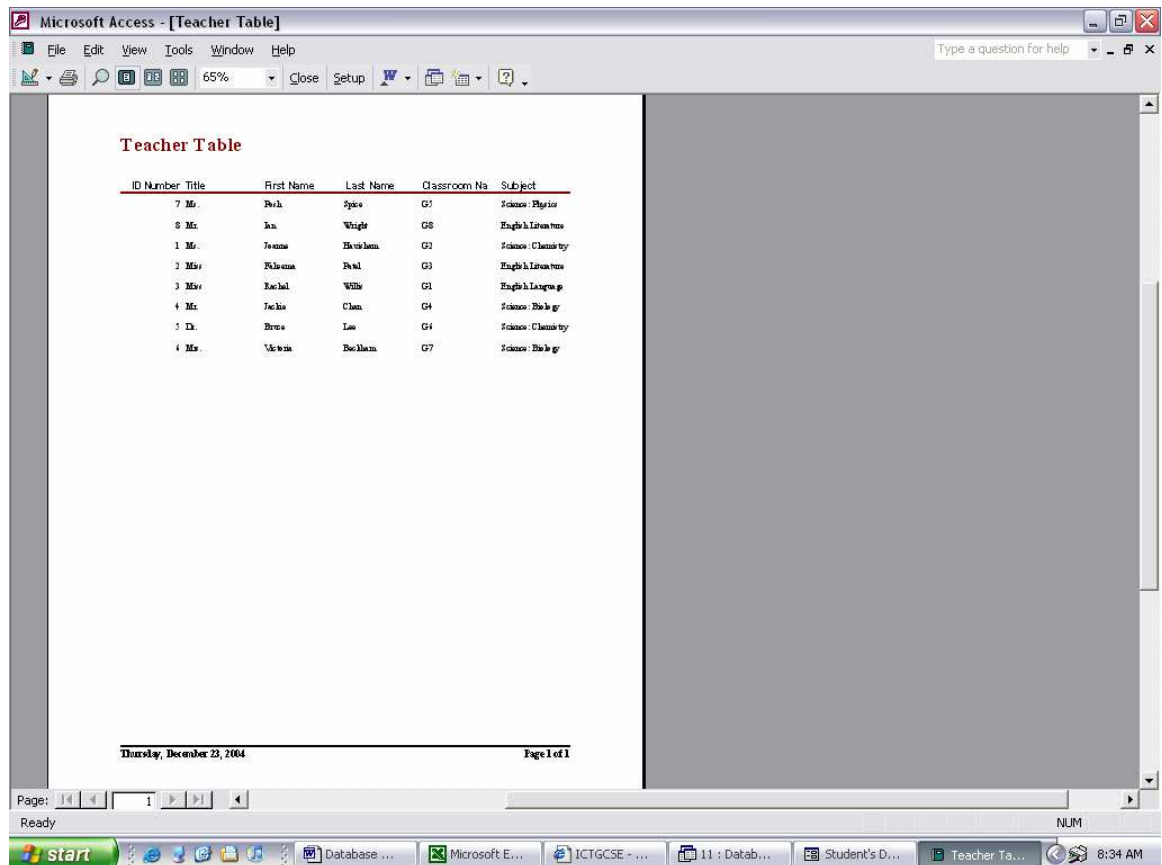
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Page: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

Ready NUM

start Database ... Microsoft ... ICTGCSE ... 11 : Datab... Student's ... Student's ... 8:23 AM

This screenshot shows the Teacher Details form.



The user found that there was no 'Exit Form' control button and thought this was necessary. Below is a screenshot of the Student Details form including this 'Exit Form' control button.

The screenshot displays the Microsoft Access application window with the 'Student Details' form in Design View. The form is titled 'Student Details' and contains the following fields and controls:

- Pupil ID Number:** A text box with a label 'Pupil ID Number'.
- First Name:** A text box with a label 'First Name'.
- Last Name:** A text box with a label 'Last Name'.
- Date of Birth:** A date picker control with a label 'Date of Birth'.
- Address:** A text box with a label 'Address'.
- Town:** A text box with a label 'Town'.
- Postcode:** A text box with a label 'Postcode'.
- Telephone Number:** A text box with a label 'Telephone Number'.
- Mobile Number:** A text box with a label 'Mobile Number'.
- Father's Name:** A text box with a label 'Father's Name'.
- Mother's Name:** A text box with a label 'Mother's Name'.

At the bottom of the form, there are four navigation buttons: 'Previous', 'Previous & Previous', 'Next', and 'Next & Next'. A 'NUM' label is also present at the bottom right of the form area.

The Windows taskbar at the bottom shows the Start button and several open applications: 'Database...', 'Microsoft E...', 'ICT GCSE - ...', '11 : Datab...', 'untitled - P...', and 'Student's D...'. The system clock shows 9:23 AM.

Evaluation

The objectives set for this task were:

1. To create a database, which stores student's details
2. To create a database, which also acts as an attendance record.
3. To make the database password protected
4. To enable the user to create reports
5. To enable the user to create forms
6. To enable the user to create queries
7. To link tables so that if changes are made in one table, the changes are clear in the other too.
8. To make the system easy to read and clear
9. To save the database on the appropriate backing storage.
10. To include the tuition logo in the system
11. Searching on the system should be easy
12. To make the forms include buttons linking from one record to another.

I was able to achieve the first two objectives which were to create the database to store student details and act as an attendance record or register. The database was password protected, as shown above. The user could easily make reports, forms and run queries. I have also made and given examples of each. I had linked tables by making relationships so that when a change was made on one table, the change would be apparent on the other too. This was shown above. The system was easy to read and clear, in my opinion. The database was saved on the user's email account, USB device, CD-RW and internal memory too. Computers in the tuition centre are all connected via a hub and router. This way if one computer fails, the other computers and other external memory still hold the database system. The tuition logo was put on the forms and reports presentably. Searching can be easy through running queries. Lastly, the forms did include buttons so that the records linked to one another.

User Comments:

Amir's Saturday Tuition

243 Jungle Lane
London
SW17 4PO

120 Hydrant Street
London
SW13 7JQ

12/12/06

Dear Ms Baig,

I would like to firstly thank you for your effort and time to help create this database. The database is just as I expected. It is very easy to use and presentable too. Teachers and pupils are now able to enter their details in forms and this can immediately be stored. The use of control buttons and queries is very helpful and I am very glad that there is password protection on the database.

I would just like to add that to further improve the system; a control button which links to queries should be included on the forms. This would assist many of the teachers and myself and will save time.

Thank You

Mr.Amir Khan.

I then created a control button which would link the forms to queries. Evidence of this is shown below.

The screenshot shows a Microsoft Access window titled 'Microsoft Access - [Student's Details Form]'. The form has a title 'Amir's Saturday Tuition' in a stylized font. Below the title is a section header 'Student Details' in a blue box. The form contains several input fields for student information:

- Pupil ID Number: []
- First Name: Zaynab
- Last Name: Joel
- Date of Birth: 7/2/1991
- Address: 212 Rowan Rd
- Town: Streatham
- Postcode: SW16 9KO
- Telephone Number: 02087648557
- Mobile Number: 07956876105
- Father's Name: Adnan
- Mother's Name: Nasreen

At the bottom of the form, there are navigation buttons: a back button, a forward button, a search button, and a print button. The status bar at the bottom indicates 'Record: 1 of 34' and 'Form View'. The Windows taskbar at the bottom shows the Start button and several open applications: Database..., Microsoft..., 1CTGCS..., 11: Dat..., untitled..., Docume..., and Student...