

A SYSTEM BUILDING EXAMPLE IN MS ACCESS

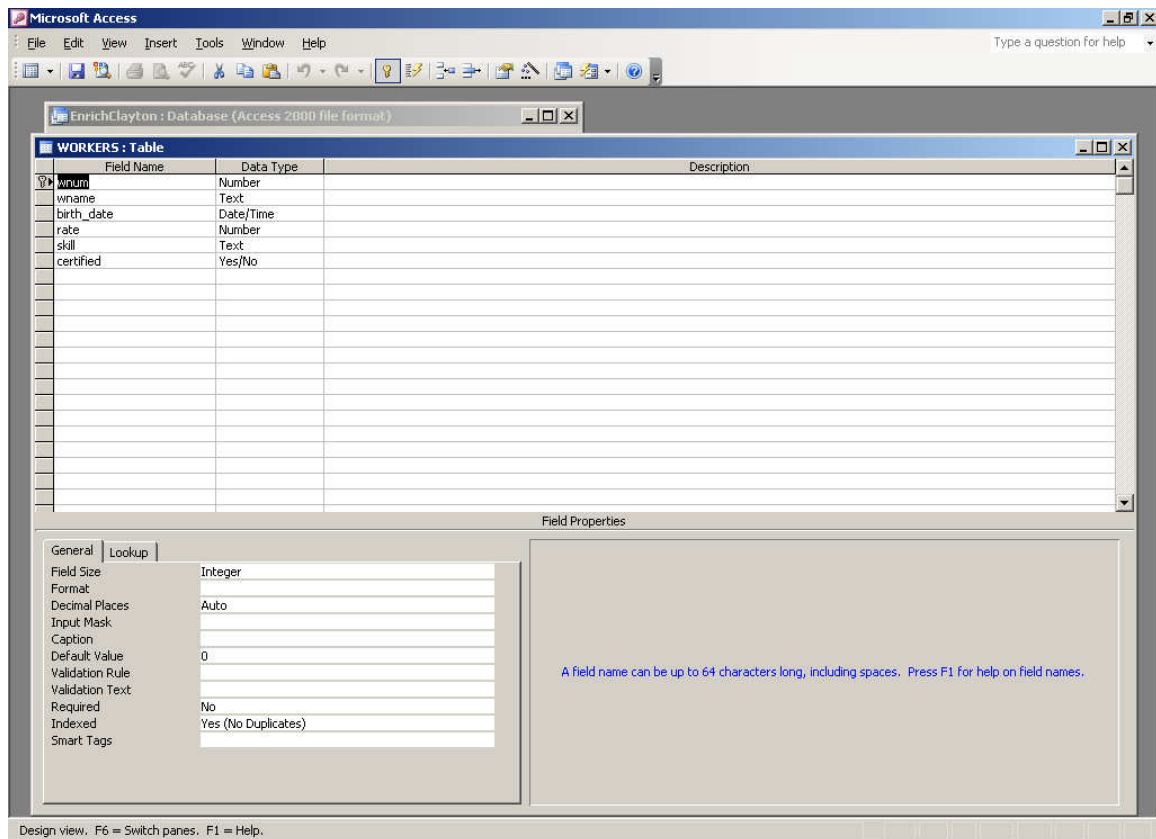
Workers - Builders – Jobs Example

We first do a data analysis and then design a database on paper. We then set this up in MS Access

Our database is called CONSTRUCTION

Then,

WORKERS TABLE DESIGN:

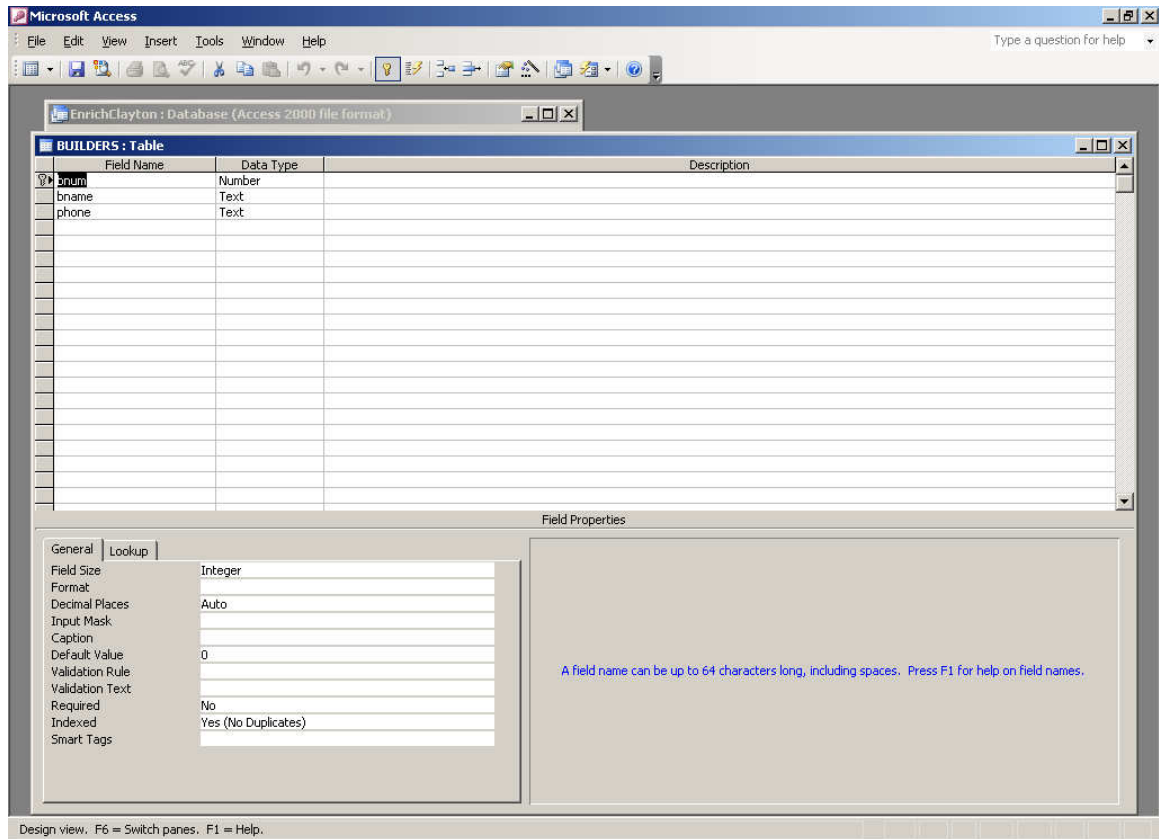


WORKERS TABLE DATA:

The screenshot shows the Microsoft Access interface with the 'WORKERS' table open in Datasheet View. The table contains 12 records with columns for wnum, wname, birth_date, rate, skill, and certified. The status bar at the bottom indicates 'Record: 1 of 12'.

	wnum	wname	birth_date	rate	skill	certified
▶ *	100	James Langdon	2/22/1953	12	Painter	<input type="checkbox"/>
*	200	Rekha Hindocha	1/8/1960	30	Engineer	<input checked="" type="checkbox"/>
*	246	Pierre Garceau	7/19/1947	18.5	Electrician	<input checked="" type="checkbox"/>
+	300	Mary Clutterham	12/30/1950	12.5	Painter	<input checked="" type="checkbox"/>
+	395	Donna Graham	9/27/1956	21	Plumber	<input checked="" type="checkbox"/>
*	452	Isabella Fong	5/12/1957	15	Electrician	<input type="checkbox"/>
*	453	Rosita Cordeiro	8/22/1955	12.5	Painter	<input type="checkbox"/>
+	565	Ernest Schneider	10/31/1957	18	Electrician	<input checked="" type="checkbox"/>
+	664	Maurice Favreau	5/17/1962	12	Plumber	<input type="checkbox"/>
*	743	Oleh Markiw	1/1/1959	15	Carpenter	<input checked="" type="checkbox"/>
*	754	Emil Juliano	9/9/1949	15	Carpenter	<input checked="" type="checkbox"/>
*	887	Salim Agarwal	11/20/1964	17	Carpenter	<input checked="" type="checkbox"/>
*	0			0		<input type="checkbox"/>

BUILDERS TABLE DESIGN



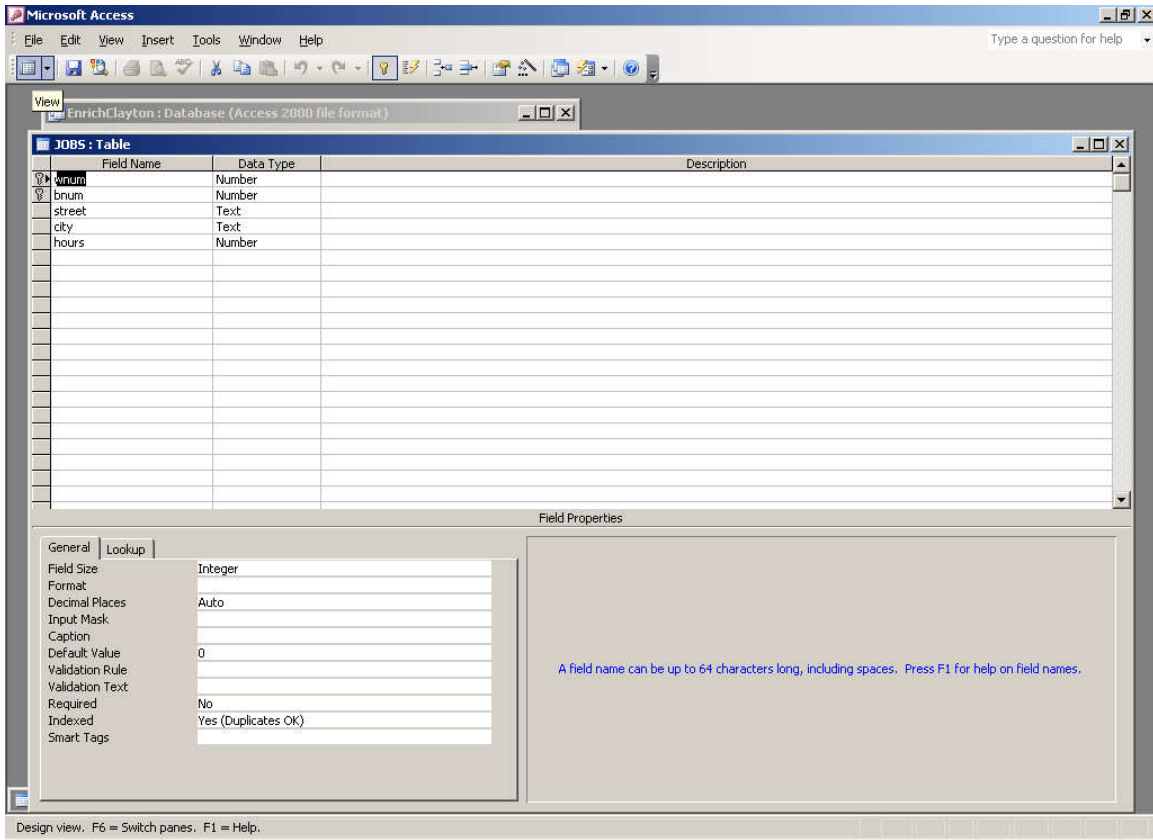
BUILDERS TABLE DATA

The screenshot shows the Microsoft Access interface with a table named 'BUILDERS' displayed in Datasheet View. The table has three columns: 'bnum', 'bname', and 'phone'. The data is as follows:

bnum	bname	phone
21	ABC Construction	(206) 589-7019
22	Dunbar Development	(604) 587-6614
33	Cando Construction	(206) 333-2231
34	K&S Contracting	(604) 222-3367
55	Lambert Contracting	(604) 256-8407
56	Blumberg Building	(206) 774-6094
65	Howell Enterprises	(604) 233-4958
79	MRP Builders	(206) 775-6101
0		

Record: 1 of 8

JOBS TABLE DESIGN



JOBS DTABLE DATA

Microsoft Access

File Edit View Insert Format Records Tools Window Help

Type a question for help

View

EnrichClayton : Database (Access 2000 file format)

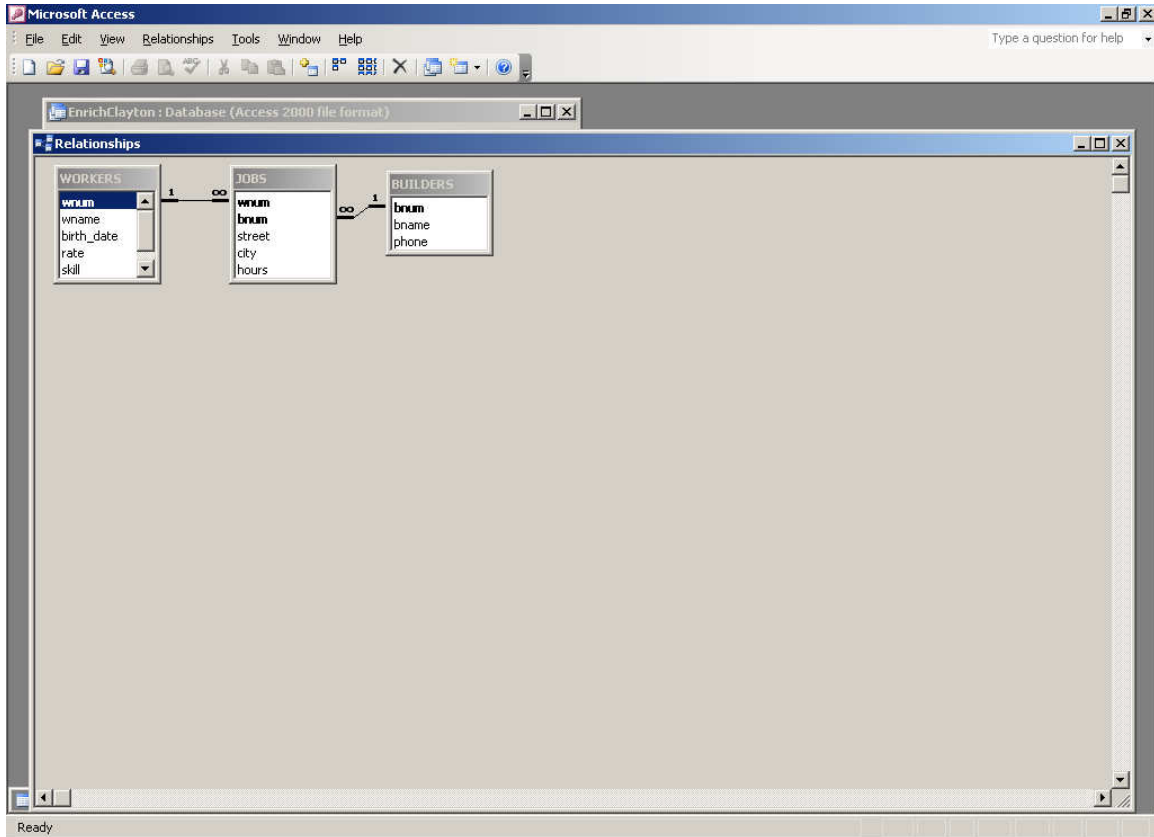
JOBS : Table

wnum	bnum	street	city	hours
100	21	55 Larter St.	Seattle	35
200	34	77 Florence St.	Victoria	20
200	65	987 Blanshard St.	Victoria	25
246	21	122 Hastings St.	Vancouver	15
246	22	72 101 St. N.	Vancouver	20
395	21	55 Larter St.	Seattle	22
452	65	987 Blanshard St.	Victoria	30
565	33	755 Brown Ave.	Seattle	35
565	34	77 Florence St.	Victoria	15
664	56	1025 Highland Cove	Tacoma	20
*	0	0	0	0

Record: 1 of 10

Datasheet View

TABLE RELATIONSHIPS



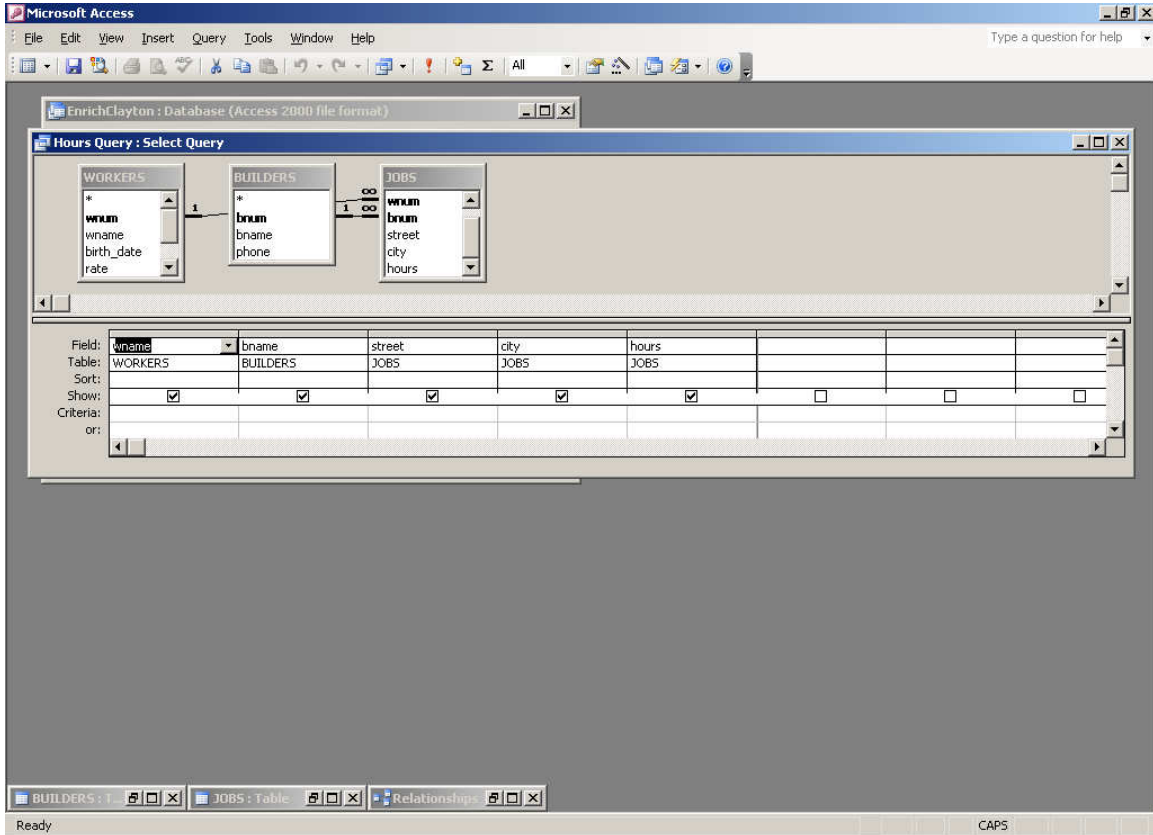
ACCESS HAS NOW SET ALL THIS UP ON DISK

WE CAN NOW ASK ACCESS FOR OUTPUT - QUERIES OR REPORTS

QUERY DESIGN

(CREATE> QUERY DESIGN)

(RUN)



QUERY RESULTS

Microsoft Access

File Edit View Insert Format Records Tools Window Help

Type a question for help

View EnrichClayton : Database (Access 2000 file format)

Hours Query : Select Query

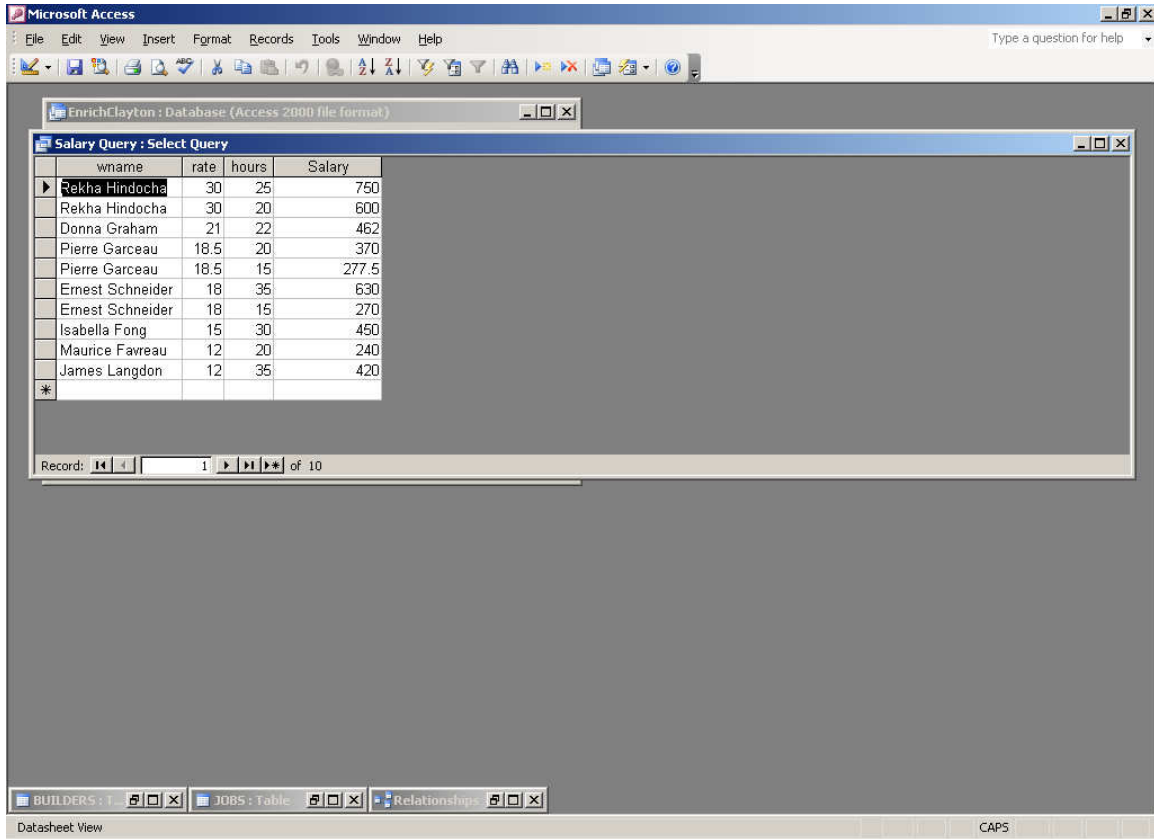
wname	bname	street	city	hours
James Langdon	ABC Construction	55 Larer St.	Seattle	35
Pierre Garceau	ABC Construction	122 Hastings St.	Vancouver	15
Donna Graham	ABC Construction	55 Larer St.	Seattle	22
Ernest Schneider	K&S Contracting	77 Florence St.	Victoria	15
Maurice Favreau	Blumberg Building	1025 Highland Cove	Tacoma	20
Pierre Garceau	Dunbar Development	72 101 St.N.	Vancouver	20
Ernest Schneider	Cando Construction	755 Brown Ave.	Seattle	35
Isabella Fong	Howell Entreprises	987 Blanshard St.	Victoria	30
Rekha Hindocha	K&S Contracting	77 Florence St.	Victoria	20
Rekha Hindocha	Howell Entreprises	987 Blanshard St.	Victoria	25
*				

Record: 1 of 10

BUILDERS : Table JOBS : Table Relationships

Datasheet View CAP5

RESULTS FROM RUNNING OTHER QUERIES

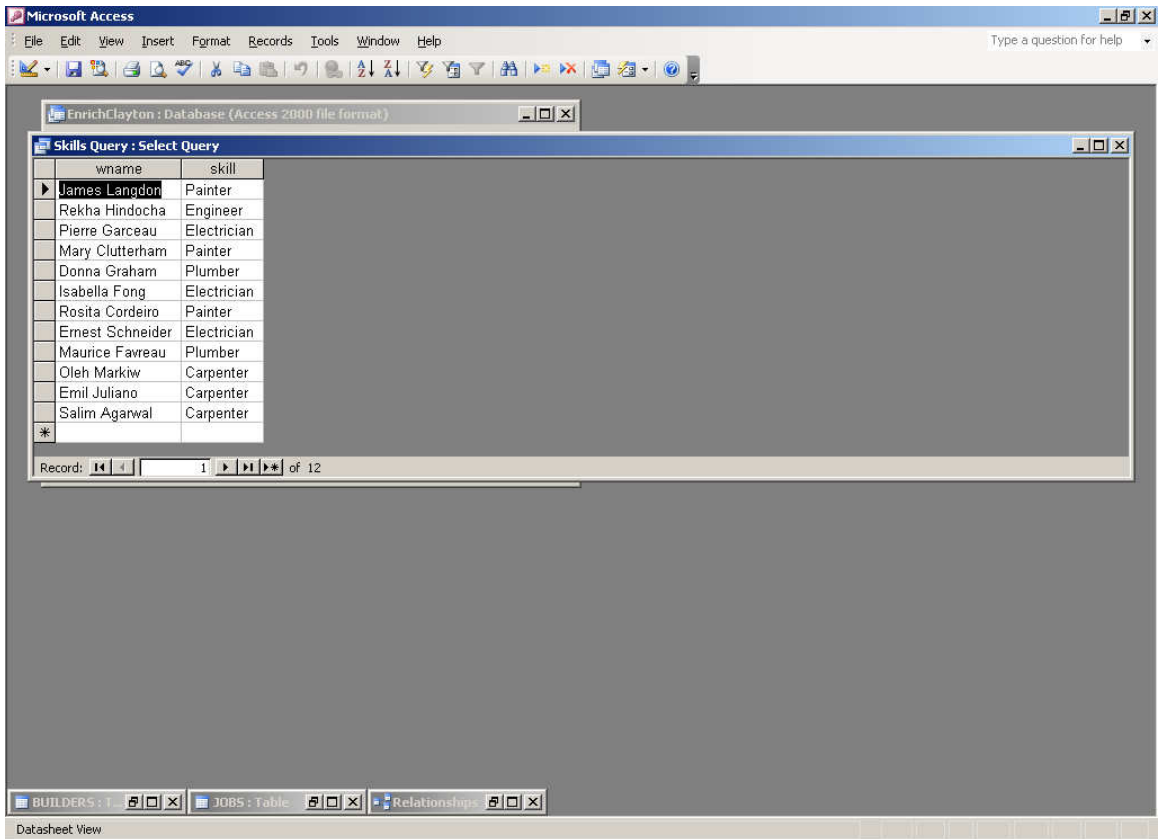


The screenshot shows the Microsoft Access interface with a query window titled "Salary Query : Select Query". The query results are displayed in a table with the following columns: wname, rate, hours, and Salary. The data is as follows:

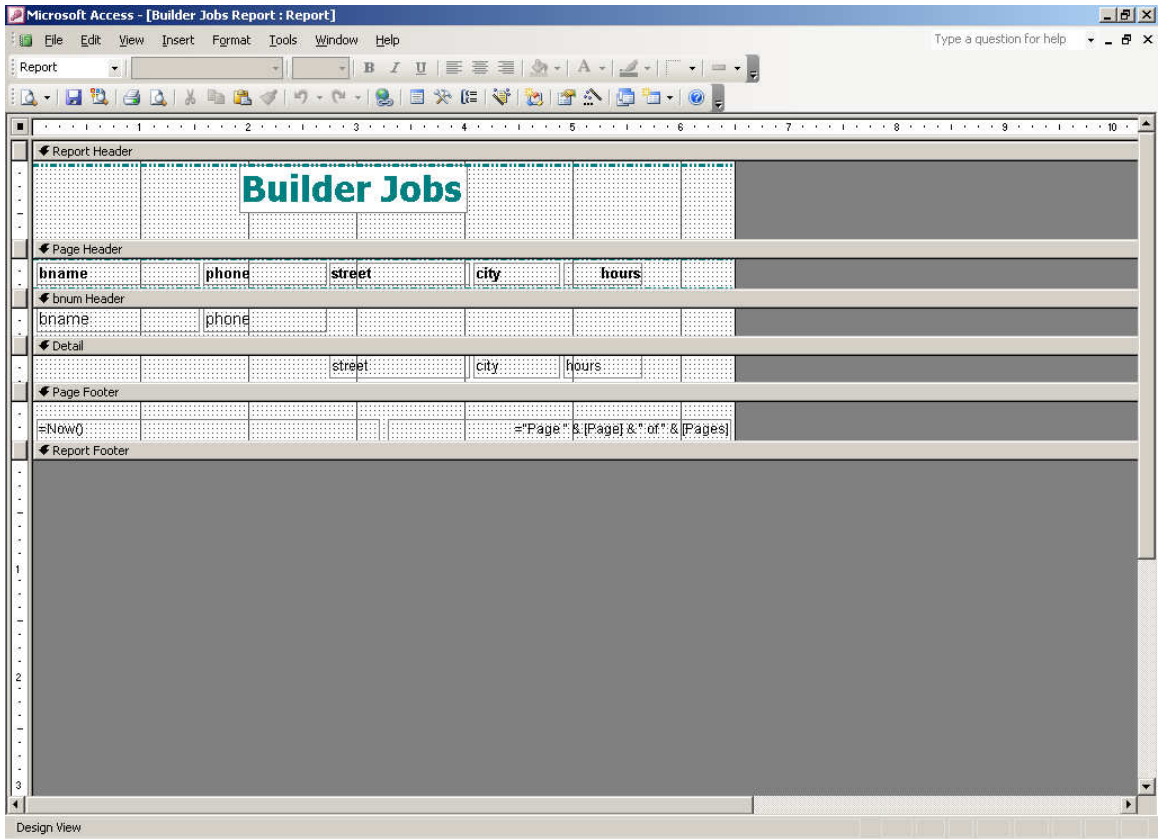
wname	rate	hours	Salary
▶ Rekha Hindocha	30	25	750
Rekha Hindocha	30	20	600
Donna Graham	21	22	462
Pierre Garceau	18.5	20	370
Pierre Garceau	18.5	15	277.5
Ernest Schneider	18	35	630
Ernest Schneider	18	15	270
Isabella Fong	15	30	450
Maurice Favreau	12	20	240
James Langdon	12	35	420
*			

Record: 1 of 10

Microsoft Access interface includes a menu bar (File, Edit, View, Insert, Format, Records, Tools, Window, Help) and a toolbar. The status bar at the bottom shows "Datasheet View" and "CAPS".



DESIGNING A REPORT



PRODUCING THE DESIGNED REPORT

The screenshot shows the Microsoft Access interface with a report titled "Builder Jobs" displayed. The report contains a table with the following data:

name	phone	street	city	hours
ABC Construction	(206) 588-7070	85 Larier St.	Seattle	22
		122 Hartley St.	Vancouver	15
		85 Larier St.	Seattle	35
Dunbar Development	(604) 587-6614	72 101STN.	Vancouver	20
Cando Construction	(206) 333-2231	785 Brown Ave.	Seattle	35
K&S Contracting	(604) 222-3367	77 Florence St.	Vancouver	20
		77 Florence St.	Vancouver	15
Blumberg Building	(206) 774-9094	1025 Highland Cove	Tacoma	20
Howell Enterprises	(604) 233-4958	587 Blairland St.	Vancouver	25
		587 Blairland St.	Vancouver	30

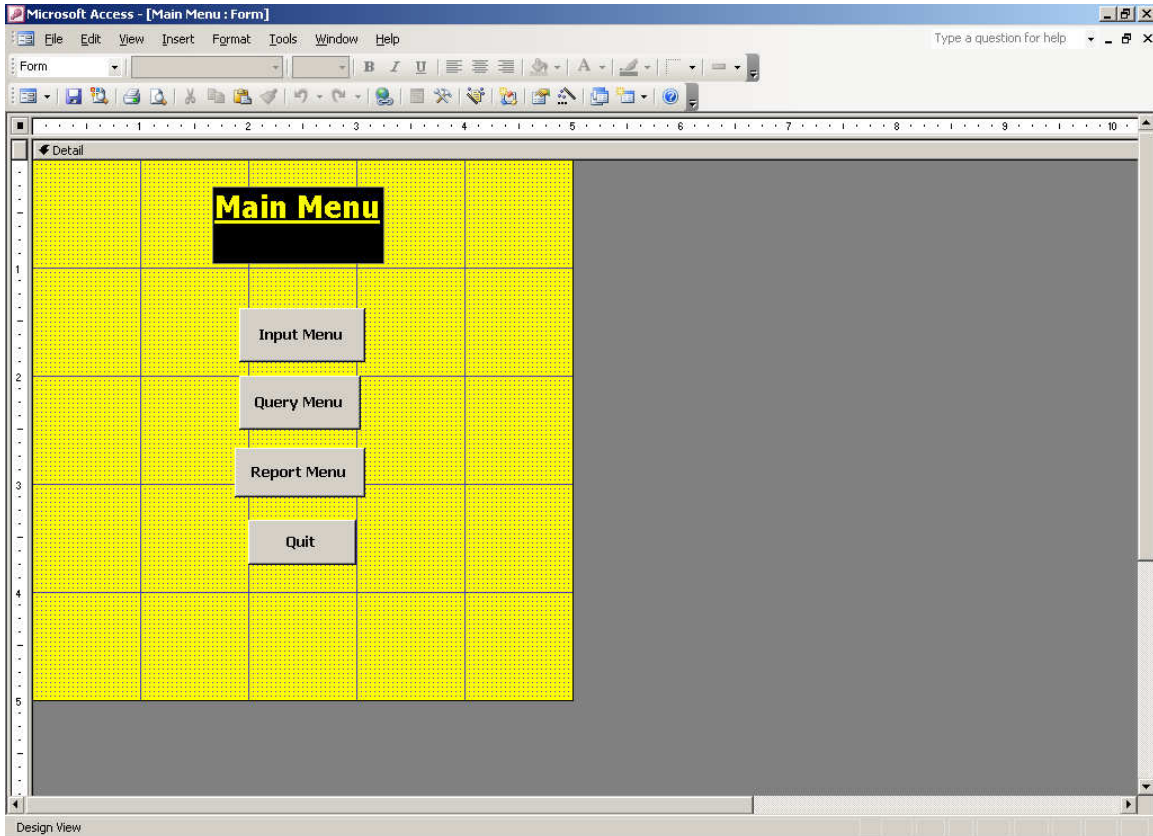
At the bottom of the report, it says "Sunday, July 17, 2011" and "Page 1 of 1". The Access window title is "Microsoft Access - [Builder Jobs]". The status bar at the bottom shows "Page: 1 of 1", "Ready", and "CAPS".

ABOVE, WE SAW EXAMPLES OF USING ACCESS AS A DBMS (DIRECTLY)

BUT ACCESS CAN ALSO BE USED TO DESIGN AN INFORMATION SYSTEM
“AT THE FRONT”

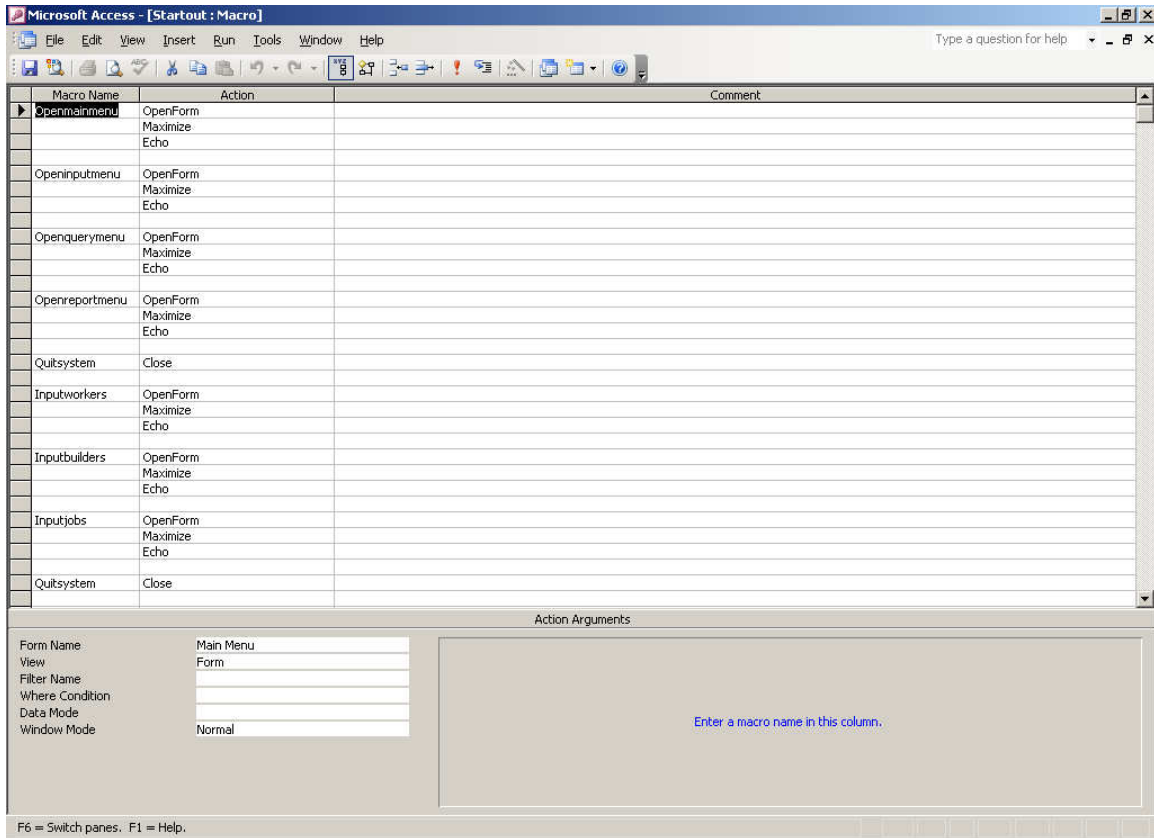
WHAT WOULD SUCH AN INFORMATION SYSTEM CONSIST OF?

DESIGNING A MENU SCREEN

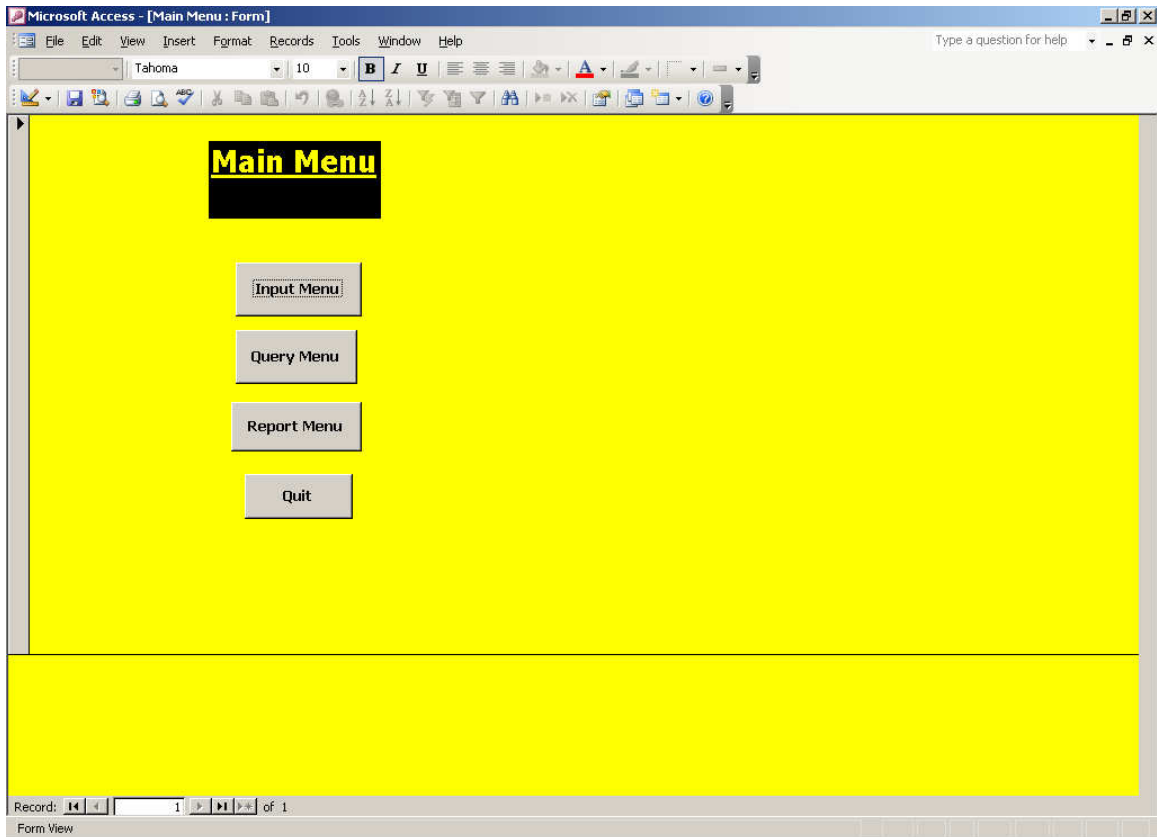


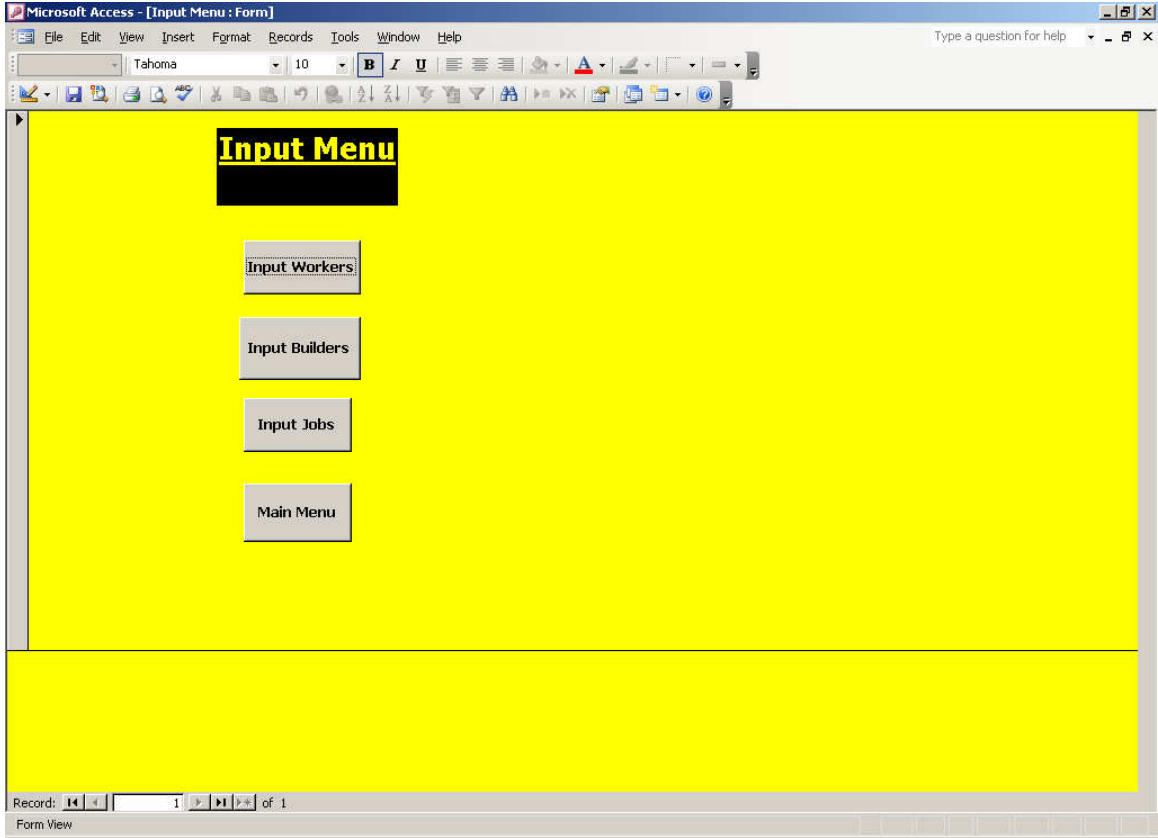
PROGRAMS THAT TIE THE SYSTEM TOGETHER

(MACROS>DESIGN VIEW)



Examples of using the information system built for the builders-jobs business





AFTER PRESSING INPUT WORKER

The screenshot shows the Microsoft Access application window titled "Microsoft Access - [WORKERS]". The menu bar includes File, Edit, View, Insert, Format, Records, Tools, Window, and Help. The status bar at the top right says "Type a question for help". The main window displays a form titled "Enter Worker" with a background image of a globe. The form contains the following fields:

Worker Number	100
Worker Name	James Langdon
Birth Date	2/22/1958
Salary	12
Skill	Painter
Certified	<input type="checkbox"/>

At the bottom of the form, the status bar indicates "Record: 1 of 12" and "Form View".

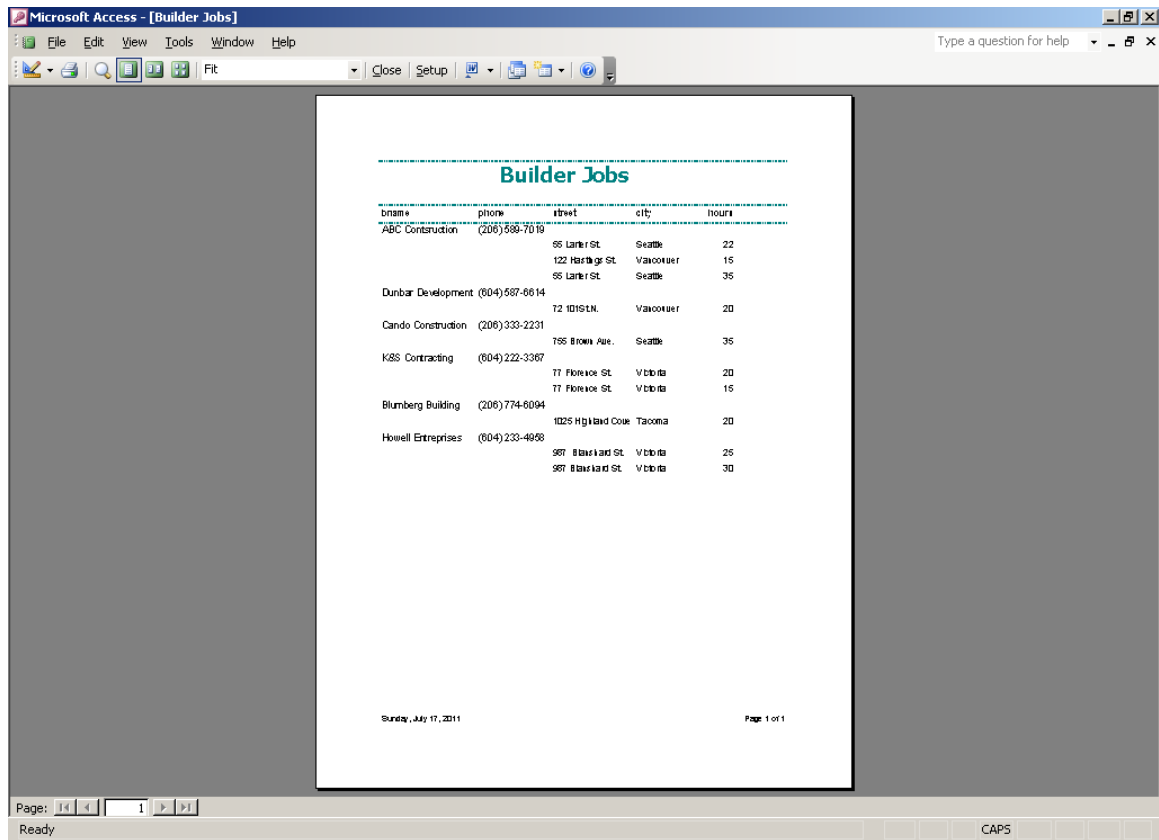
REPORTS MENU

The image shows a screenshot of a Microsoft Access window titled "Microsoft Access - [Report Menu : Form]". The window displays a form with a yellow background. At the top center, the text "Report Menu" is displayed in a bold, yellow font on a black rectangular background. Below this, three buttons are arranged vertically in the center of the form:

- Skills Report
- Builder Jobs Report
- Main Menu

The bottom of the window shows a status bar with the text "Record: 1 of 1" and "Form View". The "CAPS" key indicator is also visible in the bottom right corner of the status bar.

PRESSING BUILDER JOBS REPORT



The screenshot shows a Microsoft Access window titled "Microsoft Access - [Builder Jobs]". The window contains a report titled "Builder Jobs" with a table of data. The table has columns for "name", "phone", "street", "city", and "hours". The data is as follows:

name	phone	street	city	hours
ABC Construction	(206)588-7019	85 Larkin St.	Seattle	22
		122 Harbor St.	Vancouver	15
		85 Larkin St.	Seattle	35
Dunbar Development	(604)687-6614	72 IDISTLN.	Vancouver	20
Cando Construction	(206)333-2231	188 Brown Ave.	Seattle	35
KSS Contracting	(604)222-3367	11 Florence St.	Victoria	20
		11 Florence St.	Victoria	15
Blumberg Building	(206)774-6094	1025 Highland Code	Tacoma	20
Howell Enterprises	(604)233-4988	887 Bursard St.	Victoria	25
		887 Bursard St.	Victoria	30

At the bottom of the report, it says "Sunday, July 17, 2011" and "Page 1 of 1". The Access window also shows a status bar at the bottom with "Ready" and "CAPS" indicators.

DOES A USER USING THIS SYSTEM WITH MENUS, INPUT SCREENS, OUTPUT QUERY SCREENS AND OUTPUT REPORTS REALIZE

- a) that he using Access?
- b) that there is a relational database on disk containing the raw data for all the outputs that the user can get from the system?

The user system talks to Access and Access extracts data from the database on disk (the database consists of 3 tables in a container called CONSTRUCTION)