UIL 2021 Computer Applications Test - State

General test instructions: Follow instruction to create printouts for this contest. When time is called, completed printouts will be graded. Calibri in 12-point font was used for the document key, but this is not a requirement, and a smaller type is sometimes easier to fit to a page. Access default font size is acceptable for the report. For Access, when Text is specified for the Data Type, it should be Short Text in Office 2013/2016.

I. SPREADSHEET PRINTOUT   MAXIMUM 150

A. Create a spreadsheet with data on right; name the worksheet **Time**; show Row 1 as bold type.

A. Add data at right in Cells B95 thru B98 with 2 spaces after each colon.

	A	B	C	D	E	F	G
1	EmpNo	Start	End	Start Time	Shift	Time	Period
2	20	2/1/20 8:15 AM				12:00 AM	Graveyard
3	36					8:00 AM	First
4	219					4:00 PM	Evening
5	312						

	B
95	Cell C2:
96	Cell D2:
97	Cell E2:
98	Cell B3:

B. In Cell A6, enter the following formula to replicate data from Cell A2, and fill down thru Cell A93: =A2

C. Format date and time in the **Start** column as shown.

D. In Cell B3, use a TIME function specifying 6 hours and 15 minutes and add to the value in Cell B2, formatting the result to match the format in Cell B2 and replicate Cell B3 down thru B93.

E. In Cell C2, use a TIME function specifying 8 hours and add to the value in Cell B2, formatting the result to match the format in Cell B2.

F. In Cell D2, use the MOD function with Cell B2 as number parameter and 1 as divisor; format time as follows: h:mm AM

G. In Cell E2, use the LOOKUP function with Cell D2 as the lookup value and Cells F1 thru G4 as the table array, using absolute reference as necessary.

H. Select Cells C2 thru E2 and replicate down thru Cells C93 thru E93.

I. Copy Cells A1 thru A93 and E1 thru E93 and paste special as values into Columns A & B on a new sheet.
   1. Name the new sheet **Subtotal.**
   2. Center everything in its respective cell.

J. Make the following changes on the **Time** worksheet.
   1. Center everything in **Time** worksheet in its respective cell.
   2. Hide Rows 5 thru 91.
   3. Copy formula including equal sign from Cell C2; paste into Cell B95 after the colon and the 2 spaces.
   4. Do the same for formulas in Cells D2, E2 and B3, placing them in Cells B96, B97 and B98 following the colons and spaces in each of the cells.
   5. Left align data in Cells B95 thru B98.

K. Print your worksheet with 1" margins in Calibri 12-point font with the following specifications.
   1. Use the following header 1" from the top of the page and right aligned on the right margin, replacing 99999 with your contestant number: (99999)-State-1
   2. Show gridlines and row and column indicators.
   3. Center your printout horizontally and vertically on the page.
   4. Set the print area to Cells A1 thru G98.
   5. Print your worksheet on one page in landscape orientation.

L. With the **Subtotal** sheet open, make the following changes.
   1. Sort the data in ascending order by **EmpNo** and then by **Shift** in ascending order.
   2. Subtotal the data such that at each change in **EmpNo**, a Count function is used to calculate a subtotal for the **Shift** column that will appear below each group.
   3. View **Subtotal** worksheet showing everything EXCEPT detail data.

M. These 6 lines of data will be copied into a document in **Part III**.

N. Save your spreadsheet as a file named **State**.

II. DATABASE

A. Open a blank database named **State**, and import the **Time** worksheet from the **State** spreadsheet created in **Part I**, naming the table **Time**.

Field Name	Data Type	Description (Optional)
ID	AutoNumber	
EmpNo	Number	Integer, fixed, 0 decimals
Start	Date/Time	General date
End	Date/Time	General date
Start Time	Date/Time	Medium time
Shift	Short Text	10 characters
Earnings	Currency	2 decimals

   1. Do not import the **Time** or **Period** fields.
   2. Let Access choose a primary key and click finish.

B. Delete rows 93 to 97 caused by data conversion errors from the Excel formulas. Delete Time$_ImportErrors table.

C. In design view, change the field descriptions of the **Time** table with specifications shown above, and add the **Earnings** field with field properties as shown.

D. From **2021 Starter Files**, import the following tables: **Hourly Employees**, **Hourly Rate** and **Schedule**.

E. Use all tables and create the following relationships:
   1. Relate the **Employees ID** field of the **Hourly Employees** table to the **EmpNo** field of the **Time** table and to the **EmpID** of the **Schedule** table.
   2. Relate the **Rate Code** field of the **Hourly Rate** table to the **Rate Letter** field of the **Schedule** table and to the **Rate** field of the **Hourly Employees** table.
   3. Save your relationships and close.

F. In design view, create an update query following these steps carefully.
   1. Use **Schedule** and **Hourly Employees** tables and update **Rate Letter** field from **Schedule** table to be **Rate** field from **Hourly Employees** table and run the query.
   2. Add the **Hourly Rate** table to the query and update **Hourly Pay** field from the **Schedule** table to be the **Rate Amt** field from **Hourly Rate** table and run query.
   3. Add the **Time** table and update the **Earnings** field in **Time** table by multiplying **Rate Amt** from **Hourly Rate** table times 8 and run the query.
   4. Update the **Wages** field by adding **Wages** from the **Schedule** table and **Earnings** from **Time** table and run query only one time. *(If you have to rerun the query, reset **Wages** to zeroes.)*
   5. Save the query as **UpdQry**.

G. Create a crosstab query using **Time** and **Hourly Employees** tables with these specifications.
   1. Create a field named **Name** that concatenates the **FirstName** and **LastName** fields from the **Hourly Employees** table with a space between and indicate to group by row heading.
   2. Select **Earnings** field from **Time** table and indicate to group by row heading
   3. Select **Shift** field from **Time** table and indicate to group by column heading.
   4. Select **Shift** field from **Time** table again and indicate to count for a value.
   5. Save the query as **CrossQry** and run it, then select everything and copy to be used in **Part III**.

III. DOCUMENT WITH TABLE/FORMULAS   MAXIMUM 200

A. Create a simplified memo with 1 ½" top margin and other conventional margins.
   1. Use today's date and use the following addressee: Shift Managers
   2. Use the subject line in all caps: FEBRUARY EARNINGS
   3. Use the following header 1" from the top edge of page and right aligned on the right margin, replacing 99999 with your contestant number: (99999)-State-2

B. Use the following for the body.

Shown is a recap of February earnings for employees at one location. We need this type of report for each location that has 24-hour shifts. The tables shown are the Subtotal data from Excel and the CrossQry data and Schedule table from Access.

[Paste the CrossQry data copied from Access created in Part II and leave approximately one blank line above and below and delete the top row that says 'CrossQry'. Left align on left margin.]

[Paste the Schedule Access table created in Part II and left align on left margin. Delete the top row that has the label 'Schedule'. Format EmpID as numbers with no decimals, and format all other values as numbers with commas and 2 decimals. There should be approximately one blank line between the two tables. Add a blank line between this table and the next paragraph.]

The following formulas were used in our calculations.
Wages: [Paste the formula for Wages from the UpdQry created in Part II.]
Name: [Paste the formula for Name from the CrossQry created in Part II.]

C. Center everything in its respective cell in the **Subtotal** data from Excel, the **CrossQry** data and the **Schedule** table from Access.
D. Leave no blank line between Paragraph 2 and formulas.
E. Use the following sender's name and title on one line: Winchell Factor, Personnel Director
F. Use the following reference initials: uil
G. Save the document as a file called **State-2** and print it on one page in portrait orientation.

[Insert the data copied from the Subtotal sheet of the Excel file created in Part I.
Top align with top of Paragraph 1 and right align on right margin, wrapping document text to left of table.]

	A	B	C	D	E	F	G
1	EmpNo	Start	End	Start Time	Shift	Time	Period
2	20	2/1/20 8:15 AM	2/1/20 4:15 PM	8:15 AM	First	12:00 AM	Graveyard
3	36	2/1/20 2:30 PM	2/1/20 10:30 PM	2:30 PM	First	8:00 AM	First
4	219	2/1/20 8:45 PM	2/2/20 4:45 AM	8:45 PM	Evening	4:00 PM	Evening
92	219	2/24/20 6:45 PM	2/25/20 2:45 AM	6:45 PM	Evening		
93	312	2/25/20 1:00 AM	2/25/20 9:00 AM	1:00 AM	Graveyard		
94							
95		Cell C2: =B2+TIME(8,0,0)					
96		Cell D2: =MOD(B2,1)					
97		Cell E2: =LOOKUP(D2,$F$1:$G$4)					
98		Cell B3: =B2+TIME(6,15,0)					

UIL Computer Applications - TEST ANSWER KEY FOR GRADERS - Printout 1

Today's Date

Shift Managers

FEBRUARY EARNINGS

Shown is a recap of February earnings for employees at one location. We need this type of report for each location that has 24-hour shifts. The tables shown are the Subtotal data from Excel and the CrossQry data and Schedule table from Access.

EmpNo	Shift
20 Count	23
36 Count	23
219 Count	23
312 Count	23
Grand Count	92

Name	Earnings	Evening	First	Graveyard
Alice Loste	$81.20	8	7	8
Noah Little	$111.20	8	8	7
Rory Storm	$91.60	8	8	7
Stan Stihl	$134.00	7	8	8

EmpID	Rate Letter	Hourly Pay	Wages
20	D	11.45	2,106.80
36	C	10.15	1,867.60
219	H	16.75	3,082.00
312	F	13.90	2,557.60

The following formulas were used in our calculations.
Wages: [Wages]+[Earnings]
Name: [FirstName] & " " & [LastName]

Winchell Factor, Personnel Director

uil

UIL 2021 Computer Applications Tiebreaker – State - Score Sheet

GENERAL INSTRUCTIONS: All contestants take the Tiebreaker component of the test, but it is only to be scored if a tie occurs in the top six places.

I. **CALCULATE GROSS WORDS PER MINUTE**:
   A. Circle all errors on the tied contestants' papers.
   B. Determine the gross words per minute.
      1. Find the number of words typed to the right of the last complete line typed by contestant.
      2. Add the number of words in the last line if it is incomplete to the tally.
      3. Divide the number by five to get the gross words per minute.
      4. For example, if a contestant typed twenty lines plus seven words on the next line, add the number out to the right of the completed line plus seven.
      5. Divide by five to get gross words per minute.

II. **DETERMINE THE GROSS WORDS PER MINUTE** _____ _____ _____

III. **DEDUCT ONE POINT FOR EACH ERROR** _____ _____ _____

IV. ✔ **TOTAL - GROSS WPM TYPED LESS ERRORS** _____ _____ _____

V. **ADD FIVE BONUS POINT FOR EACH SUCCESS**

FORMAT	Top margin 1 ½"			
	Left margin 1"			
	Right margin 1"			
	Bottom margin at least 1 - 1 ½"			
TITLE	Title in boldface type			
	Title centered			
	Acute accent shown on **CÁDIZ**			
	3 blank lines between title and body			
BODY	Body of report single spaced			
	Everything in Calibri 12-point type			
	Paragraphs not indented			
	Double spaced between paragraphs			
¶ 1	Add five points for each acute accent in Cádiz **max 20**			
¶ 3	Add five points for each acute accent in Cádiz, Pópulo and María **max 15**			
	Tilde accent shown in Viña			
✔	**TOTAL - BONUS POINTS**			
✔	**GRAND TOTAL-WPM PLUS BONUS POINTS**			
✔	**GRADERS' INITIALS**			

CÁDIZ

Cádiz is a very old city and port in the southwestern part of Spain. It is the capital of the	21
Province of Cádiz, one of eight districts that make up the self-governing community of	35
Andalusia. Cádiz is one of the oldest continuously inhabited areas in Western Europe, with	49
archaeological remains dating to 3100 BCE. It has been a primary home port of the Spanish	65
Navy since the accession of the Spanish Bourbons in the 18th century. The city is a member of	83
the Most Ancient European Towns Network. It is also the site of the University of Cádiz.	99
The city was founded as Gadir in approximately 1104 BCE by the Phoenicians. The Phoenicians	114
then formed a port in the seventh century BCE. The expeditions of Himilco around Spain and	130
France and of Hanno around Western Africa began there. The Phoenician settlement traded	143
with Tartessos, a city and state whose exact location remains unknown but is thought to have	159
been near the mouth of the Guadalquivir River.	167
Positioned on a narrow spit of land surrounded by the ocean, Cádiz is a classic Andalusian city	184
with numerous attractive vistas and well-preserved historical landmarks. The older part within	196
the remnants of the city walls is commonly referred to as Old Town or in Spanish, *Casco*	213
Antiguo. It is characterized by the old charm of its various sections, among them El Pópulo, La	230
Viña, and Santa María, which present a noticeable contrast to the newer areas of town. While	246
the Old Town's street plan consists of narrow winding alleyways connecting large plazas, newer	260
areas typically have wide streets and more modern buildings.	269
The Old Town is also one of the most densely populated urban areas in Europe. In addition, the	287
city is dotted with numerous parks where exotic plants flourish, including giant trees	300
supposedly brought to Spain by Columbus from the New World. In recent years, the city has	315
experienced considerable reconstruction. Many monuments, cathedrals, and landmarks have	325
been cleaned and restored, attracting tourists from many countries.	334