



**Monmouth**  
COLLEGE

• Name: \_\_\_\_\_

• Date: \_\_\_\_\_

• Section: \_\_\_\_\_

---

## **BUSI 201 Business Data Analysis**

### **Final Exam**

**Fall 2024**

#### **INSTRUCTIONS:**

- Once you have completed the exam, save or rename the workbook as **LoginID-final.xlsx**, and submit it as an email attachment to **BPARK@monmouthcollege.edu**.
- Submissions via SharePoint file sharing will not be accepted and will result in automatic forfeiture.
- **BUSI201-F2024-Final-Workbook.xlsx** is the companion workbook for this exam.
- The workbook contains 9 worksheets: **Sheet01, Sheet02, Sheet03-1, Sheet03-2, Sheet04-1, Sheet04-2, Sheet05-1, Sheet05-2, and Sheet06**.
- The quiz booklet includes 6 problems with a total of 16 tasks.
- Before submitting, double-check your email for the attached file, the correct file name, and the receiver's email address. You will not be allowed to submit or update your solutions after the in-class deadline.
- Good luck, and have a wonderful Winter Break!

**Problem #1. Functions and PivotTables**

Navigate to the worksheet Sheet01. **You are NOT allowed to convert the given data into a table for this problem.** Complete the tasks described below. Any material that is determined to be manually calculated and typed in will NOT receive credit. All results must function correctly, regardless of how the data is sorted or filtered.

	Apartment	Condo	House	Townhouse	Grand Total
Agent A	<b>A</b>				<b>B</b>
Agent B					
Agent C					
Agent D					
Grand Total	<b>C</b>				<b>D</b>

- **Task #1:** Fill the cells in the Red Box: A with the average selling price of the properties sold by each agent by property type. For instance, cell N3 should display the average selling price of Apartments under the management of Agent A.
- **Task #2:** Fill the cells in the Blue Box: B with the average selling price of the properties sold by each agent regardless of property type. For instance, cell R3 should display the average price of all properties under Agent A's management.
- **Task #3:** Fill the cells in the Green Box: C with the average selling price of the properties by each property type, regardless of the managing agent. For instance, cell N7 should display the average selling price of Apartments.
- **Task #4:** Fill the cells in the Orange Box: D with the average selling price of all properties regardless of property type or managing agent.

**Problem #2. Functions**

Navigate to worksheet Sheet02. Complete the tasks described below using functions. Any completed material that is deemed to be manually calculated will not receive any credit. All results may work as intended regardless of how the data is sorted or filtered.

ID	Company	Role	Salary	High/Low	Rank	Deadline	City	State	Mode
366009	Wallace Inc	Business Analyst	\$ 139,241.00	<b>A</b>	<b>B</b>	12/7/2024	South Kyleland	California	Online
115217	Foster, Johnson and Cortez	Product Manager	\$ 125,117.00			11/21/2024	Fieldshaven	Arizona	In-person
634050	Davis, Anderson and Johnson	Marketing Specialist	\$ 136,774.00			12/6/2024	Lake Billy	Illinois	In-person
386501	Johnson, Perez and Johnson	IT Support	\$ 119,673.00			12/13/2024	Natalieville	New York	Hybrid
516778	Duffy-Johnston	Data Analyst	\$ 125,767.00			12/14/2024	Boydburgh	Florida	Hybrid
812555	Cruz PLC	Project Manager	\$ 120,061.00			12/11/2024	Herreraton	Georgia	Online
402620	Miller-Trujillo	Data Analyst	\$ 90,592.00			12/6/2024	Schmitthaven	Ohio	Hybrid
818991	Cobb, Parker and Taylor	Data Analyst	\$ 68,556.00			12/5/2024	North Kevin	New York	Online
613736	Gonzales-Aguilar	IT Support	\$ 81,535.00			11/22/2024	East Kelli	Arizona	In-person
944986	Cook, Pena and Holland	Data Analyst	\$ 132,949.00			12/2/2024	North John	Georgia	In-person

- **Task #1:** Fill the cells in the Red Box: A with the text High if the expected salary is greater than or equal to \$100,000, and LOW if the expected salary is strictly less than \$100,000. For instance, the cell F3 should contain the text High.
- **Task #2:** Fill the cells in the Blue Box: B the ranking of expected salaries in descending order, where the highest salary is ranked 1. For instance, the cell G3 should contain the number 3.

Expected Salary Finder				
Job ID	Role	Salary	City	State
232351	<b>C</b>			
473621				
128995				

- **Task #3:** Fill the cells in the Green Box: C with the Role, Salary, City, and State information corresponding to the Job ID given in column M. The prompted Job ID will be randomized.

**Problem #3. Filtering and Sorting**

Complete the tasks described below across two worksheets, Sheet03-1 and Sheet03-2.

Property	Property Type	List Price	Selling Price	Bedroom	Bathroom	Square Feet	Sale Date	Agent
P-11	Condo	\$ 328,274.00	\$ 317,821.99	3	3	2,000	10/20/2022	Agent D
P-13	Condo	\$ 561,927.00	\$ 602,207.36	5	1	3,995	7/2/2022	Agent A
P-20	Condo	\$ 291,564.00	\$ 310,600.65	5	2	1,446	6/10/2022	Agent B
P-40	Condo	\$ 308,823.00	\$ 308,478.37	3	3	2,643	7/4/2022	Agent A
P-42	Condo	\$ 648,863.00	\$ 655,290.49	1	4	3,691	8/24/2022	Agent B
P-51	Condo	\$ 630,761.00	\$ 578,295.16	4	1	2,698	6/7/2022	Agent B
P-53	Condo	\$ 370,984.00	\$ 339,284.38	5	4	4,742	5/26/2022	Agent B

----- Table is cropped to fit the page -----

- **Task #1:** Navigate to worksheet Sheet03-1. Filter the data so that Condos with a Listing Price that is strictly less than \$750,000 are visible to the reader.

ID	Company	Role	Salary	Deadline	City	State	Mode
219344	Castillo, Knight and Palmer	Project Manager	\$ 68,365.00	11/19/2024	Port Robin	Nevada	Online
333468	Parker, Wilson and Brown	Graphic Designer	\$ 130,159.00	11/20/2024	South Amanda	Arizona	In-person
115217	Foster, Johnson and Cortez	Product Manager	\$ 125,117.00	11/21/2024	Fieldshaven	Arizona	In-person
316334	Jones-Cooke	Software Engineer	\$ 118,151.00	11/22/2024	Burtonview	Georgia	Hybrid
613736	Gonzales-Aguilar	IT Support	\$ 81,535.00	11/22/2024	East Kelli	Arizona	In-person
831380	Villegas-Torres	Project Manager	\$ 71,184.00	11/22/2024	Townsendhaven	Texas	Hybrid
390577	Frederick-Simpson	IT Support	\$ 70,198.00	11/23/2024	New Danielstad	Texas	In-person

----- Table is cropped to fit the page -----

- **Task #2:** Navigate to worksheet Sheet03-2. Sort the data so that job postings with earlier deadlines appear at the top. If two job postings share the same deadline, prioritize the posting with the higher expected salary.

**Problem #4. Conditional Formatting**

Complete the tasks described below across two worksheets, Sheet04-1 and Sheet04-2.

Property ID	Property Type	List Price	Selling Price	Bedrooms	Bathrooms	Square Feet	Sale Date	Agent
P-1	Condo	\$ 1,370,412.00	\$ 1,434,840.84	3	2	5,240	4/13/2022	<b>Agent A</b>
P-2	Condo	\$ 879,903.00	\$ 933,309.76	3	2	2,762	9/30/2022	Agent B
P-3	House	\$ 195,714.00	\$ 187,182.22	3	3	2,982	1/14/2022	Agent C
P-4	Condo	\$ 1,124,339.00	\$ 1,051,805.54	3	3	1,451	6/8/2022	<b>Agent A</b>
P-5	Condo	\$ 780,271.00	\$ 819,380.48	1	3	4,789	6/1/2022	<b>Agent A</b>
P-6	Townhouse	\$ 274,123.00	\$ 290,945.09	3	4	3,889	4/18/2022	<b>Agent A</b>
P-7	House	\$ 1,086,093.00	\$ 1,192,639.84	4	2	2,579	7/7/2022	Agent D

----- **Table is cropped to fit the page** -----

- **Task #1 & #2:** Navigate to worksheet Sheet04-1. Apply conditional formatting to replicate the results above. The conditions are as follows:
  - Cells that contain the Top 25% of properties in terms of square footage is to be filled with a green background. The exact shade of green does not matter.
  - Cells that contain Agent A should be formatted so that the text is ***Bold and Italic***.

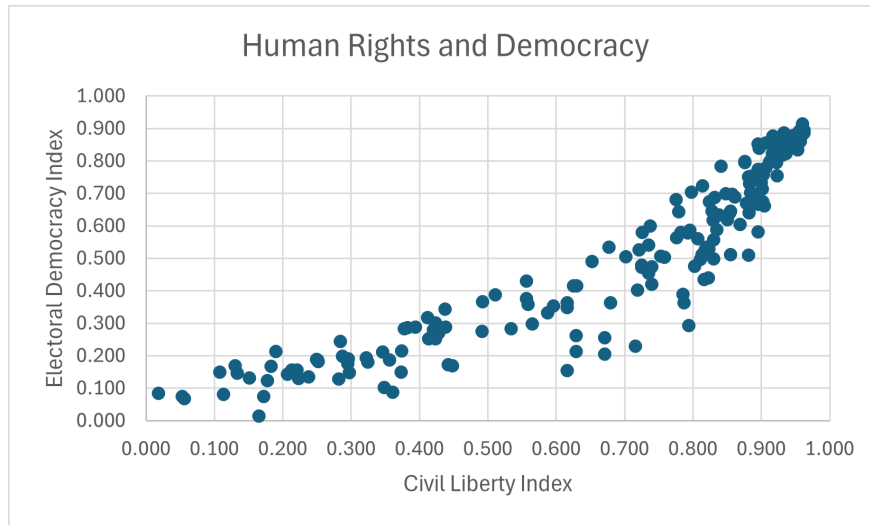
ID	Company	Role	Salary	Deadline	City	State	Mode
366009	Wallace Inc	Business Analyst	\$ 139,241.00	12/7/2024	South Kyleland	California	Online
115217	Foster, Johnson and Cortez	Product Manager	\$ 125,117.00	11/21/2024	Fieldshaven	Arizona	In-person
634050	Davis, Anderson and Johnson	Marketing Specialist	\$ 136,774.00	12/6/2024	Lake Billy	Illinois	In-person
386501	Johnson, Perez and Johnson	IT Support	\$ 119,673.00	12/13/2024	Natalieville	New York	Hybrid
516778	Duffy-Johnston	Data Analyst	\$ 125,767.00	12/14/2024	Boydburgh	Florida	Hybrid
812555	Cruz PLC	Project Manager	\$ 120,061.00	12/11/2024	Herrerton	Georgia	Online
402620	Miller-Trujillo	Data Analyst	\$ 90,592.00	12/6/2024	Schmitthaven	Ohio	Hybrid

----- **Table is cropped to fit the page** -----

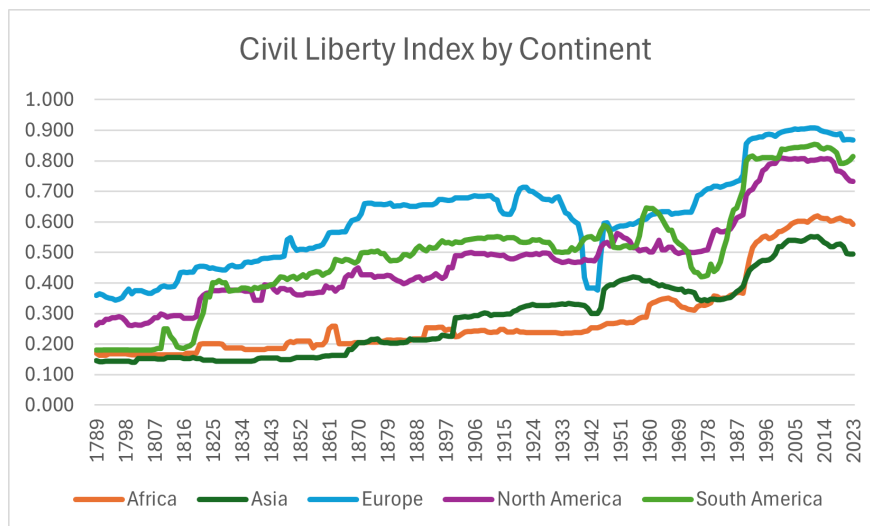
- **Task #3:** Navigate to worksheet Sheet04-2. Apply conditional formatting to visualize the salary as displayed in the figure above. The colors need not match.

**Problem #5. Charts**

Complete the tasks described below across two worksheets, Sheet05-1 and Sheet05-2.



- **Task #1:** Navigate to worksheet Sheet05-1. Replicate the chart displayed above as closely as possible.



- **Task #2:** Navigate to worksheet Sheet05-2. Replicate the chart displayed above as closely as possible.

**Problem #6. PivotTables**

Navigate to the worksheet Sheet06. Complete the task described below.

Average of List Price						
Column Labels						
Row Labels	Apartment	Condo	House	Townhouse	Grand Total	
Agent A	\$ 452,617.00	\$ 984,186.00	\$ 1,153,531.00	\$ 760,919.00	\$ 788,736.75	
Agent B		\$ 630,761.00			\$ 630,761.00	
Agent C	\$ 398,665.00	\$ 1,230,793.00	\$ 612,894.00	\$ 788,836.00	\$ 685,970.60	
Agent D	\$ 1,020,045.00	\$ 589,735.00			\$ 733,171.67	
<b>Grand Total</b>	<b>\$ 544,521.80</b>	<b>\$ 834,899.33</b>	<b>\$ 883,212.50</b>	<b>\$ 767,898.25</b>	<b>\$ 739,413.12</b>	

**City** ☰ ✖

- Chicago
- Houston
- Los Angeles
- New York
- Phoenix
- San Diego

**Bedrooms** ☰ ✖

- 1
- 2
- 3
- 4
- 5

**Bathrooms** ☰ ✖

- 1
- 2
- 3
- 4

- **Task #1:** Replicate the following PivotTable displayed below as closely as possible on the existing worksheet Sheet06.
- **Task #2:** Add slicers for the fields City, Bedrooms, and Bathrooms, **AND** apply the filters to match the figure provided above.

• Original Score: \_\_\_\_\_

• Recovered Score: \_\_\_\_\_

• Original Date: \_\_\_\_\_

• Recovered Date: \_\_\_\_\_