

# ANALYZING STUDENT PERFORMANCE BASED UPON SCORES

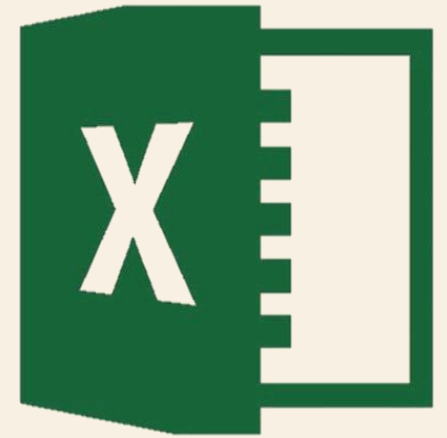
**Dr. Basim  
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**PRACTICE-2**

**X**

This practice is a part of training  
Program Applications of  
Microsoft Excell in Psychology  
and Education

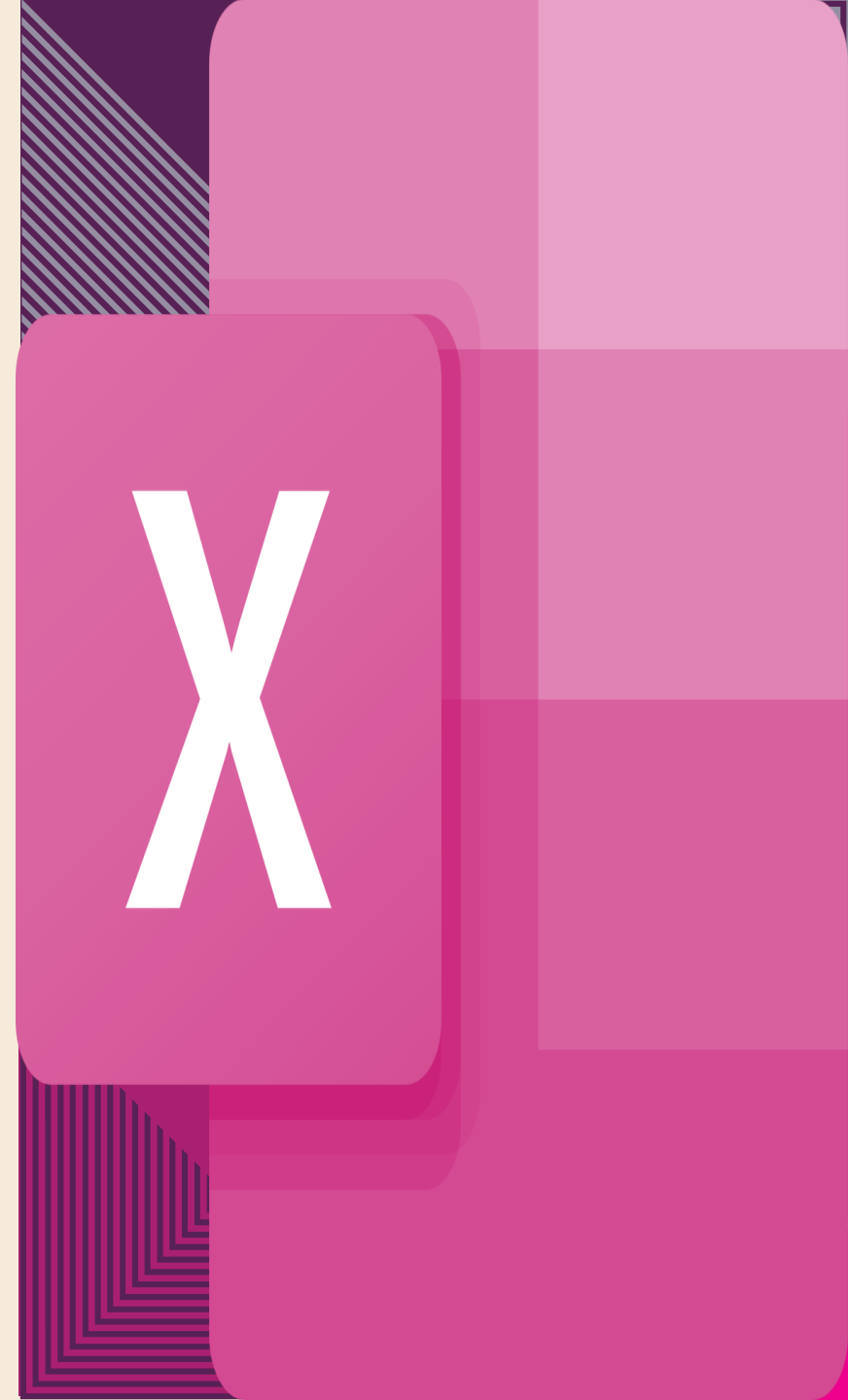
# PRACTICE-2 OBJECTIVES



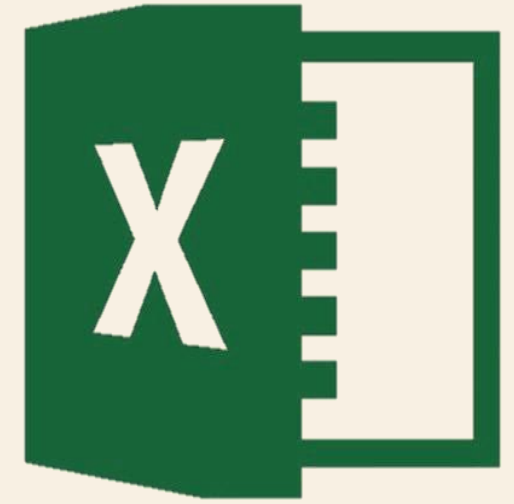
1. Gain a deeper understanding of how criteria are applied in educational assessment.
2. Learn how to identify students whose scores meet a specified standard level.
3. Understand the process of calculating the percentage of students meeting a given criterion.
4. Practice using Excel's conditional formatting features to highlight or identify specific data points.
5. Apply Excel formulas to automate the identification process and calculate percentages.

# EXCEL APPLICATIONS IN PSYCHOLOGY AND EDUCATION

- ❑ Psychology professionals and school teachers frequently deal with scores on class examinations or psychology tests.
- ❑ To better understand and interpret scores,
  - ❑ we need to enhance Excel skills, particularly in the context of analyzing student performance and calculating achievement percentages.
  - ❑ Improve efficiency in using Excel functions and features for educational data management.



# AGENDA: PRACTICE-2



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- Insert scores of students on midterm exam in psychological statistics course.
- Decide accepted level of performance and create the rule in Excel.
- Identify students whose scores equal or above the standard level of performance use Excel to highlight the accepted scores
- Compute percentage of scores that pass the standard level



# ANALYZING STUDENT PERFORMANCE BASED UPON SCORES

## PRACTICE-2

# CONDITIONAL FORMATING: EXCEL TECHNIQUE

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The screenshot shows the Excel interface with the following annotations:

- 1** Select the Score Range: C2:C21 (Arrow points to the range C2:C21 in the worksheet)
- 2** Navigate to the "Home" tab (Arrow points to the Home tab in the ribbon)
- 3** Click on "Conditional Formatting" (Arrow points to the Conditional Formatting button in the ribbon)
- 4** Choose "New Rule" from the dropdown menu. (Arrow points to the "New Rule..." option in the dropdown menu)

**SET THE CRITERIA-1**

| Student ID # | Score |
|--------------|-------|
| 202211750    | 25    |
| 202211284    | 18    |
| 202120069    | 19    |
| 202211465    | 22    |
| 202210094    | 16    |
| 202120003    | 20    |
| 202111015    | 15    |
| 202210684    | 25    |
| 202111343    | 19    |
| 201820267    | 20    |
| 202111252    | 18    |
| 202211443    | 23    |
| 202111175    | 30    |
| 202110036    | 24    |
| 202211152    | 19    |
| 202211221    | 29    |
| 202110914    | 20    |
| 202110852    | 21    |
| 202110987    | 27    |
| 202110940    | 25    |

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# CONDITIONAL FORMATING: EXCEL TECHNIQUE

**SET THE CRITERIA-2**

1 In the "New Formatting Rule" dialog box, select **"Format cells that contain."**

2 Set the criteria for formatting. In the example, choose **"Greater than or equal to"** and enter the threshold value **(24)**.

3

|    | A  | B            | C  |
|----|----|--------------|----|
| 1  |    | Student ID # | 30 |
| 2  | 1  | 202211750    | 2  |
| 3  | 2  | 202211284    | 1  |
| 4  | 3  | 202120069    | 19 |
| 5  | 4  | 202211465    | 2  |
| 6  | 5  | 202210094    | 10 |
| 7  | 6  | 202120003    | 20 |
| 8  | 7  | 202111015    | 15 |
| 9  | 8  | 202210684    | 25 |
| 10 | 9  | 202111343    | 19 |
| 11 | 10 | 201820267    | 20 |
| 12 | 11 | 202111252    | 18 |
| 13 | 12 | 202211443    | 23 |
| 14 | 13 | 202111175    | 30 |
| 15 | 14 | 202110036    | 24 |
| 16 | 15 | 202211152    | 19 |
| 17 | 16 | 202211221    | 29 |
| 18 | 17 | 202110914    | 20 |
| 19 | 18 | 202110852    | 21 |
| 20 | 19 | 202110987    | 27 |
| 21 | 20 | 202110940    | 25 |
| 22 |    |              |    |

X

Paste

Clipboard

CHOOSE THE FORMATTING STYLE FOR THE HIGHLIGHTED SCORES

Conditional Formatting

Format as Table

# CONDITIONAL FORMATTING: EXCEL TECHNIQUE

C2

Format all cells based on their values

Format only cells that contain

Format only top or bottom ranked values

Format

Format

Use a fo

Edit the Rule

Format only cells with:

Cell Value greater than or equal to 24

Preview: No Format Set

Format...

OK

Cancel

Click on "Format" to choose formatting style for highlighted scores

Format Cells

Number

Font

Border

Background Color:

No Color

Automatic

Pattern Color:

Pattern Style:

you can set yellow color.

Sample

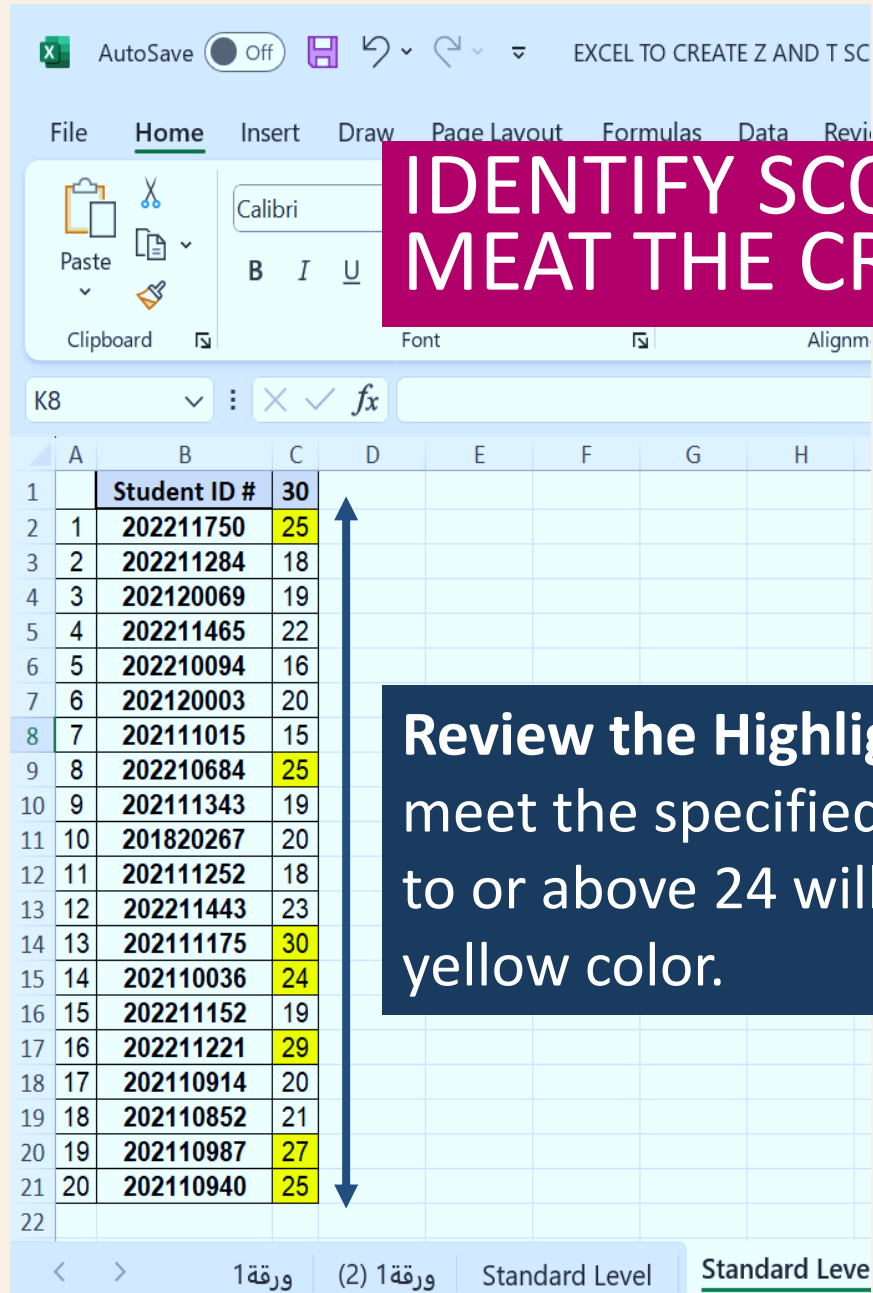
OK

Cancel

|    | A  | B            | C  | D |
|----|----|--------------|----|---|
| 1  |    | Student ID # | 30 |   |
| 2  | 1  | 202211750    | 25 |   |
| 3  | 2  | 202211284    | 18 |   |
| 4  | 3  | 202120069    | 19 |   |
| 5  | 4  | 202211465    | 22 |   |
| 6  | 5  | 202210094    | 16 |   |
| 7  | 6  | 202120003    | 20 |   |
| 8  | 7  | 202111015    | 15 |   |
| 9  | 8  | 202210684    | 25 |   |
| 10 | 9  | 202111343    | 19 |   |
| 11 | 10 | 201820267    | 20 |   |
| 12 | 11 | 202111252    | 18 |   |
| 13 | 12 | 202211443    | 23 |   |
| 14 | 13 | 202111175    | 30 |   |
| 15 | 14 | 202110036    | 24 |   |
| 16 | 15 | 202211152    | 19 |   |
| 17 | 16 | 202211221    | 29 |   |
| 18 | 17 | 202110914    | 20 |   |
| 19 | 18 | 202110852    | 21 |   |
| 20 | 19 | 202110987    | 27 |   |
| 21 | 20 | 202110940    | 25 |   |
| 22 |    |              |    |   |



# CONDITIONAL FORMATING: EXCEL TECHNIQUE



The screenshot shows an Excel spreadsheet with a table of student data. The 'Score' column (Column C) has cells with values 30, 25, 18, 19, 22, 16, 20, 15, 25, 19, 20, 18, 23, 30, 24, 19, 29, 20, 21, 27, and 25. The cells containing 25, 30, 25, 30, 24, and 29 are highlighted in yellow. A blue double-headed arrow points to the 'Score' column. The Excel ribbon shows 'File', 'Home', 'Insert', 'Draw', 'Page Layout', 'Formulas', 'Data', and 'Review'. The 'Home' tab is active, showing the 'Clipboard' and 'Font' groups. The 'Font' group shows 'Calibri' font, bold (B), italic (I), and underline (U) options. The 'Clipboard' group shows 'Paste' and 'Clipboard' options. The 'Formulas' group shows the 'fx' button. The 'Data' group shows the 'Data' button. The 'Review' group shows the 'Review' button. The status bar at the bottom shows 'ورقة 1' (Sheet 1), '(2) ورقة' (2 sheets), 'Standard Level', and 'Standard Level'.

|    | A  | B            | C  | D | E | F | G | H |
|----|----|--------------|----|---|---|---|---|---|
| 1  |    | Student ID # | 30 |   |   |   |   |   |
| 2  | 1  | 202211750    | 25 |   |   |   |   |   |
| 3  | 2  | 202211284    | 18 |   |   |   |   |   |
| 4  | 3  | 202120069    | 19 |   |   |   |   |   |
| 5  | 4  | 202211465    | 22 |   |   |   |   |   |
| 6  | 5  | 202210094    | 16 |   |   |   |   |   |
| 7  | 6  | 202120003    | 20 |   |   |   |   |   |
| 8  | 7  | 202111015    | 15 |   |   |   |   |   |
| 9  | 8  | 202210684    | 25 |   |   |   |   |   |
| 10 | 9  | 202111343    | 19 |   |   |   |   |   |
| 11 | 10 | 201820267    | 20 |   |   |   |   |   |
| 12 | 11 | 202111252    | 18 |   |   |   |   |   |
| 13 | 12 | 202211443    | 23 |   |   |   |   |   |
| 14 | 13 | 202111175    | 30 |   |   |   |   |   |
| 15 | 14 | 202110036    | 24 |   |   |   |   |   |
| 16 | 15 | 202211152    | 19 |   |   |   |   |   |
| 17 | 16 | 202211221    | 29 |   |   |   |   |   |
| 18 | 17 | 202110914    | 20 |   |   |   |   |   |
| 19 | 18 | 202110852    | 21 |   |   |   |   |   |
| 20 | 19 | 202110987    | 27 |   |   |   |   |   |
| 21 | 20 | 202110940    | 25 |   |   |   |   |   |
| 22 |    |              |    |   |   |   |   |   |

IDENTIFY SCORES THAT MEET THE CRITERIA

Review the Highlighted Scores that meet the specified criteria. Scores equal to or above 24 will be highlighted with yellow color.

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# COUNTING & COUNT IF: EXCEL TECHNIQUES

# X

## COMPUTE NUMBER OF SCORES ON EXAM-1

Write titles of Count & percentage in column "E" and row 4 and 6 – cells E4 - E6

Locate cursor on cell F4

Count the number of students who take the exam using the following excel Formula *fx*  
[=COUNT(C2:C21)]

| 7  | 6 | 202120003 | 20 |
|----|---|-----------|----|
| 9  |   | 202111252 | 18 |
| 10 |   | 202211443 | 23 |
| 11 |   | 202111175 | 30 |
| 12 |   | 202110036 | 24 |
| 13 |   | 202211152 | 19 |
| 14 |   | 202211221 | 29 |
| 15 |   | 202110914 | 20 |
| 16 |   | 202110852 | 21 |
| 17 |   | 202110987 | 27 |
| 18 |   | 202110940 | 25 |

# COUNTING & COUNT IF: EXCEL TECHNIQUES

## COMPUTE COUNT OF SCORES THAT MEAT THE CRITERIA-2

Excel interface showing the formula bar and a spreadsheet with student scores.

Formula bar: `=COUNTIF(C2:C21,">=24")`

| Student ID # | Score     |
|--------------|-----------|
| 1            | 202211750 |
| 2            | 202211284 |
| 3            | 202120069 |
| 4            | 202211465 |
| 5            | 202210094 |
| 6            | 202120003 |
| 7            | 202210684 |
| 12           | 202211443 |
| 13           | 202111175 |
| 14           | 202110036 |
| 15           | 202211152 |
| 16           | 202211221 |
| 17           | 202110914 |
| 18           | 202110852 |
| 19           | 202110987 |
| 20           | 202110940 |

Summary table:

|                                  |    |
|----------------------------------|----|
| Number scores on final exam      | 20 |
| Number scores meet the criterion | 7  |
| percentage scores meet criterion |    |

Annotations:

- 1: Locate cursor on cell F5
- 2: Count the number of students who meet the criteria using the following excel Formula `fx` `[=COUNTIF(C2:C21,">=24")]`

X

# COUNING & COUNT IF: EXCEL TECHNIQUES

X

## COMPUTE PERCENTAGE OF SCORES THAT MEAT THE CRITERIA-3

Excel interface showing a spreadsheet with student data and a summary table.

| Student ID # | Score |
|--------------|-------|
| 202211750    | 25    |
| 202211284    | 18    |
| 202120069    | 19    |
| 202211465    | 22    |
| 202210094    | 16    |
| 202120003    | 20    |
| 202210684    | 25    |
| 202111343    | 19    |
| 202111175    | 30    |
| 202110036    | 24    |
| 202211152    | 19    |
| 202211221    | 29    |
| 202110914    | 20    |
| 202110852    | 21    |
| 202110987    | 27    |
| 202110940    | 25    |

|                                  |    |
|----------------------------------|----|
| Number scores on final exam      | 20 |
| Number scores meet the criterion | 7  |
| percentage scores meet criterion | 35 |

Formula bar:  $=F5/F4*100$

Cell F6:  $=F5/F4*100$

1 Locate cursor on cell F6

2

Compute the percentage of students who meet the criteria using the following excel Formula  $fx$   $[=F5/F4*100]$  F5. F4 cell locations



# ANALYZING STUDENT PERFORMANCE BASED UPON SCORES

## THANK YOU

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