

Minitab

Lecture: Entering Data in Minitab

Correct data entry is the **first and most crucial step** before performing any statistical analysis. Minitab allows working with various types of variables (numeric, text, date, categorical, etc.)

Minitab supports two main modes for entering data:

- **Direct (Manual) entry:** typing or pasting values directly into the Worksheet — good for small datasets and teaching.
- **Indirect (Programmatic & Import) entry:** importing Excel/CSV/TXT, using command-line input (SET, READ), or running macros/automation — ideal for large or pre-existing dataset

1-Direct / Manual Entry (detailed)

When to use

- Small datasets (< ~200 rows), teaching, quick tests or single edits.

Detailed steps

1. **Open the Worksheet** in Minitab.
2. **Add/name columns:** Click the column header (C1) and type a variable name (Age, Grade).
3. **Type values manually:** Enter one observation per row. Text can be entered directly (no quotes required). Dates: use a consistent format (DD/MM/YYYY or YYYY-MM-DD) depending on your locale.
4. **Copy & Paste from Excel:** Select cells in Excel, Ctrl+C, then Ctrl+V into Minitab; columns map across.
5. **Generate patterned data quickly:** Use **Calc > Make Patterned Data > Simple Set of Numbers** to fill a column with a sequence.
6. **Check/change data type:** Verify column type via **Data > Change Data Type** or visually.
7. **Save project:** **File > Save Project (.MPJ)** to keep data + outputs.

Data Entry, indirect method, direct method
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Example

Five students' names, grades, and exam dates

C1 Name C2 Grade C3 Exam_Date

Ali	78	01/06/2024
Sara	85	01/06/2024
Omar	92	02/06/2024
Lina	67	02/06/2024
Zain	74	03/06/2024

How: name columns and type/paste values into each column.

Advantages

- Intuitive, immediate feedback.
- Great for small demos, teaching, and quick adjustments.

Limitations

- Time consuming and error-prone for large datasets.
- Possible text-encoding issues with non-Latin scripts when using CSV; prefer Excel (.xlsx)

2-Indirect / Import & Commands (detailed)

The indirect approach contains several practical options (from simplest to most advanced):

A) Import from Excel (common)

Steps:

1. **File > Open Worksheet** and select Excel (*.xlsx) or **File > Import > From Excel**.
2. Select the file and sheet, tick "First row contains column names" if appropriate.
3. Open → columns load into C1, C2, ... You may adjust data types if needed.

Tip: Keep variable names in Excel's first row for direct header mapping.

D) Command-line input (SET, READ)

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- **SET** for entering data via commands:

SET C1

DATA 78 85 92 67 74

END

READ to read text files (general example)

Important notes

- Use clear column names (e.g., Student_Age).
- Keep a raw data copy before cleaning.
- Decide on missing-value codes (NA) and handle them consistently.
- Check data types after import.
- Save the Minitab project (.MPJ) to capture data and outputs

Input commands into the Minitab program

1-Set

Entering data by prompt: Set

```
MTB > set c1
Data > 3 0 1 2 4
Data > end
MTB > print c1
3
0
1
2
4
```

```
MTB > set c2
Data > 3
Data > 0
Data > 1
Data > 2
Data > 4
Data > end
MTB > print c2
3
0
1
2
4
```

Data can be entered in ascending or descending order using the following formula:

```
MTB > set c3          MTB> set c3          10
Data > A:B / K        MTB> 10 : 15 \ 0.5    10.5
Data > end            MTB> end              11
MTB > print c3        MTB> print c3        :
                                                                15
```

```
MTB > set c3          MTB> set c3
Data > 10:15          MTB> 15:10
Data > end            MTB> end
MTB > print c3        MTB> print c3
    10                15
    11                14
```


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```
Data > 2 0 3
Data > 4 2 1
Data > end
MTB > Print
```

The Second: is to enter a matrix

```
MTB > Read 2 3 m1 enter
Data > 1 3 5 enter
Data > 4 2 6 enter
MTB > print
```

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