Exercise : 1

---

## Title: Variable View and Data View in SPSS

**Aim:**
To learn the process of defining variables in *Variable View* and entering data in *Data View* in SPSS.

---

## Procedure:

1. **Step 1: Launching SPSS**
   Open the SPSS software by selecting it from the program list or desktop.
2. **Step 2: Defining Variables in Variable View**
   - Go to the *Variable View* tab.
   - For each variable, complete the following:
     - **Name:** Enter a short, descriptive name (e.g., "Income," "Education").
     - **Type:** Choose the appropriate data type (Numeric or String).
     - **Width:** Adjust the width (default is often appropriate).
     - **Decimals:** Set the number of decimal points (relevant for numeric variables).
     - **Label:** Provide a full descriptive label for better understanding (e.g., "Monthly Income").
     - **Values:** Input values for categorical variables (e.g., 1 = Yes, 2 = No).
     - **Missing:** Assign any codes for missing data if required.
     - **Measure:** Choose whether the variable is Nominal, Ordinal, or Scale.
3. **Step 3: Entering Data in Data View**
   - Click on the *Data View* tab.
   - Enter your dataset row by row, where:
     - Each row represents an individual case or observation.
     - Each column corresponds to a variable defined in *Variable View*.
4. **Step 4: Saving the File**
   - Click *File* and then *Save As*.
   - Choose the location to save the file.
   - Enter an appropriate name for the file and click *Save*.

---

**Summary:**
Variables are set up in *Variable View* with appropriate attributes, and data is entered in *Data View* for analysis. Finally, the dataset is saved for future use.

---

Exercise : 2

---

## Title: Table Creation in SPSS

**Objective:**
To create and interpret a table in SPSS for analyzing data.

---

## Procedure:

1. **Step 1: Open SPSS**
   Launch SPSS and open the dataset you wish to analyze.
2. **Step 2: Creating a Frequency Table**
   - Click on *Analyze* in the menu bar.
   - Select *Descriptive Statistics → Frequencies*.
   - In the dialog box, move the variable(s) you want a table for into the *Variable(s)* box.
   - Click *OK* to generate a frequency table.
3. **Step 3: Creating a Crosstab Table**
   - Go to *Analyze → Descriptive Statistics → Crosstabs*.
   - Move the desired variable to the *Rows* and another variable to the *Columns*.
   - Click *OK* to create the crosstab table.
4. **Step 4: Save the Table Output**
   - After the table appears in the output window, click *File → Save As* to save the output.

---

**Example of a Common Table:**

| Age Group | Frequency | Percentage |
|---|---|---|
| 18-25 | 50 | 25% |
| 26-35 | 80 | 40% |
| 36-45 | 45 | 22.5% |
| 46+ | 25 | 12.5% |

---

**Conclusion:**
The table summarizes the distribution of data in SPSS using frequency or crosstab functions.

---

Exercise : 3

---

## Title: Measures of Central Tendency in SPSS

**Objective:**
To compute and interpret the measures of central tendency: Mean, Median, and Mode in SPSS.

---

## Procedure:

1. **Step 1: Open SPSS**
   Start SPSS and load your dataset.
2. **Step 2: Access Descriptive Statistics**
   - Click *Analyze → Descriptive Statistics → Frequencies* or *Descriptives*.
   - Select the variable(s) for which you want to calculate central tendency.
3. **Step 3: Calculate Mean, Median, and Mode**
   - In the *Frequencies* dialog box:
     - Click *Statistics*.
     - Check **Mean**, **Median**, and **Mode**.
     - Click *Continue → OK* to generate the output.
4. **Step 4: Interpret the Results**
   - **Mean**: The average value of the dataset.
   - **Median**: The middle value when data is arranged in order.
   - **Mode**: The most frequently occurring value in the dataset.

---

**Example Output:**

| Measure | Value |
|---|---|
| Mean | 25.6 |
| Median | 24.0 |
| Mode | 22.0 |

---

**Conclusion:**
The measures of central tendency help summarize a dataset's average, middle, and most frequent values.

---

Exercise : 4

---

## Title: Creating Charts and Graphs in SPSS

**Objective:**
To create and interpret common charts and graphs in SPSS.

---

## Procedure:

1. **Open SPSS**
   Launch the SPSS software and open your dataset.
2. **Create a Bar Chart**
   - **Path:** *Graphs → Chart Builder*
   - Drag the *Bar* chart type to the chart preview area.
   - Move the variable to the *Category Axis* and another variable to the *Bar Representations*.
   - Click *OK* to generate the bar chart.
3. **Create a Histogram**
   - **Path:** *Graphs → Chart Builder*
   - Drag the *Histogram* chart type to the chart preview area.
   - Move the variable to the *X-Axis*.
   - Click *OK* to generate the histogram.
4. **Create a Pie Chart**
   - **Path:** *Graphs → Chart Builder*
   - Select the *Pie* chart type and drag it to the chart preview area.
   - Move the variable to the *Slice By* box.
   - Click *OK* to generate the pie chart.
5. **Save the Chart**
   - Right-click on the chart in the output window.
   - Select *Export* or *Save As* to save the chart.

---

**Conclusion:**
Charts and graphs in SPSS help visualize data, making patterns and relationships clearer.

---

Exercise : 5

---

## Title: One-Sample T-Test in SPSS

**Objective:**
To perform a one-sample t-test in SPSS to compare the sample mean against a known value.

---

## Procedure:

1. **Open SPSS**
   Launch SPSS and open your dataset.
2. **Access One-Sample T-Test**
   - **Path:** *Analyze → Compare Means → One-Sample T Test*
3. **Set Up the Test**
   - Move the variable you want to test into the *Test Variable(s)* box.
   - Enter the known value (the hypothesized mean) into the *Test Value* box.
4. **Run the Test**
   - Click *OK* to perform the t-test.
5. **Interpret the Output**
   - Review the t-test results in the output window, including:
     - **T Value:** The calculated t statistic.
     - **Degrees of Freedom (df):** Number of observations minus 1.
     - **Sig. (2-tailed):** The p-value indicating the probability of the observed result under the null hypothesis.

---

**Example Output:**

| Test Variable | Mean | Test Value | T Value | df | Sig. (2-tailed) |
|---|---|---|---|---|---|
| Variable X | 20.5 | 18 | 3.15 | 29 | 0.004 |

---

**Conclusion:**
The one-sample t-test compares the sample mean to a known value, providing a t statistic and p-value to assess if the sample mean significantly differs from the hypothesized mean.

---

Exercise : 6

## Title: One-Way ANOVA in SPSS

**Objective:**
To perform a one-way ANOVA in SPSS to compare the means of three or more groups.

---

## Procedure:

1. **Open SPSS**
   Launch SPSS and open your dataset.
2. **Access One-Way ANOVA**
   - **Path:** *Analyze → Compare Means → One-Way ANOVA*
3. **Set Up the ANOVA**
   - Move the dependent variable (the variable you are comparing) into the *Dependent List* box.
   - Move the independent variable (the grouping variable) into the *Factor* box.
4. **Configure Options**
   - Click *Post Hoc* if you want to perform post hoc tests (optional, for comparing all pairs of groups).
   - Choose appropriate post hoc tests (e.g., Tukey, Bonferroni) if needed.
   - Click *Options* to select additional statistics (e.g., Means, Standard Deviations).
5. **Run the Test**
   - Click *OK* to perform the one-way ANOVA.
6. **Interpret the Output**
   - **ANOVA Table:** Review the F-value and p-value to determine if there are significant differences between group means.
   - **Post Hoc Tests:** If applicable, review the results to see which specific groups differ.

---

**Example Output:**

| Source | Sum of Squares | df | Mean Square | F Value | Sig. |
|---|---|---|---|---|---|
| Between Groups | 150.25 | 2 | 75.125 | 5.67 | 0.007 |
| Within Groups | 523.50 | 27 | 19.37 | | |
| Total | 673.75 | 29 | | | |

---

**Conclusion:**
One-way ANOVA compares the means of multiple groups to determine if at least one group mean is significantly different from the others. Post hoc tests can be used to identify which groups differ.

---

Exercise : 7

---

## Title: Mann-Whitney U Test in SPSS

**Objective:**
To perform the Mann-Whitney U test in SPSS to compare differences between two independent groups on a continuous or ordinal dependent variable.

---

## Procedure:

1. **Open SPSS**
   Launch SPSS and open your dataset.
2. **Access Mann-Whitney U Test**
   - **Path:** *Analyze → Nonparametric Tests → Legacy Dialogs → 2 Independent Samples*
3. **Set Up the Test**
   - Move the dependent variable (the variable being compared) into the *Test Variable List* box.
   - Move the grouping variable (the variable defining the two groups) into the *Grouping Variable* box.
   - Click *Define Groups* and enter the values that represent the two groups in the *Group 1* and *Group 2* fields.
4. **Run the Test**
   - Click *OK* to perform the Mann-Whitney U test.
5. **Interpret the Output**
   - **Mann-Whitney U:** Review the U statistic for differences between groups.
   - **Asymp. Sig. (2-tailed):** The p-value indicating whether the differences are statistically significant.

---

**Example Output:**

| Group | N | Mean Rank | Sum of Ranks |
|---|---|---|---|
| Group 1 | 30 | 35.75 | 1072.50 |
| Group 2 | 30 | 25.25 | 757.50 |

| Test Statisticsa | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) |
|---|---|---|---|---|
| | 315.50 | 757.50 | -2.30 | 0.021 |

---

**Conclusion:**
The Mann-Whitney U test assesses whether there is a significant difference between the

distributions of two independent groups. The p-value indicates if the observed differences are statistically significant.

---

Exercise : 8

---

## Title: Friedman’s Test in SPSS

**Objective:**
To perform Friedman's test in SPSS to compare the medians of three or more related groups.

---

## Procedure:

1. **Open SPSS**
   Launch SPSS and open your dataset.
2. **Access Friedman's Test**
   - **Path:** *Analyze → Nonparametric Tests → Legacy Dialogs → K Related Samples*
3. **Set Up the Test**
   - Move the variables representing the related groups into the *Test Variables List* box.
   - Ensure that these variables are paired observations (e.g., measurements taken at different times or conditions).
4. **Run the Test**
   - Click *OK* to perform Friedman's test.
5. **Interpret the Output**
   - **Friedman’s Chi-Square:** Review the chi-square statistic to assess if there are significant differences between the medians of the groups.
   - **Asymp. Sig.:** The p-value indicating whether the differences in medians are statistically significant.

---

**Example Output:**

| Test Statisticsa | Chi-Square | df | Asymp. Sig. |
|---|---|---|---|
| | 10.75 | 2 | 0.005 |

**Ranks Table:**

| Variable | Mean Rank |
|---|---|
| Condition 1 | 2.85 |
| Condition 2 | 1.75 |
| Condition 3 | 3.40 |

---

**Conclusion:**
Friedman's test evaluates if there are significant differences in median values across three or more related groups. The p-value indicates if the differences are statistically significant.

---

Exercise : 9

---

## Title: Kruskal-Wallis Test in SPSS

**Objective:**
To perform the Kruskal-Wallis H test in SPSS to compare the medians of three or more independent groups.

---

## Procedure:

1. **Open SPSS**
   Launch SPSS and open your dataset.
2. **Access Kruskal-Wallis Test**

- **Path:** *Analyze → Nonparametric Tests → Legacy Dialogs → K Independent Samples*

3. **Set Up the Test**
   - Move the dependent variable (the variable being compared) into the *Test Variable List* box.
   - Move the grouping variable (the variable defining the groups) into the *Grouping Variable* box.
   - Click *Define Range* and enter the range of values that represent the groups.
4. **Run the Test**
   - Click *OK* to perform the Kruskal-Wallis test.
5. **Interpret the Output**
   - **Kruskal-Wallis H:** Review the H statistic to assess if there are significant differences between the medians of the groups.
   - **Asymp. Sig.:** The p-value indicating whether the differences in medians are statistically significant.

---

**Example Output:**

| Test Statisticsa | Chi-Square | df | Asymp. Sig. |
|---|---|---|---|
| | 15.23 | 3 | 0.002 |

**Ranks Table:**

| Group | N | Mean Rank |
|---|---|---|
| Group 1 | 30 | 22.75 |
| Group 2 | 30 | 29.50 |
| Group 3 | 30 | 18.25 |

---

**Conclusion:**
The Kruskal-Wallis test assesses whether there are significant differences in the median values across three or more independent groups. The p-value indicates if the differences are statistically significant.

---

Exercise : 10

## Title: Creation of Company in Tally Prime

**Objective:**
To set up a new company in Tally Prime efficiently.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Company Creation**
   - **Path:** *Gateway of Tally → Company Info → Create Company*
   - **Shortcut:** Press **Alt + F3** to directly access the *Company Info* menu.
3. **Enter Company Details**
   - **Name:** Enter the company name.
   - **Address:** Fill in the company address and contact details.
   - **Financial Year:** Set the financial year starting date.
   - **Currency:** Select the appropriate currency.
   - **State:** Choose the state for GST compliance.
4. **Save the Company**
   - Click *Accept* (or press **Ctrl + A**) to save and create the company.
5. **Confirm Company Creation**
   - Ensure the company details are correct and the company is now listed in the company list.

---

**Conclusion:**
Creating a company in Tally Prime is a straightforward process, allowing for efficient setup with direct shortcuts for quick access.

---

Exercise : 11

## Title: Creating Accounting Groups

**Objective:**
To set up accounting groups in Tally Prime for organizing and managing financial transactions.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Accounting Groups**
   - **Path:** *Gateway of Tally → Accounts Info → Groups → Create*
   - **Shortcut:** Press **Alt + A** to access the *Accounts Info* menu, then **G** to select *Groups*, and **C** to create a new group.
3. **Enter Group Details**
   - **Group Name:** Enter the name of the new group.
   - **Under:** Select the appropriate parent group (e.g., Assets, Liabilities) for classification.
   - **Nature of Group:** Specify if it's a primary or sub-group (e.g., Bank Account, Fixed Assets).
4. **Set Additional Options**
   - **Use for:** Indicate if the group is used for specific purposes such as GST, Interest, etc.
   - **Pre-Fill:** Optionally, fill in any default values or additional details as required.
5. **Save the Group**
   - Click *Accept* (or press **Ctrl + A**) to save and create the group.
6. **Confirm Group Creation**
   - Verify that the new group is listed under the selected parent group in the group list.

---

**Conclusion:**
Creating accounting groups in Tally Prime helps in organizing financial transactions efficiently, providing better management and reporting.

---

## Title: Creating Ledgers

**Objective:**
To set up new ledgers in Tally Prime for recording specific financial transactions.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Ledger Creation**
   - **Path:** *Gateway of Tally → Accounts Info → Ledgers → Create*
   - **Shortcut:** Press **Alt + A** to access the *Accounts Info* menu, then **L** to select *Ledgers*, and **C** to create a new ledger.
3. **Enter Ledger Details**
   - **Ledger Name:** Enter the name of the new ledger (e.g., Supplier Name, Customer Account).
   - **Under:** Select the appropriate group under which this ledger should be classified (e.g., Sundry Creditors, Sales Accounts).
   - **Opening Balance:** Enter the opening balance if applicable.
   - **Maintain Balance:** Specify whether to maintain balance or not, depending on ledger type.
4. **Set Additional Options**
   - **Address:** (Optional) Enter the address details for the ledger.
   - **PAN/TAN:** (Optional) Enter PAN/TAN details if applicable.
   - **Email/Contact:** (Optional) Enter contact information if needed.
5. **Save the Ledger**
   - Click *Accept* (or press **Ctrl + A**) to save and create the ledger.
6. **Confirm Ledger Creation**
   - Verify that the new ledger appears in the ledger list under the appropriate group.

---

**Conclusion:**
Creating ledgers in Tally Prime allows for detailed recording of individual transactions and accounts, enhancing financial management and reporting accuracy.

---

## Title: Creating Vouchers in Tally Prime

**Objective:**
To record financial transactions using vouchers in Tally Prime.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Voucher Creation**
   - **Path:** *Gateway of Tally → Vouchers*
   - **Shortcut:** Press **V** to access the *Vouchers* menu directly.
3. **Select the Voucher Type**
   - Choose the appropriate voucher type for your transaction from the list (e.g., Payment, Receipt, Journal, Sales, Purchase).
   - **Shortcut:** Press **F7** for Payment, **F6** for Receipt, **F5** for Journal, **F8** for Sales, and **F9** for Purchase.
4. **Enter Voucher Details**
   - **Date:** Enter the transaction date.
   - **Voucher Number:** (Optional) Enter or modify the voucher number.
   - **Party Details:** Select or enter the ledger accounts involved in the transaction.
   - **Amount:** Enter the amount for each entry.
   - **Narration:** (Optional) Add a brief description of the transaction.
5. **Verify Entries**
   - Ensure that all entries and amounts are correct.
6. **Save the Voucher**
   - Click *Accept* (or press **Ctrl + A**) to record the voucher.
7. **Confirm Voucher Creation**
   - Verify that the voucher appears in the list of vouchers and reflects in the respective accounts.

---

**Conclusion:**
Creating vouchers in Tally Prime enables precise recording of financial transactions, supporting accurate bookkeeping and financial reporting.

---

## Title: Displaying Trial Balance and Profit & Loss Account

**Objective:**
To view the Trial Balance and Profit & Loss Account reports in Tally Prime.

---

## Procedure:

### Displaying Trial Balance

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Trial Balance**
   - **Path:** *Gateway of Tally → Display → Trial Balance*
   - **Shortcut:** Press **Alt + D** to access the *Display* menu, then **T** to select *Trial Balance*.
3. **Select the Period**
   - Choose the desired period for which you want to view the Trial Balance.
   - You can set the date range or select a predefined period.
4. **View Trial Balance**
   - Review the Trial Balance report showing all ledger balances.
5. **Save or Print (Optional)**
   - Use the options to save or print the report if needed.

---

### Displaying Profit & Loss Account

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Profit & Loss Account**
   - **Path:** *Gateway of Tally → Display → Profit & Loss A/c*
   - **Shortcut:** Press **Alt + D** to access the *Display* menu, then **P** to select *Profit & Loss A/c*.
3. **Select the Period**
   - Choose the period for which you want to view the Profit & Loss Account.
   - You can set the date range or select a predefined period.
4. **View Profit & Loss Account**
   - Review the Profit & Loss Account report, which shows the financial performance for the selected period.
5. **Save or Print (Optional)**
   - Use the options to save or print the report if needed.

---

**Conclusion:**
Displaying the Trial Balance and Profit & Loss Account in Tally Prime provides essential insights into the financial health and performance of a business.

Exercise : 15

## Title: Displaying Balance Sheet

**Objective:**
To view the Balance Sheet report in Tally Prime, summarizing the financial position of the company.

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Balance Sheet**
   - **Path:** *Gateway of Tally → Display → Balance Sheet*
   - **Shortcut:** Press **Alt + D** to access the *Display* menu, then **B** to select *Balance Sheet.*
3. **Select the Period**
   - Choose the period for which you want to view the Balance Sheet.
   - Set the date range or select a predefined period to reflect the company's financial position at a specific date.
4. **View Balance Sheet**
   - Review the Balance Sheet report, which displays the company's assets, liabilities, and equity.
5. **Save or Print (Optional)**
   - Use the options to save or print the report if needed.

**Conclusion:**
The Balance Sheet in Tally Prime provides a snapshot of a company's financial position at a given point in time, helping assess its financial stability and structure.

Exercise : 16

## Title: Creating Stock Group

**Objective:**
To organize inventory items by creating stock groups in Tally Prime for better management and classification.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Stock Group Creation**
   - **Path:** *Gateway of Tally → Inventory Info → Stock Groups → Create*
   - **Shortcut:** Press **Alt + G** to access the *Inventory Info* menu, then **G** to select *Stock Groups*, and **C** to create a new group.
3. **Enter Stock Group Details**
   - **Stock Group Name:** Enter the name of the stock group (e.g., Electronics, Stationery).
   - **Under:** Choose if this is a primary group or belongs to another group.
   - **Should Quantities of Items be Added:** Choose *Yes* if the stock group requires the sum of quantities.
4. **Save the Stock Group**
   - Click *Accept* (or press **Ctrl + A**) to save and create the stock group.
5. **Confirm Stock Group Creation**
   - Verify that the newly created stock group appears in the list under *Inventory Info*.

---

**Conclusion:**
Creating stock groups in Tally Prime allows for structured inventory management by categorizing items, making stock management easier and more organized.

---

Exercise : 17

---

## Title: Viewing Invoice Report with GST in Tally Prime

**Objective:**
To view and analyze the invoice report along with GST details in Tally Prime.

---

## Procedure:

1. **Open Tally Prime**
   Launch Tally Prime on your computer.
2. **Navigate to Display Invoice Reports**
   - **Path:** *Gateway of Tally → Display More Reports → Statutory Reports → GST → GSTR-1*
   - **Shortcut:** Press **Alt + G** to access *Display More Reports*, then select *Statutory Reports*, followed by *GST* and *GSTR-1*.
3. **Select the Period**
   - Choose the time period for which you want to view the invoice report (monthly, quarterly, etc.).
   - Set the date range or select a predefined period to display GST invoices.
4. **View GST Invoice Report**
   - The report will display all invoices with details like taxable value, GST amount, and total value.
   - You can filter the report by B2B, B2C, export invoices, etc.
5. **Verify the GST Details**
   - Check if all the necessary GST details are correctly captured, such as GSTIN, invoice number, and tax breakup.
6. **Save or Print (Optional)**
   - Use the options to save or print the report if needed.

---

**Conclusion:**
Viewing the invoice report with GST in Tally Prime ensures compliance with tax regulations and helps in keeping track of GST-related transactions.

---