بسم الله الرحمن الرحيم

Excel for Data Analysis – Full Course for Beginners

Project One

**Bike Sales**

**(Project Documentation)**

**Content:**

* Overview.
* Part 1: Prepare Data for Analysis.
* Part 2: Analyze the Data.
* Part 3: Building the Dashboard.

**Written by:**

**Abobaker Ahmed Khidir Hassan**

Overview

About the Project

This is the final project of Alex the Analyst Excel Tutorials. It started from installing Excel up to creating simple dashboard with Excel.

Lessons Have Been Taken:

* Pivot Tables in Excel
* Formulas in Excel
* Conditional Formatting in Excel
* LOOKUP Functions in Excel
* Cleaning Data in Excel
* Charts in Excel

Data

It is consisted from 16 columns and 1,000 rows/records without header.

| **Column Name** | **Description** | **Inferred Data Type** |
| --- | --- | --- |
| **ID** | Unique identifier for each record | Integer |
| **Marital Status** | Marital status of the individual (note typo: "Maried" instead of "Married") | Binary |
| **Gender** | Gender of the individual | String |
| **Income** | Annual income (note the dollar sign, might need cleaning) | Float |
| **Class** | Socioeconomic class (A, B, C, etc.) | String |
| **Children** | Number of children | Integer |
| **Education** | Education level | String |
| **Occupation** | Occupation category | String |
| **Home Owner** | Whether the person owns a home (note typo: "Dosen't has a home") | Binary |
| **Cars** | Number of cars owned | Integer |
| **Commute Distance** | Distance range for daily commute | String |
| **Region** | Geographical region | String |
| **Age** | Age in years | Integer |
| **Age Classes** | Age category (e.g., "30-40", "55 +") | String |
| **Purchased Bike** | Whether the person purchased a bike ("Bayed" / "Unbayed ") | Binary |

Preparing Data for Analysis

In this section, I will clean and applying many concepts about the data preprocessing as what we will se.

Step 1: Create a Copy of the Data

This is my first step before doing anything, and we know how it’s important to save the original data in a safe place.

I named the new workbook.

Step 2: Rewrite the Values

To make sure values will be well represented in the dashboard later, I preform:

1. I changed “M” in the marital status by “married”, and “S” with “Single”,
2. I changed “M” in the gender with “Male”, and “F” with “Female”.
3. I create new column with age grouped to use it later.
4. I changed Yes in the Purchased by “Bayed”, and No with “Unbayed”.
5. I changed Yes in the Home Own by “Has Home”, and No with “Not Has Home”.

Step 3: Formatting Data as a Table

To make referencing more efficient and reduce the referencing error those maybe happen in the cell referencing.

I named it sales.

Step 4: Formatting

I set the format/data types of the fields then removing spalling errors, blanks to make sure the analysis will be applied in a clean data.

Step 5: Removing Duplicates & Blanks

To ensure the final analysis will be accurate.

Analyze the Data

In this section, I will clean and applying many concepts about the data preprocessing as what we will se.