

## Retail Customer Retention Analytics – TARGET

### Project Overview:

Target Corporation, one of the largest retail chains in the United States, operates through hypermarkets, discount department stores, and e-commerce platforms. With growing competition from **Walmart, Amazon, and Costco**, retaining loyal customers has become a crucial challenge.

Target collects extensive data from customer transactions, loyalty memberships, and online interactions, but its current reporting lacks analytical depth to:

- Understand why customers are churning.
- Identify loyal vs. at-risk customers.
- Measure the impact of loyalty tiers, promotions, and influencer-driven campaigns.
- Guide region- and channel-specific retention strategies.

You are hired as a Power BI Analyst to design a Customer Retention Dashboard for Target that consolidates fragmented data and delivers real-time, actionable insights.

### Project Objective:

Develop an interactive **Customer Retention Analytics Dashboard** in Power BI using Target's customer data that will:

- Consolidate customer demographics, purchase history, store/e-commerce performance, and loyalty data.
- Enable dynamic segmentation of high-value, repeat, and churned customers.
- Provide actionable insights to improve retention, loyalty engagement, and regional strategies.

(If you're unfamiliar with domain-specific terms, feel free to take the help of Google or AI tools like ChatGPT or Gemini to understand better and apply them effectively in your project.)

**Dataset Description:** [Link for Dataset](#)

#### 1. Customer\_Demographics.csv

Columns: Customer\_ID, Age, Gender, Region, Income\_Level, Membership\_Since, Preferred\_Channel (Store/Online)

## 2 .Customer\_Transactions.csv

Columns: Transaction\_ID, Customer\_ID, Store\_ID, Product\_Category (Groceries, Electronics, Apparel, Home & Living), Transaction\_Date, Amount, Promotion\_Applied (Yes/No)

## 3. Store\_Locations.csv

Columns: Store\_ID, Store\_Type (Supercenter, Neighborhood Market, Sam's Club, Online), Region, Opening\_Year

## 4. Loyalty\_Program.csv

Columns: Customer\_ID, Loyalty\_Tier (Basic, Plus, Premium, Elite), Points\_Earned, Points\_Redeemed

## 5. Churn\_Labelled\_Customers.csv

Columns: Customer\_ID, Last\_Purchase\_Date, Churn\_Flag (0 = Active, 1 = Churned), Churn\_Reason (Inactivity, Competitor, Low Engagement)

## Tasks to be Performed:

(Please refrain from using AI to perform the tasks mentioned below, as it will only provide generic solutions.)

### Task 1: Data Modeling & Cleaning (10 Marks)

- Load and transform datasets in Power Query
- Handle duplicates, missing values, and ensure correct data types
- Create calculated columns:
  - $\text{Membership\_Duration} = \text{Today} - \text{Membership\_Since}$
  - Extract Transaction\_Year, Transaction\_Month
- Create a basic Data Model view
  - One-to-Many: Customer\_Demographics → Transactions, Loyalty\_Program, Churn\_Labelled\_Customers

- Many-to-One: Transactions → Store\_Locations

### **Task 2: Churn & Retention Metrics (10 Marks)**

- Create **Churn Rate KPI** =  $(\text{Churned Customers} / \text{Total Customers}) * 100$
- Visualize churn rate by:
  - **Region**
  - **Income Group**
  - **Channel (Store/Online)**
  - **Loyalty Tier**
- Funnel Chart: Total Customers → Repeat Customers → Churned

### **Task 3: Repeat Purchase Analysis (10 Marks)**

- Segment customers:
  - **Low-Tier:** 0–3 purchases
  - **Mid-Tier:** 4–8 purchases
  - **High-Tier:** 9+ purchases
- Compare avg. purchase frequency by **Region, Age Group, Loyalty Tier**
- Identify **most purchased product categories by loyal customers**

### **Task 4: Promotion & Loyalty Impact (10 Marks)**

- Calculate % of transactions with promotion applied.
- Compare average purchase amount with vs. without promotions.
- Analyze churn rate across loyalty tiers.
- Visualize Points Earned vs. Redeemed by Tier (Clustered Column Chart).
- Give recommendations to improve redemption & retention.

#### **Task 5: Store & Channel Performance vs Retention (10 Marks)**

- Merge store data with transactions
- Visualize:
  - Avg. transaction amount by **Store Type**
  - Churn rate by store type
  - Correlation between **store opening year & retention**

#### **Task 6: Customer Lifetime Value (CLV) Analysis (10 Marks)**

- $CLV = \text{Total Amount Spent} / \text{Membership Duration (Years)}$
- Segment customers into **Low, High CLV**
  - Above Average CLV as High
  - Below Average CLV value- Low
- Visualize:
  - CLV vs Days Since Last Purchase
  - CLV by Loyalty Tier & Region

#### **Task 7: Final Dashboard & Executive Summary (20 Marks)**

- Multi-page Power BI Report:
  - Page 1: KPIs (Churn, CLV, Repeat Rate)
  - Page 2: Loyalty & Promotion Impact
  - Page 3: Store/Channel Insights
  - Page 4: Segmentation (Churned, Repeat, High-Value)

- Slicers: Region, Channel, Income, Loyalty Tier
- Provide Top 3 Recommendations for Target:
  - Which customers to prioritize for retention?
  - Which channels are underperforming?
  - How to strengthen loyalty engagement?

### **Task 8: Video explanation: Expressing the finding and actionable insights (20 Marks)**

**(The summary should be in your own words and must not be generated using AI. Please don't write a script and read it aloud. Also, screen share and show the key findings. Marks will be deducted for failing to do so.)**

#### **Content: 3-5 minute video explaining:**

- Introduction to the project.
- Problem statement.
- Key findings and insights.

**Evaluation:** Video quality, clarity of explanation, and presentation.

#### **Evaluation Criteria:**

- Quality of analysis and visualizations.
- Clarity in explanations and insights.
- Adherence to instructions and deliverables.

#### **Note:**

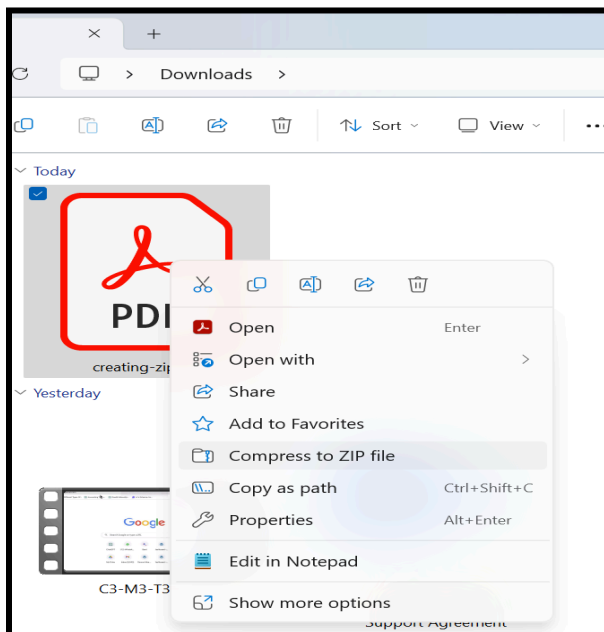
- The whole project should be submitted in a word file showing all tasks wherever with calculations, reporting features and dashboard with screenshots and the final submission should be in PDF format, converted from the Word file
- Plagiarism will result in a penalty, including possible project disqualification.
- The project will be evaluated based on the quality of analysis and visualizations, depth of insights, feasibility of recommendations, clarity of explanations, and adherence to instructions and deliverables.

#### **Submission Guidelines:**

- Save the PDF in a folder and then convert it into a zipped (.zip) folder. **(Please note, the drivelink for the video created should also be added in the PDF itself.)**
- Upload the zipped folder on your respective dashboard.
- Failure to comply with submission guidelines will result in no grading/0 marks.

### How to ZIP a PDF file:

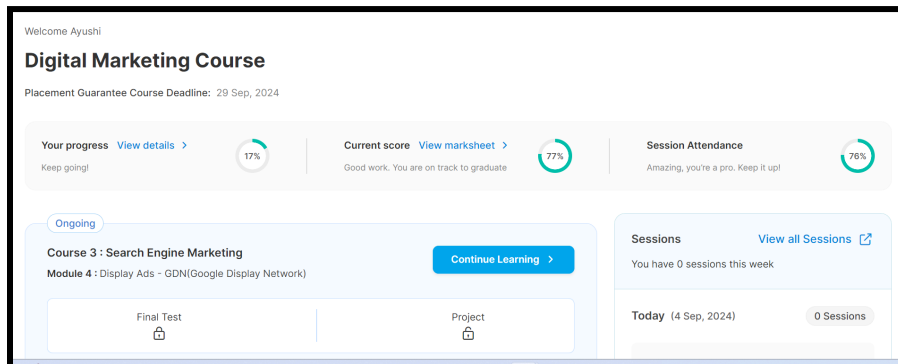
- Put all of the PDF you want to compress (or just one) into a new folder.
- Right click on that folder.



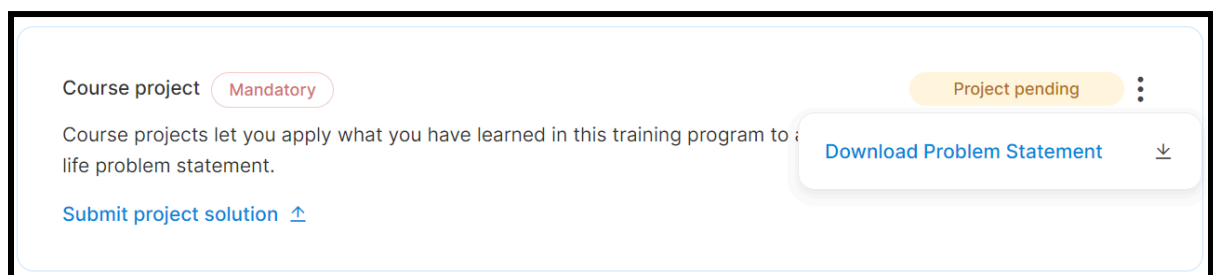
- Select the “Compress to ZIP file” option and then click “Compressed (Zipped) folder.”
- A new .ZIP file will be created that contains your document(s).

In order to submit the projects please follow the following steps:

1. Click on “ Your progress [View details](#)” after logging into your dashboard.



2. Next, click on the tab for the specific child course for which you want to download the problem statement. Then, scroll down to find the "**Course Project**" section.
3. Now, click on the three dots on the right-hand side of the "Course Project" tab to select "**Download Problem Statement.**"



4. Please follow the guidelines (screenshot is shared below) provided in the project to ensure correct submissions. Then, click on "**Upload Project Solution**" to submit

your work.

Instructions for submission

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✔ Submit your original work


✔ Ensure that all the details are included and checked thoroughly.

✔ Upload only one .Zip/.rar file(<40 MB) containing all files if there are multiple files.

✘ Do not submit the solution file downloaded from the internet. A plagiarism check will be performed on your submissions.

✘ Do not present a part or all of another student's work as your own.

If you fail to follow the instructions above, your submission will be discarded and you will be debarred from the placement guarantee course without any further notice

 Choose file

No file chosen