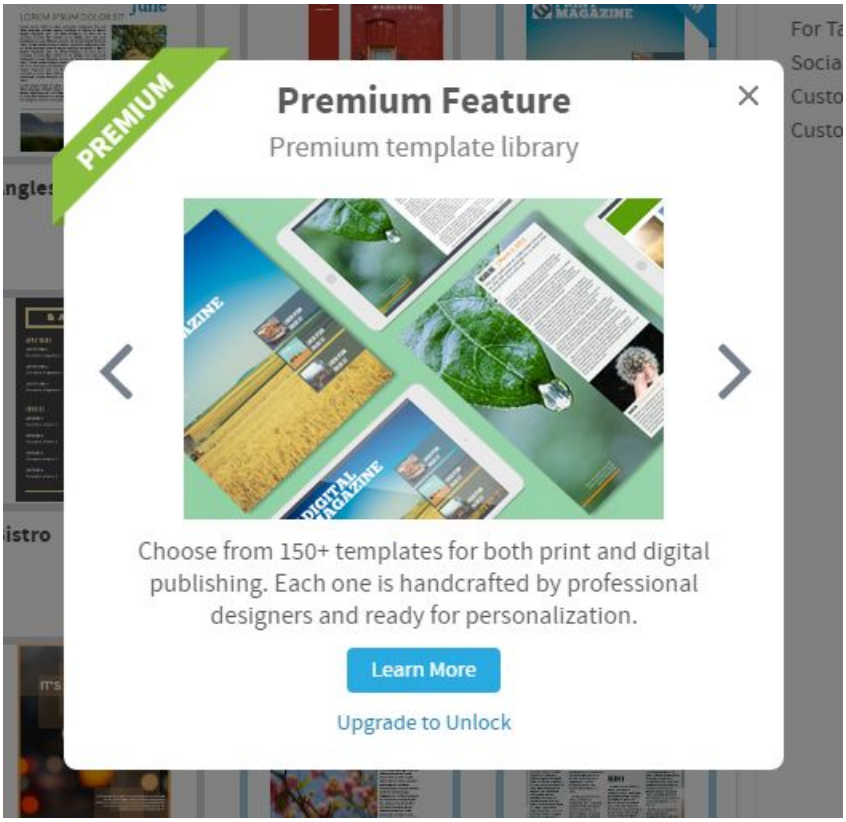
# Lucid Software Analytics Assignment

**Guidelines**

- You should complete this assignment by yourself, but you may use any tools or resources at your disposal (e.g., internet, textbooks, Excel, R, python, etc.)
- You should plan to spend no more than **3 hours** on your analysis and write up. You may not be able to fully answer every question in this timeframe, and that's ok. In your answer, be sure to include next steps if appropriate.
- You may need to reach out with questions as you work through the assignment. You can email questions by replying all to the email you received with these instructions.

**Description**

One of our products, Lucidpress, has several premium features that are behind paywalls. Users who have signed up for the free version of Lucidpress will be prompted to upgrade if they try to use one of these features. An example of this popup window is shown below:




Users hit these paywalls at different rates (i.e., some are encountered frequently by users, while others are rarely hit). We also expect that different features have different levels of effectiveness at convincing people to pay.

You've been given two data sets to use for this analysis. Each field in the data is described in the included data dictionary at the end of this document.

Your task is to evaluate the performance of each of these paywalls by answering the questions below:

1. **Which paywalls have the best conversion rate?**
   Note: Conversion rate is defined as the number of people who pay because of a given paywall divided by the number of people who hit the paywall. An important part of this task is deciding how you will determine whether a paywall caused a user to pay or not. Also note that a user can continue to hit paywalls after their first payment for features that are not part of their subscription plan (Lucidpress has multiple subscription plans as shown here).

2. **Which paywalls contribute most to revenue?**
   Note: Be aware that revenue can be different for each customer because Lucidpress has different subscription plans, as noted above.

3. **Based on your findings, do you have any recommendations for product changes or further analysis?**

When you've completed your analysis, please follow the instructions you received to submit your results and recommendations via email. This email should be written for an executive audience. A good email will be well-organized, clear, and concise, while answering the questions above. Please attach your detailed work (any files, calculations, etc.) to this email.

Thanks and good luck!

**Data Dictionary**

A description of each field in the two files and other relevant terms can be found below:

paywall_data.csv

- **ID** - unique identifier for each user
- **Paid?** - Binary variable for whether the user paid or not
- **Registration date** - Date that the user registered for the product
- **Paywalls** - for each of the paywalls described below, when the user hit this paywall
    - **Analytics** - Access to summary data statistics about published documents
    - **Backup-restore** - Ability to restore accidentally deleted documents and backup entire document library
    - **Color-Management** - Custom color management
    - **Custom-Fonts** - Import your own custom fonts
    - **Downloadable-Publication** - Lets other people download your publication
    - **Email-Thumb** - Attach a published document in an email with a Lucidpress generated thumbnail
    - **Embedding** - Be able to embed published document within a website
    - **Page-Limit** - For free users, there is a three page limit for all documents
    - **Pdf-dpi** - Print quality pdf or dpi publishing
    - **Premium Templates** - Certain templates require a paid account to access
    - **Pub-Password** - Ability to publish a password protected document
    - **Publish-banner** - In a published document, there's a banner inviting people to use Lucidpress
    - **Revision-history** - Visibility on who edited the document, at what time
    - **Storage** - Extra account storage
    - **Unlicensed/View Only** - Giving unlicensed users view-only access to documents in product.

paywall_payment_data.csv

- **ID** - unique identifier for each user (matches with the ID field from "paywall_data.csv")
- **First Payment Date** - If the user paid, the date and timestamp of the first payment
- **First Payment Value** - If the user paid, the amount of the first payment