

# Econ 3040 - Assignment 1

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In this assignment, you will explore the relationships between the ESRB rating of “Mature” for a video game, and their global sales and critic ratings. The data for the assignment uses the data from Lab 1: the video game sales data. The video game sales data was scraped by Abdulshaheed Alqunber and is originally from [vgchartz.com](http://vgchartz.com).

Due date: January 28th 2020. Worth 3% of your final grade.

Instructions:

- Submit your assignment in the “Assignment 1” drop box on UM Learn. Include your name and student number.
- You must complete your assignment individually.
- Your assignment must have two parts: “Answers” and “R Code”.
- In “Answers”, type the assignment answers using a word processor (for example, Microsoft Word). Use output from RStudio to help answer the questions. Questions 1 and 2 will be blank for this section.
- For each question, include your RStudio code at the end of your assignment, in the “R Code” part.
- For example, for question 4, the “Answers” part should include a picture, and the “R Code” part the code used to get that picture.
- Do not copy and paste output from RStudio. Format or type your results nicely.

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Now, here is the assignment for you to work through.

1. Load the data from:  
`http://home.cc.umanitoba.ca/~godwinrt/3040/lab1/vidsales3040.csv`
2. Only use observations for which `Global_Sales` are greater than or equal to 1 million dollars.
3. Calculate the sample mean and sample variance for `Global_Sales` and `Critic_Score`.
4. Draw a histogram for `Critic_Score`.
5. Determine the sample mean `Global_Sales` for video games with a `Critic_Score` greater than 9, and for a `Critic_Score` between 8 and 9.
6. Determine the total `Global_Sales` for video games with and without an `ESRB_Rating` of M.
7. Calculate the sample mean and sample variance of `Global_Sales` for video games with and without an `ESRB_Rating` of M.
8. Draw a scatterplot of `Critic_Score` (x-axis) vs. `Global_Sales` (y-axis), using one colour for games with a rating of M and another colour for games without a rating of M.