

Reading 08: Document Tools

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Monday March 14, 2016

Overview

For this experiment, I created **two** scripts, **one** gnu plot file, and a makefile

- **roll_dice.sh** : This script simulates rolling a dice.
- **experiment.sh** : This script uses **roll_dice.sh** to perform an experiment and then collect that data into **results.dat**.
- **histogram.plt** : This script uses gnuplot to create a graph of the data in **textttresults.dat**.

Rolling Dice

The first script **roll_dice.sh** uses a while getopts loop to take in extra parameters and otherwise executes a simple for loop with the **shuf** command within the range of 1-6.

usage: **roll_dice.sh** [-r ROLLS -s sides]

-r ROLLS	Number of rolls of die (default: 10)
-s SIDES	Number of sides on die (default: 6)

Experiment

The experiment script simulates 1000 rolls by:

- Calling **roll_dice.sh** with **r=1000** rolls
- Using **awk** to determine the number of samples of the randomly generated number
- Using **sort** to show the output for 1, 2, 3, 4, 5 and 6
- Output results using **awk** to a tsv file

Results

Table 1 contains the results of my experiment of rolling a dice 1000 times:

Figure 1 contains a plot of my experimental results as produced by **histogram.plt**:

Side	Counts
1	195
2	163
3	142
4	159
5	173
6	168

Table 1: Dice Rolling Results

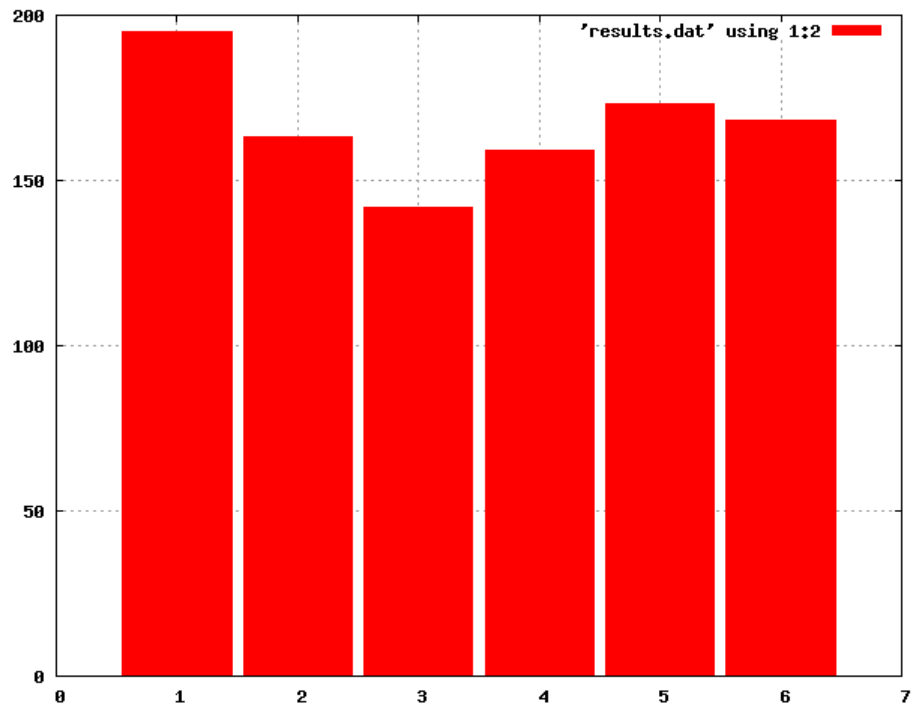


Figure 1: Dice Rolling Results