

CSE 201, Fall 2016
Homework Set # 02
Due Thursday September 22nd, 2016
Show all your work, and type your solution, convert document to PDF for final submission.
Make sure to print team members' names

1. In about 100 words, summarize the main points of Chapter 2 of the Text.
2. Read the article:
<http://uk.pcmag.com/desktop-reviews/42425/feature/how-to-build-your-own-pc>
on how to make your own PC.
3. Answer the following questions which are related to the lecture you are to watch from Udacity:
<https://www.udacity.com/course/viewer#!c-cs253/l-48737165/m-48723400>
 - a. What is the main type of document on the web?
 - b. In your opinion which of these browsers is the best? Pick one and explain with few sentences why it is better than the others.
You can look into its speed and security issues when discussing, or any other issue that is handled better with your browser against the ones listed.
 - i. Internet Explorer
 - ii. Firefox
 - iii. Chrome
 - iv. Safari
 - v. Opera
 - vi. None of the above
 - c. By way of examples, explain what a tag is, what an HTML element is.
 - d. By way of an example, explain what an HTML attribute is. In particular, make the phrase *my favorite course* a link to our course website.
 - e. Give an example of an image tag
 - f. What is the difference between span and div?
 - g. What character is used to separate url from a query?
 - h. What character is used to signify a *fragment*?
 - i. Dissect <http://localhost:8000/>
 - j. Identify the different parts (host, protocol, fragment, query, and port) of this url:
<http://mycompany.com:80/toys?p=car#red>
 - k. Which method is most often used for requesting a document from a server?
 - l. What is the structure of a valid header?
 - m. Contrast static versus dynamic content
4. You will be using Excel to complete this problem. You can convert your completed work to PDF when done, name this PDF file as Hw2_Pr4. D2L will allow you to upload multiple PDFs. Let x be a random variable representing the number of characters in a typical person's name (first name, last name, ignoring spaces) in USA.
Our goal is to come up with a reasonable probability distribution for x .
To do this, use this site (<http://random-name-generator.info/>) and generate 100 random names, and use that to find the probability distribution for x .

Steps:

- After generating the names, cut-and-paste the names onto Excel, and then use the len() function to count the number of characters. See example below for 5 names.

| | A | B | C |
|---|------------------------|-----------------|---|
| 1 | Name | Length of Names | |
| 2 | 01. Evelyn Carlson | 14 | |
| 3 | 02. Sonja Dennis | 12 | |
| 4 | 03. Jasmine Strickland | 18 | |
| 5 | 04. Ollie Simon | 11 | |
| 6 | 05. Laurence Thornton | 17 | |
| 7 | | | |

- Use the min and max function to find out name min and max name length. See example below for 5 names.

| Name | Length of Names |
|------------------------|-----------------|
| 01. Evelyn Carlson | 14 |
| 02. Sonja Dennis | 12 |
| 03. Jasmine Strickland | 18 |
| 04. Ollie Simon | 11 |
| 05. Laurence Thornton | 17 |
| | |
| min name length | 11 |
| max name length | 18 |

- Use this min and max to create bins. See example below for 5 names.

| A | B | C | D |
|------------------------|-----------------|---|-----|
| Name | Length of Names | | Bin |
| 01. Evelyn Carlson | 14 | | 11 |
| 02. Sonja Dennis | 12 | | 12 |
| 03. Jasmine Strickland | 18 | | 13 |
| 04. Ollie Simon | 11 | | 14 |
| 05. Laurence Thornton | 17 | | 15 |
| | | | 16 |
| min name length | 11 | | 17 |
| max name length | 18 | | 18 |

- Create a column that checks to frequency for each bin value: You will need to use CountIf function in Excel to count the number of occurrences in column B for each Bin value as its criteria. See example below for 5 names.

| A | B | C | D | E | F | G | H | I |
|------------------------|-----------------|---|-----|-----------|------|------------|-----------------------|---|
| Name | Length of Names | | Bin | Frequency | Prob | Prob*value | Prob*(value - mean)^2 | |
| 01. Evelyn Carlson | 14 | | 11 | 1 | | | | |
| 02. Sonja Dennis | 12 | | 12 | 1 | | | | |
| 03. Jasmine Strickland | 18 | | 13 | 0 | | | | |
| 04. Ollie Simon | 11 | | 14 | 1 | | | | |
| 05. Laurence Thornton | 17 | | 15 | 0 | | | | |
| | | | 16 | 0 | | | | |
| min name length | 11 | | 17 | 1 | | | | |
| max name length | 18 | | 18 | 1 | | | | |

- Compute Probability for each frequency value out of 100 possible names. See example below for 5 names

| A | B | C | D | E | F | G | H | I |
|------------------------|-----------------|---|-----|-----------|------|------------|-----------------------|---|
| Name | Length of Names | | Bin | Frequency | Prob | Prob*value | Prob*(value - mean)^2 | |
| 01. Evelyn Carlson | 14 | | 11 | 1 | 0.2 | | | |
| 02. Sonja Dennis | 12 | | 12 | 1 | 0.2 | | | |
| 03. Jasmine Strickland | 18 | | 13 | 0 | 0 | | | |
| 04. Ollie Simon | 11 | | 14 | 1 | 0.2 | | | |
| 05. Laurence Thornton | 17 | | 15 | 0 | 0 | | | |
| | | | 16 | 0 | 0 | | | |
| min name length | 11 | | 17 | 1 | 0.2 | | | |
| max name length | 18 | | 18 | 1 | 0.2 | | | |

- Compute the Probability * value. See example below for 5 names

| | A | B | C | D | E | F | G | H | I |
|------------------------|---|-----------------|---|-----|-----------|------|------------|-----------------------|---|
| Name | | Length of Names | | Bin | Frequency | Prob | Prob*value | Prob*(value - mean)^2 | |
| 01. Evelyn Carlson | | 14 | | 11 | 1 | 0.2 | 0.2 | | |
| 02. Sonja Dennis | | 12 | | 12 | 1 | 0.2 | 0.2 | | |
| 03. Jasmine Strickland | | 18 | | 13 | 0 | 0 | 0 | | |
| 04. Ollie Simon | | 11 | | 14 | 1 | 0.2 | 0.2 | | |
| 05. Laurence Thornton | | 17 | | 15 | 0 | 0 | 0 | | |
| | | | | 16 | 0 | 0 | 0 | | |
| min name length | | 11 | | 17 | 1 | 0.2 | 0.2 | | |
| max name length | | 18 | | 18 | 1 | 0.2 | 0.2 | | |

- Compute the mean and standard deviation.
- Compute the Probability *(value-mean)²
- Using Excel's chart option, chart Bin vs Frequency.
- Convert your Excel file to PDF when done.