**DAILY ASSESSMENT FORMAT**

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| **Date:** | **21/July/2020** | **Name:** | **Sanketh S Acharya** |
| **Course:** | **Basic statistics** | **USN:** | **4AL17EC084** |
| **Topic:** | **Week 2** | **Semester & Section:** | **6th b** |
| **GitHub Repository:** |  |  |  |

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| **FORENOON SESSION DETAILS (9.00am to 1.00pm)** |
| **Image of session** |
| **Report – Report can be typed or hand written for up to two pages.**  **Correlation**  **The first two videos in this module discuss the concept of correlation. In the first video, we'll talk about how we can display the correlation between two variables using tables and graphs. First we'll look at categorical variables and discuss contingency tables. In a next step we look at how we can best display the relationship between two quantitative variables. Here we'll introduce the scatterplot.**  **In the second video we'll discuss the Pearson's r - one of the most frequently used measures of correlation. It is an appropriate measure if the variables under analysis are measured on a quantitative level and if they are linearly related to each other. The Pearson's r expresses the direction and strength of the correlation**  **Regression**  **Regression analysis is one of the most frequently employed statistical methods. In the next three videos we'll discuss the basics of regression analysis. In the first video we'll explain how we can find the regression line (the line that best represents the linear correlation between two quantitative variables in a scatterplot). You'll learn that the best fitting line is the line for which the sum of the squared residuals (vertical distances of the cases in your scatterplot to the line) is the smallest. We therefore talk about ordinary least squares (OLS) regression.**  **In the next video foucses how we can describe what the regression line looks like. This is very useful because it can help us make predictions about our dependent variable. We can make these predictions by means of the regression equation of which important ingredients are the regression coefficient and the regression slope. In the final part of this video we'll show you how you can also find the regression line by means of two rather simple formulas.**  **The third video in this section focuses on the question how we can assess how well a regression line fits the data under analysis. Here we'll introduce the so-called r-squared. It tells you how much better a regression line predicts your dependent variable than the mean of that variable, and it shows you how much of the variance in your dependent variable is explained by your independent variable.**  **Although many people like eating chocolate, most people are slightly cautious with their chocolate consumption, because they know that there is a strong correlation between the amount of chocolate you eat and your body weight. However, a recent study shows that it might actually be a good idea to eat a lot of chocolate. This scatterplot shows that a country’s annual chocolate consumption per person (so, how much chocolate someone eats in a year) is positively related to the number of Nobel Prize winners per 10 million people in a country. Notice that in this scatterplot chocolate consumption is displayed as the independent variable and the number of Nobel prize winners as the dependent variable. The units of analysis in this scatterplot are countries. You can see that the correlation is pretty high. In fact, the Pearson’s r correlation coefficient here is 0.93.**  **Let me give you an example based on a random line. Say… this one. You measure the vertical distance between Japan and the line, the distance between Spain and the line, and so on, until you know the distance to the line of every case in your study. Every distance is called a residual. You end up with positive residuals (the distances from cases above the line to the line, displayed in blue) and negative residuals (distances from cases below the line to the line, displayed in red). You measure these residuals for every possible line through the scatterplot. So, not only for this line, but also for this line, this line and this line. And for every other possible line through the scatterplot. Eventually, you choose the line for which the sum of the squared residuals is the smallest. That’s this one. Why the squared residuals? Because positive and negative residuals cancel each other out: the sum of the length of the positive residuals (the blue lines) is exactly as big as the sum of the length of the negative residuals (the red lines). The best fitting line is called the regression line, and the name of the method of analysis is called ordinary least squares regression, which refers to the way we have found the line.**  **When we do a regression analysis, we assume that the independent variable X explains the dependent variable Y. Building on that assumption, we can make a scatterplot and let the computer draw the line that best describes the linear relationship between the two variables. With this line and the corresponding regression equation we can predict the values of the dependent variable based on the values of the independent variable. Moreover, with r-squared we can also assess how well the line fits our data. However, for at least two reasons, we need to be very careful when we interpret the results. The first reason is that on the basis of a regression analysis, we can never prove that there is a causal relationship between two variables. We can, in other words, never be certain that one variable is the cause of another variable. This translates to one single and not very complicated, but extremely important message: correlation is no causation. For instance, research suggests that eating a lot of chocolate makes you fat. This scatterplot shows that the more chocolate people eat, the larger their body weight tends to be. However, we need to be careful here. It might also be the case that causality runs in the opposite direction. The correlation between the two variables could also have another reason. It might for instance be the case that people with more body weight are more hungry and therefore eat more chocolate. This means that your X variable becomes your Y variable, and your Y variable becomes your X variable. This changes your scatterplot and your regression equation. This is the old scatterplot and this is the new one. This is the old equation and this is the new one. The most likely explanation of the relation between chocolate consumption and body weight, however, is that causality runs in both ways. The more chocolate you eat, the heavier you get, and the heavier you get, the more you crave chocolate.**  **abline() to add any line we like, as long as the first argument is the intercept and the second is the slope**  **These are the two lines you plotted in the last assignment. One line shows the mean, and one shows the regression line. Clearly, there is less error when we use the regression line compared to the mean line. This reduction in error from using the regression line compared to the mean line tells us how well the independent variable (money) predicts the dependent variable (prosocial behaviour).**  **4 days Online Workshop on ‘How to develop a Pythonic coding rather than Python coding – Logic Perspective’**    **Introduction to Python**  • Python - a general-purpose,Interpreted,  interactive, object-oriented and high-level  programming language.  • Fastest growing open source Programming  language  • Dynamically typed  • Versatile and can be adapted in DA,  ML, GUI,Software &Web development  • It was created by Guido van Rossum during  1985-1990.  **Python IDEs**  **• IDLE**  **• Pycharm**  **• Spyder**  **• Thonny**  **• Atom**  **• Anaconda -Jupyter Notebook, I python**  **for larger project in different domains.**  **• Google colab**  **Indentation and Blocks**  **• Python doesn't use braces ({}) toindicate blocks of code for class andfunction definitions or flow control.**  **• Blocks of code are denoted by lineindentation, which is rigidly enforced.**  **• All statements within the block mustbe indented the same level**  **Conditional Execution**  **• if and else**  **if v == c:**  **#do something based on the**  **condition**  **else:**  **#do something based on v != c**  **• elif allows for additional branching**  **if condition:**  **…...**  **elif another condition:**  **…**  **else: #none of the above**  **13**  **14**  **# python program for finding greater of two numbers**  **a=int(input(‘Enter the first number’))**  **b=int(input(‘Enter the second number’))**  **if a>b:**  **print("The greater number is",a)**  **else:**  **print("The greater number is",b)**  **# for satisfying equality condition**  **if a>b:**  **print("The greater number is",a)**  **elif a==b:**  **print(“both numbers are equal",a)**  **else:**  **print(“The greater number is",b)**  **Variables, expressions, and statements**  **python**  **>>>print(4)**  **4**  **If you are not sure what type a value has, the**  **interpreter can tell you.**  **>>>type('Hello, World!')**  **<class 'str'>**  **>>>type(17)**  **<class 'int'>**  **>>>type(3.2)**  **<class 'float'>**  **>>>type('17')**  **<class 'str'>**  **>>>type('3.2')**  **<class 'str'>**  **for loop**  **for var in <collection>:**  **<statements>**  **where collection is iterable obj like list, tuple,dictionary,stringand range**  **while loop**  **while condition:**  **<Statements>**  **Converting anything to a String**  **The built-in str() function can convert an**  **instance of any data type into a string**  **Ex:**  **print(“Hello ” + str(2))**  **Slicing strings**  **A segment of a string is called a slice.**  **Selecting a slice is similar to selecting acharacter:** |

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| **Date:** | **21/July/2020** | **Name:** | **Sanketh S Acharya** |
| **Course:** | **Salesforce** | **USN:** | **4AL17EC084** |
| **Topic:** | **Developer** | **Semester&Section:** | **6th b** |
| **Git hub repository** |  |  |  |
| **AFTERNOON SESSION DETAILS (2.00pm to 5.00pm)** | | | |
| **Image of session** | | | |
| **Report – Report can be typed or hand written for up to two pages.**  **Get Started with the Salesforce Platform**  **Learning Objectives**   * **Define the Salesforce platform.** * **Describe the DreamHouse scenario.** * **Create a Trailhead Playground.** * **Explain the difference between declarative and programmatic development**   **A Quick Introduction to Salesforce**  **Salesforce is just a CRM. It stores your customer data, gives you processes to nurture prospective customers, and provides ways to collaborate with people you work with. And it does all those things. But saying that Salesforce is “just a CRM” is like saying a house is just a kitchen. There’s a lot more to it than that.**  **Salesforce comes with a lot of standard functionality, or out-of-the-box products and features that you can use to run your business. Here are some common things businesses want to do with Salesforce and the features we give you that support those activities.**  **A Trailhead Playground (TP) org is a safe environment where you can practice the skills you’re learning before you take them to your real work. TPs come with all the standard app building and customization tools required to test your app development chops. If you’ve ever heard of a Developer Edition (DE) org, a TP is a special type of DE.**  **When you sign up for Trailhead, we automatically create a TP for you. So if you haven’t signed up yet, now is a great time to do so. If you’re already signed in, scroll to the bottom of this page and click Launch to open your TP.**  **TP orgs are free and you can have up to 10 of them at a time. To create one, go to any hands-on challenge, click the down arrow next to Launch and select Create a Trailhead Playground.. If you hit your max or want to manage your TPs, you can view and delete them from your Trailhead profile. If you ever need your TP’s username and password, you can access them using the instructions**[**here**](https://trailhead.salesforce.com/help?article=Find-the-username-and-password-for-your-Trailhead-Playground)**.**  **Go ahead and launch your TP so we can start getting our hands dirty.**  **Customize the Salesforce Platform**  **You already know that you can use the Salesforce platform to develop custom objects and functionality specific to your business. What you might not know is that you can do most of this development without ever writing a line of code.**  **Developing without code is known as declarative development. With declarative development, you use forms and drag-and-drop tools to perform powerful customization tasks. The platform also offers programmatic development, which uses things like Lightning components, Apex code, and Visualforce pages. But if you’re not a programmer, you can still build some amazing things on the platform.**  **Explore Career Options**  **Learning Objectives**  **After completing this unit, you’ll be able to:**  **Describe the different job roles within the Salesforce ecosystem.**  **Research potential career options that align to your interests.**  **Identify skills and requirements for your target career goal.**  **Researching Career Pathways**  **Now that you’ve looked inward to assess your current skills, interests, and values, it’s time to expand your view outward and explore different pathways that interest you.**  **Perhaps you already have some ideas about roles that interest you. Perhaps you’ve thought about consulting, but aren’t sure what a day in the life is like for that role. Or perhaps there’s a specific industry that interests you, like healthcare or finance, but you’re not sure what the different roles are within that industry. Whatever your starting point, this is an opportunity to cast a wide net to see what options interest you.**  **Here are a few ways to research different career pathways.**  **Search job descriptions with keywords related to your interest.**  **Talk to others who are already in roles you’re interested in.**  **Attend industry events and meetups.**  **Take people in your network out for coffee or lunch to learn more about other functions, teams, and roles.**  **Shadow someone doing what you’d like to do in the future.**  **Look for opportunities to be part of a special project to learn new skills.**  **Labor Market Trends**  **One thing to consider as you research career options is the labor market demand for specific skills and roles. What are the jobs and industries experiencing the highest growth, and where are there more opportunities?**  **For example, Burning Glass, Inc., found that over 300,000 new jobs were created in 2015 that specifically required Salesforce skills. These roles spanned multiple functional areas, including sales, IT, marketing, business management, and operations. In addition, 2 of the 10 best jobs on Indeed’s Best Jobs of 2017 list were Salesforce-specific roles.**  **As businesses embrace the future of mobile, big data, IoT, and AI, Salesforce skills are becoming some of the hottest skills to have on your resume, and that demand is growing. In fact, according to IDC, Salesforce and our broader ecosystem will create nearly 2 million jobs over the next 5 years.**  **Knowing where the demand for a specific skill set, such as Salesforce skills, is strong can give you a starting point for researching different career options that draw upon those skills.**  **Here are some places to look for labor market information.**  **Occupational Outlook Handbook**  **Glassdoor’s 50 Best Jobs List**  **Burning Glass Research**  **A Day in the Life**  **Another factor to consider during your research is the day-to-day activities of different roles. Does the role require more time working with others or working alone? Is the workday structured with lots of meetings or more self-directed? What types of problems does the role solve?**  **Once you’ve identified specific roles that interest you, search online to find more information about a typical day for that role. Use LinkedIn or Twitter to find people in your network with that role and ask to interview them.**  **For Salesforce career pathways, you can read stories from Trailblazers who have built their careers on Salesforce. Or explore a typical day in the life of different career paths on the Salesforce Career Paths site.**  **Check out some other places to explore a day in the life for different roles.**  **Careerproject.org**  **PWC: A day in the life**  **Conducting Your Research**  **We’ve provided some information on different career pathways within the Salesforce ecosystem as a starting point for researching career options that interest you. Read through the career profiles, the skills required, what a day in the life of each of these jobs is like, and some of the additional resources provided. You can also expand your exploration outside this list and do your own research on job roles that interest you.**  **Once you’ve identified one or two roles that look interesting, complete the career exploration worksheet in the Career Exploration Resources packet you downloaded to do a deeper dive on those career options.**  **Salesforce Developer Overview**  **You believe that any repetitive task is best automated with code. You dig into juicy problems and work through the night until you have an elegant solution. Coding Apex and custom applications for Salesforce or building Visualforce pages and controllers are some of the tasks you enjoy tackling.**  **Average salary (national): $112,620**  **Jobs last 12 months (US only): 7,975**  **Annual percent growth rate (last 4 years): 58%**  **Average experience required: 2 to 5 years**  **Specialized Skills**  **General Business Skills**  **Salesforce**  **Apex**  **Visualforce**  **Lightning**  **Java/C#/OOP**  **JavaScript**  **JQuery/Angular JS/Bootstrap**  **SQL/SOQL**  **Web services**  **Communication**  **Writing**  **Problem solving**  **Organization**  **Project management**  **Customer service**  **Teamwork**  **Here are some more Salesforce developer resources:**  **A Day in the Life of a Salesforce Developer**  **Become a Salesforce Developer eBook**  **Careers in the Cloud: Take Your Developer Career to the Next Level!**  **Salesforce Developer Skills Lead to Dream Job**  **Salesforce Administrator Overview**  **You love to help your team be efficient and on top of things. You’re the one that your team depends on to have all their ducks in a row and you help them monitor their successes and customer relationships. You provide value to the business by automating complex business processes, creating reports and dashboards, and training users on using Salesforce.**  **Average salary (national): $88,230**  **Jobs last 12 months (US only): 3,240**  **Annual percent growth rate: 34%**  **Average experience required: 2 to 5 years**  **Specialized Skills**  **General Business Skills**  **Salesforce**  **Business process**  **Data management**  **System administration**  **Business analysis**  **System and network configuration**  **Data validation**  **Communication skills**  **Organization**  **Problem solving**  **Writing**  **Project management**  **Attention to detail**  **Troubleshooting**  **Here are some more Salesforce administrator resources:**  **A Day in the Life of a Salesforce Administrator**  **QUIZ: What Type of Salesforce Admin Are You?**  **The Best Thing I Built on Salesforce: My Career**  **Being a Salesforce Admin Means Being a Business Analyst**  **What Is a Salesforce Administrator?**  **Business Analyst Overview**  **You love data and providing key business insights based on analyzing multiple data sources. You take initiative to identify what the business should be tracking and evaluating. You’re able to think through problems and make actionable recommendations.**  **Average salary (national): $85,529**  **Jobs last 12 months (US only): 3,395**  **Annual percent growth rate: 24.2%**  **Average experience required: 2 to 5 years**  **Specialized Skills**  **General Business Skills**  **Salesforce**  **Business analysis**  **Data analysis**  **Data management**  **Financial modeling**  **Scripting languages: SQL, Python**  **Communication**  **Organization**  **Writing**  **Project management**  **Problem solving**  **Attention to detail** | | | |