**DAILY ASSESSMENT FORMAT**

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| **Date:** | 15 July 2020 | **Name:** | Anupama J S |
| **Course:** | Coursera | **USN:** | 4AL16EC005 |
| **Topic:** | Mathematics of machine learning-Linear algebra | **Semester & Section:** | 8th sem “A”section |
| **Github Repository:** | AnupamaJS |  |  |

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| **FORENOON SESSION DETAILS** |
| **C:\Users\User\Pictures\Screenshots\Screenshot (297).png**  **C:\Users\User\Pictures\Screenshots\Screenshot (298).png**  **C:\Users\User\Pictures\Screenshots\Screenshot (299).png** What are matrices? Matrices are objects that rotate and stretch vectors. And they’re also objects that let us solve these sorts of problems. Where do matrices come into play? Now we know that matrix enjoys a particular property that might be crucial to develop a fast algorithm or even to prove that a solution exists, or that the solution has some nice property. Some important points to be noted:   * A linear system can be seen in a matrix-vector form. * Matrices look just like a fancy and compact way to write down a system of equations, mere tables of numbers. * Just giving a quick look to the matrix, we can understand if this system has a solution. * We can also understand whether the solution is non-negative (meaning that all the components of the solution are non-negative) or not. We wouldn’t be able to draw this conclusion just by looking at the system without trying to solve it. * We can also claim that to solve this system how many operations we need (one operation being a single addition/subtraction/division/multiplication) even if we construct a larger system with the same pattern.  **How to use matrices for simultaneous equations?** Matrices can be used to compactly write and work with systems of equations, and it can be manipulated in any way that a normal equation can be. This is very helpful when we start to work with systems of equations. It is helpful to understand how to organize matrices to solve these systems. [[6]](https://courses.lumenlearning.com/boundless-algebra/chapter/using-matrices-to-solve-systems-of-equations/)  It is important to do the following:   * Make sure that all of the equations are written in a similar manner, meaning the variables need to be in the same order. * Make sure that one side of the equation is only variables and their coefficients, and the other side is just constants.  **Example** Say we walk into a fruit shop and we buy two apples, and three oranges, and suppose that costs 8 dollars. We write it to this equation:  **2a + 3b = 8** Here,a = an appleb = an orange Now, say we go to that fruit shop on another day and we buy 10 apples and 1 orange. And the shopkeeper charges us 13 dollars. So the equation is:  **10a + 1b = 13**  This is an example of a Linear Algebra problem.  We will have to solve these **simultaneous equations** in order to find out the price of individual apples and oranges. Knowing the prices will help us to decide which offers better value or we can just predict the bill.  You might think the shop must-have sticker prices, why would we do this? But actually, this sort of thing, price discovery, happens all the time in many businesses with complicated products and service agreements and more expensive purchases. Think about what happens when you buy an apartment or a car for instance.  It might be quite difficult to solve all these equations by hand frequently. So, we might want a computer algorithm to do it for us which will **save time**. So, the equations are…2a + 3b = 810a + 1b = 13 Constant linear coefficients in these equations: **2, 10, 3, 1**  That relates the input variables A and B, to the output 8 and 13. We can consider it as a vector **[a, b]**, that describes the prices of apples and oranges.  Here, 8 and 13 are the cost (how many we might want to buy).  These are just simultaneous equations, and we can write them down in a different way, as a matrix problem:  Image for post  Consider it as…  **[ Known values ] [ Unknown values ] = [Output ]**  This matrix is an object with numbers in 2, 3, 10, 1 where:   * **Our first trip:** 2, 3 * **Our second trip:** 10, 1  Again... Image for post **Operations on the matrices…** Image for post  Now we will multiply this out in the following way:   * We would multiply the elements in the rows by the elements in the column. * We’d multiply the top row times that column: (2 X a) + (3 X b). * And we’d say that **(2a + 3b)** equaled the top row on the right-hand side.   Image for post  2a + 3b = 8   * And do the same for the next row, that row times that column is: **10a + 1b**, is equal to the row on the bottom on the right-hand side.   Image for post  10a + 1b = 13  Finally, that looks like our two simultaneous equations:  Image for post  Two simultaneous equations  Now let’s check what happens if we multiply that matrix by the unit basis (x-axis) vector.   * **Step 1:** (2 X 1) + (3 X 0) = 2 * **Step 2:** (10 X 1) + (1 X 0) = 10  The result is… Image for post  Multiplied the matrix by the unit basis (x-axis) vector  It takes the little unit vector which we called e1 hat, and transforms it to another place:  Image for post  e1 hat  Let’s do that with the other basis vector. Multiply 2, 3, 10, 1 multiplied by 0, 1:   * **Step 1:** (2 X 0) + (3 X 1) = 3 * **Step 2:** (10 X 0) + (1 X 1) = 1  And the result… Image for post  Multiplied the matrix by the y-axis vector  The other basis vector e2 hat gets transformed over to 3, 1:  Image for post  e2 hat So, the complete picture is… Image for post |

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| **Course:** | Sales force | **USN:** | 4AL16EC005 |
| **Topic:** | Career Development Planning | **Semester & Section:** | 8th sem “A”section |
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| **AFTERNOON SESSION DETAILS** | | | |
| C:\Users\User\Pictures\Screenshots\Screenshot (294).pngC:\Users\User\Pictures\Screenshots\Screenshot (295).pngC:\Users\User\Pictures\Screenshots\Screenshot (296).pngAssess YourselfLearning Objectives After completing this unit, you’ll be able to:   * List the steps for creating a career plan. * Identify your unique strengths, skills, and talents and what’s important to you. * Describe the different elements of self-assessment.  A Quick Introduction to Career Development Whether you’re just starting out in your career or already have a few years of experience under your belt, it can be helpful to step back and think about your career plan. Career planning is not a one-time event; it’s an ongoing process to revisit throughout your career as your priorities and interests shift and change. Explore Career OptionsLearning 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](https://medium.com/trailhead/chances-are-your-next-job-will-require-salesforce-skills-290f4da05e8c)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](http://blog.indeed.com/2017/03/21/best-jobs-united-states-2017/" \t "_blank) 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](https://www.salesforce.com/blog/2017/10/salesforce-economy-idc-study-2022), 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](https://www.bls.gov/ooh/) * [Glassdoor’s 50 Best Jobs List](https://www.glassdoor.com/List/Best-Jobs-in-America-LST_KQ0,20.htm) * [Burning Glass Research](http://burning-glass.com/)   There are three main areas to consider in developing your career plan.   1. **Learning:** what are the skills you need to acquire, and where can you learn them? 2. **Earning:** what credentials do you need for this role and how can you demonstrate your skills to employers? 3. **Connecting:** what are ways to connect and network with others in the field?  Learning For most skills and roles, you can find many options for learning—from self-paced online learning to instructor-led classes, events, and even formal degree programs.  What type of learning you choose to do depends on your time, learning style, and budget. Sometimes what works best for you is a combination of different learning programs. There’s no one right way. It’s up to you to choose the adventure that works best for you.  **Learn Online**  One of the best ways to skill up for Salesforce career paths is through Trailhead—the fun, free, hands-on way learn.  If you’re new to Trailhead, here are a few recommendations on where to start.   |  |  |  | | --- | --- | --- | | **If you want to be a...** | **Start with...** | **Next steps...** | | Salesforce developer | [Developer Beginner](https://developer.salesforce.com/trailhead/trail/force_com_dev_beginner) (trail) [Build a Conference Management App](https://trailhead.salesforce.com/project/salesforce_developer_workshop) (project) | [Developer Intermediate](https://trailhead.salesforce.com/trails/force_com_dev_intermediate) (trail)  [Develop for Lightning Experience](https://trailhead.salesforce.com/trails/lex_dev) (trail)  [Build an Automated Workshop Management System](https://trailhead.salesforce.com/project/workshop_mgmt) (project) | | Salesforce administrator | [Admin Beginner](https://trailhead.salesforce.com/trail/force_com_admin_beginner) (trail)  [Build a Suggestion Box App](https://trailhead.salesforce.com/project/suggestion_box) (project) | [Admin Intermediate](https://trailhead.salesforce.com/trail/force_com_admin_intermediate) (trail) [Admin Advanced](https://trailhead.salesforce.com/trails/force_com_admin_advanced) (trail) | | Sales manager | [Grow Faster with CRM](https://trailhead.salesforce.com/en/trails/crm) (trail)  [Sell Lightning Fast with Sales Cloud](https://trailhead.salesforce.com/trails/lex_end_user) (trail) | [Integrate Outlook and Gmail with Salesforce](https://trailhead.salesforce.com/trails/outlook_gmail_integration) (module)  [Drive Sales with Operational Excellence](https://trailhead.salesforce.com/trails/drive-sales-with-operational-excellence) (trail) | | Marketing manager | [Personalize Your Customer Journeys with Marketing Cloud](https://trailhead.salesforce.com/trails/personalize_customer_journeys_marketing_cloud) (trail) |  | | Business analyst | [Explore with Analytics](https://trailhead.salesforce.com/trail/wave_analytics_explorer) (trail)  [Admin Beginner](https://trailhead.salesforce.com/trail/force_com_admin_beginner) (trail) |  | | | | |