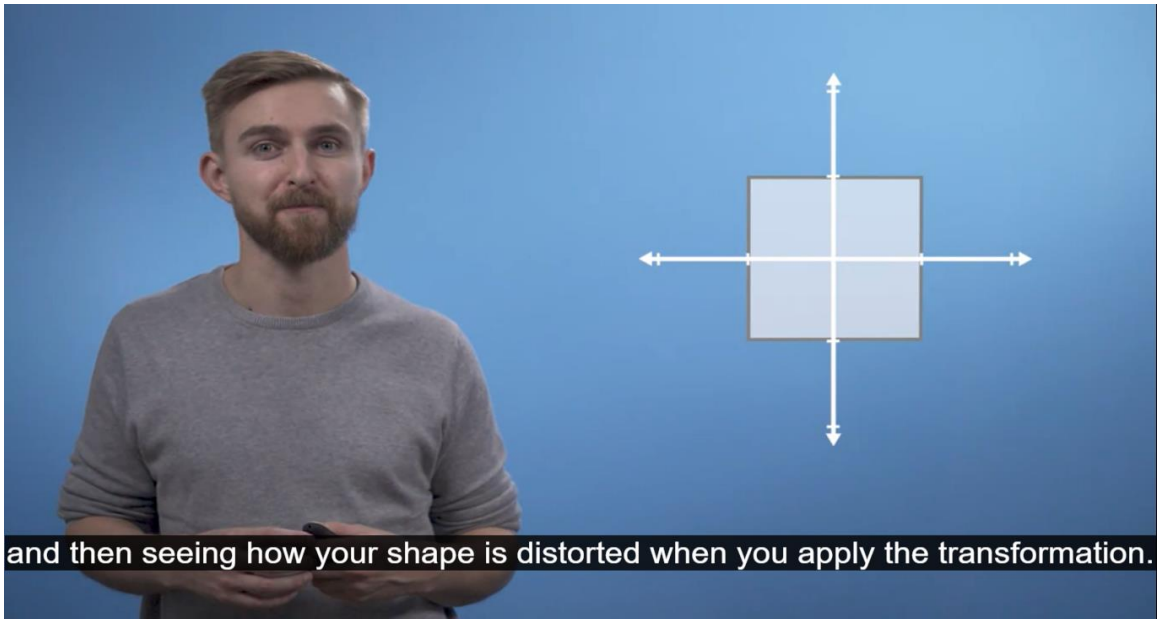
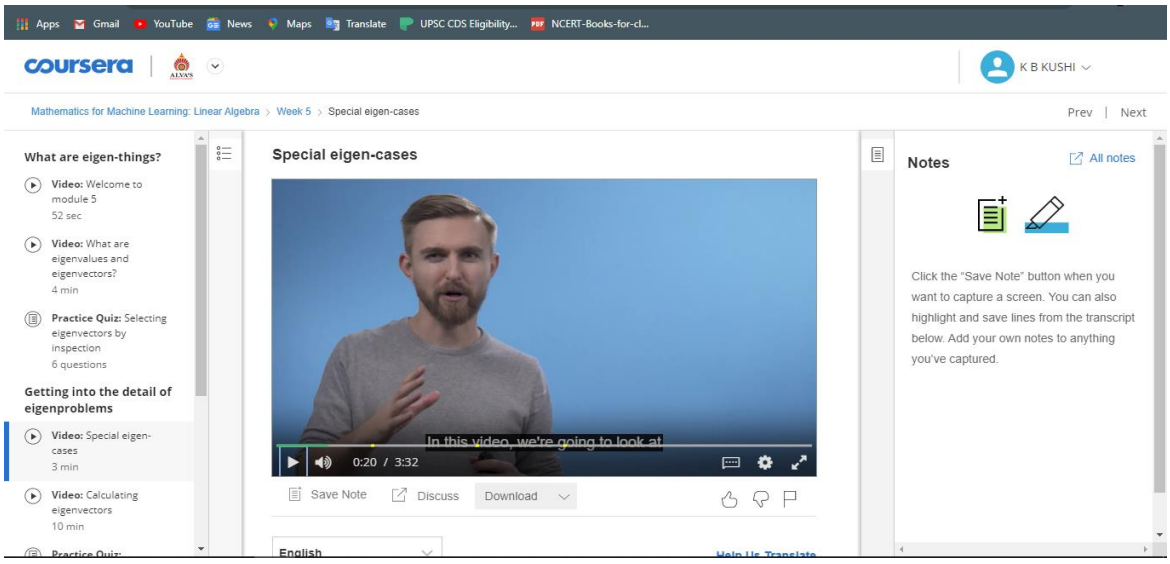
DAILY ASSESSMENT FORMAT

Date:	**16th July 2020**	**Name:**	**K B KUSHI**
Course:	**coursera**	**USN:**	**4AL17EC107**
Topic:	• **Mathematics for machine learning: Linear Algebra**	**Semester & Section:**	**6th sem 'B' sec**
GitHub Repository:	**KUSHI-COURSES**		

FORENOON SESSION DETAILS

Image of session





Report:

What are Eigen things?

- **An eigenvector is a vector that when you multiply it by a square matrix, you get the same vector or the same vector multiplied by a scalar.**
- **There are a lot of terms which are related to this like eigenspaces and eigenvalues and eigenbases and such, which I don't quite understand, in fact, I don't understand at all.**
- **Can someone give an explanation connecting these terms? So that it is clear what they are and why they are related.**
- **Eigenvectors are those vectors that exhibit especially simple behaviour under a linear transformation.**
- **Loosely speaking, they don't bend and rotate, they simply grow (or shrink) in length (though a different interpretation of growth/shrinkage may apply if the ground field is not R*R*).**
- **If it is possible to express any other vector as a linear combination of eigenvectors (preferably if you can in fact find a whole basis made of eigenvectors) then applying the - otherwise complicated - linear transformation suddenly becomes easy because with respect to a basis of eigenvectors the linear transformation is given simply by a diagonal matrix.**
- **In linear algebra, an eigenvector or characteristic vector of a linear transformation is a nonzero vector that changes at most by a scalar factor when that linear transformation is applied to it.**
- **The corresponding eigenvalue is the factor by which the eigenvector is scaled. Geometrically, an eigenvector, corresponding to a real nonzero eigenvalue, points in a direction in which it is stretched by the transformation and the eigenvalue is the factor by which it is stretched.**
- **If the eigenvalue is negative, the direction is reversed. Loosely speaking, in a multidimensional vector space, the eigenvector is not rotated.**
- **However, in a one-dimensional vector space, the concept of rotation is meaningless. If the entries of the matrix *A* are all real numbers, then the coefficients of the characteristic polynomial will also be real numbers, but the eigenvalues may still have nonzero imaginary parts.**
- **The entries of the corresponding eigenvectors therefore may also have nonzero imaginary parts. Similarly, the eigenvalues may be irrational numbers even if all the entries of *A* are rational numbers or even if they are all integers.**
- **However, if the entries of *A* are all algebraic numbers, which include the rationals, the eigenvalues are complex algebraic numbers.**
- **The non-real roots of a real polynomial with real coefficients can be grouped into pairs of complex conjugates, namely with the two members of each pair having imaginary parts that differ only in sign and the same real part.**
- **If the degree is odd, then by the intermediate value theorem at least one of the roots is real.**
- **Therefore, any real matrix with odd order has at least one real eigenvalue, whereas a real matrix with even order may not have any real eigenvalues.**

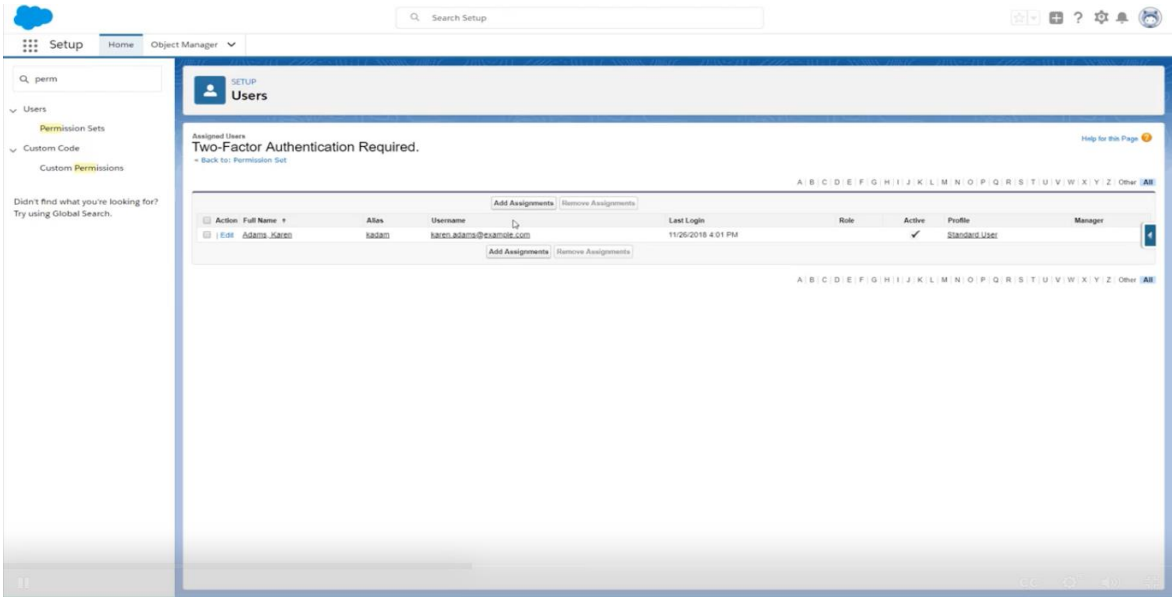
- **The eigenvectors associated with these complex eigenvalues are also complex and also appear in complex conjugate pairs.**

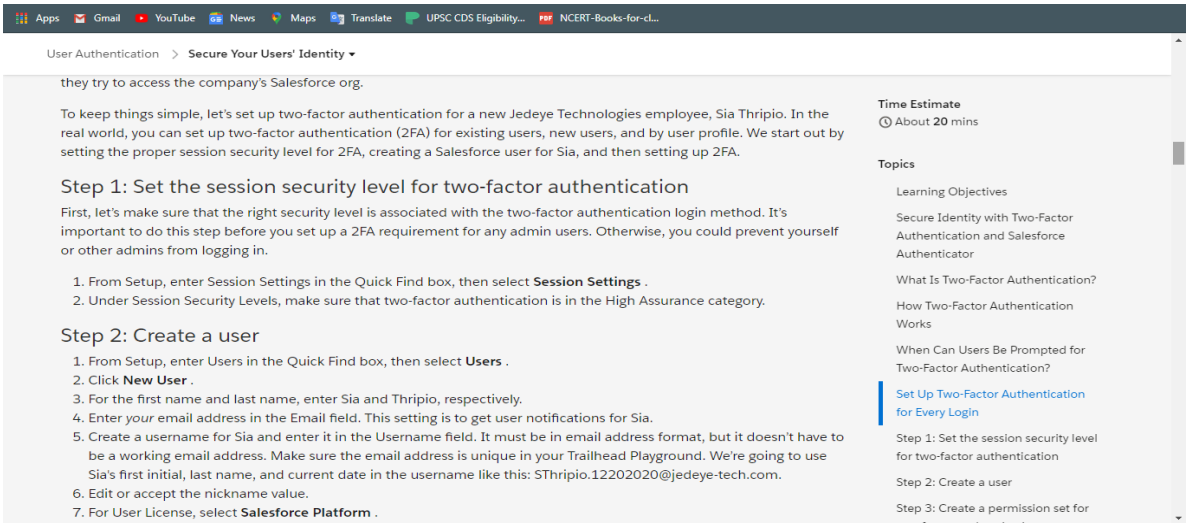
DAILY ASSESSMENT FORMAT

Date:	**16th July 2020**	**Name:**	**K B KUSHI**
Course:	**Salesforce**	**USN:**	**4AL17EC107**
Topic:	**build-your-career-with-salesforce-skills**	**Semester & Section:**	**6th sem 'B' sec**
GitHub Repository:	**KUSHI-COURSES**		

AFTERNOON SESSION DETAILS

image of session





Report:

Secure Your Users' Identity

- **Learning Objectives**

  After completing this module, you'll be able to:

  Describe ways to identify your users in addition to a username and password.

  Set up two-factor authentication.

  Use the Salesforce Authenticator app to verify identity.

Get login information about users who log in to your org.

- **Secure Identity with Two-Factor Authentication and Salesforce Authenticator:**

As an admin, you probably walk a fine line between making sure that your Salesforce org is secure and that your users can log in quickly and easily.

- **The most effective way to protect your org and its data is to require that users provide more than just their username and password. Security experts call this two-factor authentication, or 2FA for short.**

What Is Two-Factor Authentication?

- **Sounds like a mathematical equation, right? Whether math thrills you or fills you with dread, just know that 2FA has nothing to do with high school algebra. But it has everything to do with making sure that your users are who they say they are.**

What are the two factors?

- **Something users know, like their password**
- **Something users have, such as a mobile device with an authenticator app installed**
- **That second factor of authentication provides an extra layer of security for your org.**

As an admin, you can require it every time your users log in. Or you can require it only in some circumstances, such as when users log in from an unrecognized device or try to access a high-risk application.

- **After users successfully verify their identity with both authentication factors, they can access Salesforce and start working.**

How Two-Factor Authentication Works

- **You might not have known what it's called, but you've probably already used two-factor authentication.**
- **Every time you get cash from the ATM, you use something you have (your bank card) plus something you know (your PIN). And maybe you already have an authenticator app on your phone. For instance, you enter a verification code that you get from the app when you log in to some of your online accounts.**
- **This unique code is sometimes called a time-based one-time password (or TOTP for short) because it expires after a set amount of time.**
- **Several vendors, including Salesforce and Google, provide apps that generate these time-sensitive codes.**

Set Up Two-Factor Authentication for Every Login

- **Now that you know the basics of two-factor authentication, let's see how easy it is to set up.**

Suppose you're a Salesforce admin for Jedeye Technologies, a company *not* located in a galaxy far, far away.

- **Your chief security officer has handed you a mission: Make all employees supply more than their username and password every time they try to access the company's Salesforce org.**

Step 1: Set the session security level for two-factor authentication

Step 2: Create a user

Step 3: Create a permission set for two-factor authentication

Step 4: Assign the permission set to Sia's user