**DAILY ASSESSMENT FORMAT**

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| **Date:** | 14 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\Downloads\WhatsApp Image 2020-07-14 at 9.05.00 PM.jpeg**  **VECTOR**  This article is about the vectors mainly used in physics and engineering to represent directed quantities. For mathematical vectors in general, see [Vector (mathematics and physics)](https://en.wikipedia.org/wiki/Vector_(mathematics_and_physics)). For other uses, see [Vector (disambiguation)](https://en.wikipedia.org/wiki/Vector_(disambiguation)).  [https://upload.wikimedia.org/wikipedia/commons/thumb/9/95/Vector_from_A_to_B.svg/220px-Vector_from_A_to_B.svg.png](https://en.wikipedia.org/wiki/File:Vector_from_A_to_B.svg)  A vector pointing from A to B  In [mathematics](https://en.wikipedia.org/wiki/Mathematics), [physics](https://en.wikipedia.org/wiki/Physics), and [engineering](https://en.wikipedia.org/wiki/Engineering), a Euclidean vector (sometimes called a geometric[[1]](https://en.wikipedia.org/wiki/Euclidean_vector#cite_note-1) or spatial vector,[[2]](https://en.wikipedia.org/wiki/Euclidean_vector#cite_note-2) or—as here—simply a vector) is a geometric object that has [magnitude](https://en.wikipedia.org/wiki/Magnitude_(mathematics)) (or [length](https://en.wikipedia.org/wiki/Euclidean_norm)) and [direction](https://en.wikipedia.org/wiki/Direction_(geometry)). Vectors can be added to other vectors according to [vector algebra](https://en.wikipedia.org/wiki/Vector_algebra). A Euclidean vector is frequently represented by a [line segment](https://en.wikipedia.org/wiki/Line_segment) with a definite direction, or graphically as an arrow, connecting an initial point A with a terminal point B,[[3]](https://en.wikipedia.org/wiki/Euclidean_vector#cite_note-3) and denoted by {\displaystyle {\overrightarrow {AB}}.}  A vector is what is needed to "carry" the point A to the point B; the Latin word vector means "carrier".[[4]](https://en.wikipedia.org/wiki/Euclidean_vector#cite_note-4) It was first used by 18th century astronomers investigating planetary revolution around the Sun.[[5]](https://en.wikipedia.org/wiki/Euclidean_vector#cite_note-5) The magnitude of the vector is the distance between the two points and the direction refers to the direction of displacement from A to B. Many [algebraic operations](https://en.wikipedia.org/wiki/Algebraic_operation) on [real numbers](https://en.wikipedia.org/wiki/Real_number) such as [addition](https://en.wikipedia.org/wiki/Addition), [subtraction](https://en.wikipedia.org/wiki/Subtraction), [multiplication](https://en.wikipedia.org/wiki/Multiplication), and [negation](https://en.wikipedia.org/wiki/Additive_inverse) have close analogues for vectors, operations which obey the familiar algebraic laws of [commutativity](https://en.wikipedia.org/wiki/Commutativity" \o "Commutativity), [associativity](https://en.wikipedia.org/wiki/Associativity), and [distributivity](https://en.wikipedia.org/wiki/Distributivity" \o "Distributivity). These operations and associated laws qualify [Euclidean](https://en.wikipedia.org/wiki/Euclidean_space) vectors as an example of the more generalized concept of vectors defined simply as elements of a [vector space](https://en.wikipedia.org/wiki/Vector_space).  Vectors play an important role in [physics](https://en.wikipedia.org/wiki/Physics): the [velocity](https://en.wikipedia.org/wiki/Velocity) and [acceleration](https://en.wikipedia.org/wiki/Acceleration) of a moving object and the [forces](https://en.wikipedia.org/wiki/Force) acting on it can all be described with vectors. Many other physical quantities can be usefully thought of as vectors. Although most of them do not represent distances (except, for example, [position](https://en.wikipedia.org/wiki/Position_(vector)) or [displacement](https://en.wikipedia.org/wiki/Displacement_(vector))), their magnitude and direction can still be represented by the length and direction of an arrow. The mathematical representation of a physical vector depends on the [coordinate system](https://en.wikipedia.org/wiki/Coordinate_system) used to describe it. Other vector-like objects that describe physical quantities and transform in a similar way under changes of the coordinate system include [pseudovectors](https://en.wikipedia.org/wiki/Pseudovector" \o "Pseudovector) and [tensors](https://en.wikipedia.org/wiki/Tensor). DOT PRODUCT "Scalar product" redirects here. For the abstract scalar product, see [Inner product space](https://en.wikipedia.org/wiki/Inner_product_space). For the product of a vector and a scalar, see [Scalar multiplication](https://en.wikipedia.org/wiki/Scalar_multiplication).  In [mathematics](https://en.wikipedia.org/wiki/Mathematics), the dot product or scalar product[[note 1]](https://en.wikipedia.org/wiki/Dot_product#cite_note-1) is an [algebraic operation](https://en.wikipedia.org/wiki/Algebraic_operation) that takes two equal-length sequences of numbers (usually [coordinate vectors](https://en.wikipedia.org/wiki/Coordinate_vector)) and returns a single number. In [Euclidean geometry](https://en.wikipedia.org/wiki/Euclidean_geometry), the dot product of the [Cartesian coordinates](https://en.wikipedia.org/wiki/Cartesian_coordinates) of two [vectors](https://en.wikipedia.org/wiki/Vector_(mathematics_and_physics)) is widely used and often called "the" inner product (or rarely projection product) of Euclidean space even though it is not the only inner product that can be defined on Euclidean space; see also [inner product space](https://en.wikipedia.org/wiki/Inner_product_space).  Algebraically, the dot product is the sum of the [products](https://en.wikipedia.org/wiki/Product_(mathematics)) of the corresponding entries of the two sequences of numbers. Geometrically, it is the product of the [Euclidean magnitudes](https://en.wikipedia.org/wiki/Euclidean_vector#Length) of the two vectors and the [cosine](https://en.wikipedia.org/wiki/Cosine) of the angle between them. These definitions are equivalent when using Cartesian coordinates. In modern [geometry](https://en.wikipedia.org/wiki/Geometry), [Euclidean spaces](https://en.wikipedia.org/wiki/Euclidean_space) are often defined by using [vector spaces](https://en.wikipedia.org/wiki/Vector_space). In this case, the dot product is used for defining lengths (the length of a vector is the [square root](https://en.wikipedia.org/wiki/Square_root) of the dot product of the vector by itself) and angles (the cosine of the angle of two vectors is the quotient of their dot product by the product of their lengths).  The name "dot product" is derived from the [centered dot](https://en.wikipedia.org/wiki/Interpunct) " · " that is often used to designate this operation; the alternative name "scalar product" emphasizes that the result is a [scalar](https://en.wikipedia.org/wiki/Scalar_(mathematics)), rather than a [vector](https://en.wikipedia.org/wiki/Euclidean_vector), as is the case for the [vector product](https://en.wikipedia.org/wiki/Vector_product) in three-dimensional space. LINEAR INDEPENDENCE For linear dependence of random variables, see [Covariance](https://en.wikipedia.org/wiki/Covariance).  [https://upload.wikimedia.org/wikipedia/commons/thumb/b/bc/Vec-indep.png/220px-Vec-indep.png](https://en.wikipedia.org/wiki/File:Vec-indep.png)  Linearly independent vectors in {\displaystyle \mathbb {R} ^{3}}  [https://upload.wikimedia.org/wikipedia/commons/thumb/a/ab/Vec-dep.png/220px-Vec-dep.png](https://en.wikipedia.org/wiki/File:Vec-dep.png)  Linearly dependent vectors in a plane in {\displaystyle \mathbb {R} ^{3}}.  In the theory of [vector spaces](https://en.wikipedia.org/wiki/Vector_space), a [set](https://en.wikipedia.org/wiki/Set_(mathematics)) of [vectors](https://en.wikipedia.org/wiki/Vector_(mathematics)) is said to be linearly dependent if at least one of the vectors in the set can be defined as a [linear combination](https://en.wikipedia.org/wiki/Linear_combination) of the others; if no vector in the set can be written in this way, then the vectors are said to be linearly independent. These concepts are central to the definition of [dimension](https://en.wikipedia.org/wiki/Dimension_(vector_space)).  A vector space can be of [finite-dimension](https://en.wikipedia.org/wiki/Finite-dimension) or [infinite-dimension](https://en.wikipedia.org/wiki/Dimension_(vector_space)) depending on the number of linearly independent [basis vectors](https://en.wikipedia.org/wiki/Basis_vectors). The definition of linear dependence and the ability to determine whether a subset of vectors in a vector space is linearly dependent are central to determining a [basis](https://en.wikipedia.org/wiki/Basis_(linear_algebra)) for a vector space. |

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| **Date:** | 14 July 2020 | **Name:** | Anupama J S |
| **Course:** | Sales force | **USN:** | 4AL16EC005 |
| **Topic:** | [Trailhead Playground Management](https://trailhead.salesforce.com/en/content/learn/modules/trailhead_playground_management?trail_id=learn_salesforce_with_trailhead) | **Semester & Section:** | 8th sem “A”section |
| **Github Repository:** | AnupamaJS |  |  |
| **AFTERNOON SESSION DETAILS** | | | |
| C:\Users\User\Pictures\Screenshots\Screenshot (285).pngC:\Users\User\Pictures\Screenshots\Screenshot (286).png Create a Trailhead Playground  Learning Objectives  After completing this unit, you’ll be able to:  Create a Trailhead Playground.  Explain the difference between a Trailhead Playground and a Developer Edition org.  What Is a Trailhead Playground?  A Trailhead Playground is an org you can use to complete hands on challenges, and try out new features and customizations. Much like a real playground, a Trailhead Playground lets you play around and make customizations without impacting anything else (in this case, your production org).  The only difference is that in a playground, playing means swinging from the monkey bars and riding the merry-go-round. In a Trailhead Playground, it means writing Lightning web components and creating new custom objects. Which, if you ask us, is just as fun!  You can do almost anything to your Trailhead Playground, and it comes with a set of Trailhead-specific data that you can use when completing challenges. Trailhead Playgrounds have some limits, but for the most part they give you the same customization options as a production org. And although you can outgrow a real-life playground, your Trailhead Playground never expires, as long as you keep using it.  What’s the Difference Between a Trailhead Playground and a Developer Edition Org?  If you’re used to trying out new Salesforce features and playing around in a development environment, you might already have a Developer Edition (DE) org. A DE org is an org that we provide for free to test new features and implementations in Salesforce without affecting a production org.  A Trailhead Playground is like a DE org, but specifically for Trailhead. Trailhead Playgrounds come with Trailhead-specific data, and a pre-installed package that we use to test your hands-on challenges. Trailhead Playgrounds also include tools to make some of the tasks you’ll find yourself completing often easier, such as finding your username and resetting your password, and installing managed packages.  Additionally, My Domain is already active in every Trailhead Playground. My Domain is required to create custom Lightning components and set up single sign-on (SSO) in an org. To learn more about My Domain, check out this help article. To learn how to activate it in your production org, see the User Authentication module.  If you’d rather use an existing DE org, though, we understand. Just choose Log in to a Developer Edition from the dropdown in any hands-on challenge, and enter the credentials for your DE org. Once you’ve linked your DE org to your Trailhead account, you’ll be able to launch it from any hands-on challenge.  Create Your First Trailhead Playground  Once you've created a Trailhead account with your Salesforce account or a linked social account, we’ve done all the hard work for you! A Trailhead Playground is created automatically and linked to your Trailhead account.  In every hands-on challenge and project step verification, there’s a dropdown menu. To create a new Trailhead Playground, click the dropdown and select Create a Trailhead Playground. And that’s it! Now you have an org that you can use to complete hands-on challenges and projects, and test new features and code. Note that if you're using Trailhead in a language other than English, your playground still needs to be set to English when you're working on hands-on challenges. Otherwise you may run into issues passing challenges.  Get Your Trailhead Playground Username and Password  Learning Objectives  After completing this unit, you’ll be able to:  Get your Trailhead Playground username and password.  Rename a Trailhead Playground.  Get Your Username and Reset Your Password  Most of the time, you won’t need to know the username and password of your Trailhead Playground. When a Trailhead Playground is linked to your Trailhead account, you can launch it with the click of a button, without logging in to it. You don’t even need to choose a username or fill out any information to create a new Trailhead Playground. You do need your username and password every once in a while, however. For example, if you’re authorizing your org for use with the Salesforce Command-Line Interface (CLI), or signing into it on your phone to see how something looks on mobile.  In most Trailhead Playgrounds, it’s easy to reset your password. First, launch your Trailhead Playground by clicking Launch from any hands-on challenge. If you see a tab in your playground that says Get Your Login Credentials, great! Follow the steps in the Your Playground Has the Playground Starter App section below.  If not, click App Launcher to launch the App Launcher, then click Playground Starter and keep reading. If you don’t see the Playground Starter app, that’s OK—skip to the Your Playground Doesn’t Have the Playground Starter App section. | | | |