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# **JAVA**

### **Day 1 - Task 1**

Solve any 5 from (Java Assignment.docx) in the github

### **Day 1 - Task 2**

Create static method inside the class **Area**

* For Area Of Square
* For Area Of Trapezium

**Area = (1/2) h (a+b)**

### **Day 1- Task 3**

1. Create New Java Project and name it as “**MathArticleProject**”
2. Create a package with name as “**com.HA.volume**”
3. Create a class with name as “**Volume**”
4. Create non-static method for below formula

Create non static method

|  |  |
| --- | --- |
| [Volume Of Sphere](https://byjus.com/maths/volume-of-sphere/) | [Volume Of A Cylinder](https://byjus.com/maths/volume-of-a-cylinder/) |
| [Volume Of Cuboid](https://byjus.com/maths/volume-of-cuboid/) | [Volume Of Cone](https://byjus.com/maths/volume-of-cone/) |

1. Create one more package with name as “**com.voya.runner**”
2. Create a class with name as “**VolumeTest**” inside the package “com.voya.runner”
3. Call the non-static method of volume of sphere by passing radius as **15.5**
4. Call the non-static method of Voume of Cuboid by passing - Length=20, Width=20.5, Height=65.2

### **Day 2 - Task 4**

1. Create Student type with below details (decide between static and non-static variable)

**Student - attributes/state**

* **studentRollno (private)**
* **studentName (private)**
* **studentMailid (private)**
* **studentPercentage (private)**
* **schoolName (private)**

1. Create 3 different instance for storing below values

**1001,"jack",jack@gmail.com,45.2, Global school**

**1002,"peter",peter@gmail.com,85.2, Global school**

**1003,"mark",mark@gmail.com,56.5, Global school**

### **Day 3- Task 5**

1. Create the Item class as a plain "Java class" in the package com.healthasyst.shoppingcart.
2. Declare private fields for ID (int), description (String), quantity (int), price (double).
3. Create getter and setter method for description
4. Create getter and setter method for quantity (value should be greater than 0)
5. Declare and instantiate 2 objects of type Item.
6. Initialize only the description field in each, using different values for each (Example: shirt, pants, laptop)
7. Initialize only the quantity field in each, using different values for each (Example: shirt - 5, laptop - 3)
8. Create new class shopping cart with main method and Print the description and quantity for each item and run the code.

### **Day 3- Task 6**

**Introduction**

This assignment will help you understand the concepts learnt in the session.

**Objective**   
In this challenge, we review concepts of creating user defined type.

**Task**

1. Create New Project - School Management
2. Create **Person Type in package com.ha.base**

**Person**

**Attributes:**

* **Name**
* **PhoneNumber**
* **MailID**
* **Address**
* **SchoolName**
* **SchoolAddress**

1. Create **Student type in package com.ha.groups** with below details (decide between static and non-static variable)

**Student**

**Attributes:**

* **studentId(101,102,103)**
* **studentPercentage**
* **courseCode (CC101,CC102)**

**Methods**

* **Provide all necessary getters and setters method**
* **Provide method to display all professor detail**

1. Create **Professor type in package com.ha.groups** with below details (decide between static and non-static variable)

**Professor**

**Attributes:**

* **professorId (P1001,P1002,P1003)**
* **departmentId (DP101, DP102,DP103,DP104,DP105)**
* **departmentName**
* **experience**

**Methods**

* **Provide all necessary getters and setters method**
* **Provide method to display all professor detail**

### **Day 4- Task 7**

1. Complete Day 3 - Task 5
2. Create Constructor with argument “description”,” quantity”, “price” in Item class and set it to private field “description”,” quantity”, “price” declared in Item class
3. Create a new class called Shirt that inherits from Item.
4. Declare two private char fields: size and colorCode
5. Create a constructor method that takes 5 args (description , quantity , price, size, colorCode).
6. The constructor should:

- Call the 3-arg constructor in the superclass, pass the desc, qty, price argument from this constructor.

- Assign the size and colorCode fields.

1. Create new class shopping cart or use if any of the ShoppingCart class,

Declare and instantiate a Shirt object, using the 5 arg constructor.

1. Create a display() method in Shirt class and print the desc, qty, price, size, colorCode
2. Call the display() method on the object reference.