1. Write Text-Based Application using Object-Oriented Approach to display your name.
2. Write a program that calculates and prints the product of three integers
3. Write a program that converts a Fahrenheit degree to Celsius
4. Write an application that displays the numbers 1 to 4 on the same line, with each pair of adjacent numbers separated by one space. Write the application using the following techniques:
   a. Use one System.out.println statement.
   b. Use four System.out.print statements.
   c. Use one System. out. printf statement.
5. Write an application that asks the user to enter two integers, obtains them from the user and prints their sum, product, difference and quotient (division).
6. Write an application that asks the user to enter two integers, obtains them from the user and displays the larger number followed by the words "is larger". If the numbers are equal, print "These numbers are equal"
7. Write an application that inputs three integers from the user and displays the sum, average, product, smallest and largest of the numbers.
8. Write an application that reads two integers, determines whether the first is a multiple of the second and print the result.
9. The process of finding the largest value (i.e., the maximum of a group of values) is used frequently in computer applications. For example, a program that determines the winner of a sales contest would input the number of units sold by each sales person. The sales person who sells the most units wins the contest. Write a Java application that inputs a series of 10 integers and determines and prints the largest integer. Your program should use at least the following three variables:
   a. counter: A counter to count to 10 (i.e., to keep track of how many numbers have been input and to determine when all 10 numbers have been processed).
   b. number: The integer most recently input by the user.
   c. largest: The largest number found so far.
10. Write a complete Java application to prompt the user for the double radius of a sphere, and call method sphereVolume to calculate and display the volume of the sphere.
11. Write statements that perform the following one-dimensional-array operations: a. Set the 10 elements of integer array counts to zero. b. Add one to each of the 15 elements of integer array bonus. c. Display the five values of integer array bestScores in column format.
12. Write a Java application that allows the user to enter up to 20 integer grades into an array. Stop the loop by typing in -1. Your main method should call an Average method that returns the average of the grades. Use the DecimalFormat class to format the average to 2 decimal places
13. Create a class Account to provide a method called debit that withdraws money from an Account. Ensure that the debit amount does not exceed the Account's balance. If it does, the balance should be left unchanged and the method should print a message indicating —Debit amount exceeded account balance.
14. Create a class called Invoice that a hardware store might use to represent an invoice for an item sold at the store. An Invoice should include four pieces of information as instance variables-a part number(type String),a part description(type String),a quantity of the item being purchased (type int) and a price per item (double). Your class should have a constructor that initializes the

four instance variables. Provide a set and a get method for each instance variable. In addition, provide a method named getInvoice Amount that calculates the invoice amount (i.e., multiplies the quantity by the price per item), then returns the amount as a double value. If the quantity is not positive, it should be set to 0. If the price per item is not positive, it should be set to 0.0. Write a test application named InvoiceTest that demonstrates class Invoice's capabilities.

15. Create a class called Employee that includes three pieces of information as instance variables—a first name (typeString), a last name (typeString) and a monthly salary (double). Your class should have a constructor that initializes the three instance variables. Provide a set and a get method for each instance variable. If the monthly salary is not positive, set it to 0.0. Write a test application named EmployeeTest that demonstrates class Employee's capabilities. Create two Employee objects and display each object's yearly salary. Then give each Employee a 10% raise and display each Employee's yearly salary again.
16. Create a class called Date that includes three pieces of information as instance variables—a month (typeint), a day (typeint) and a year (typeint). Your class should have a constructor that initializes the three instance variables and assumes that the values provided are correct. Provide a set and a get method for each instance variable. Provide a method displayDate that displays the month, day and year separated by forward slashes(/). Write a test application named DateTest that demonstrates classDate's capabilities.
17. Create class SavingsAccount. Usea static variable annualInterestRate to store the annual interest rate for all account holders. Each object of the class contains a private instance variable savingsBalance indicating the amount the saver currently has ondeposit. Provide method calculateMonthlyInterest to calculate the monthly www.oumstudents.tk interest by multiplying the savingsBalance by annualInterestRate divided by 12 this interest should be added to savingsBalance. Provide a static method modifyInterestRate that sets the annualInterestRate to a new value. Write a program to test class SavingsAccount. Instantiate two savingsAccount objects, saver1 and saver2, with balances of $2000.00 and $3000.00, respectively. Set annualInterestRate to 4%, then calculate the monthly interest and print the new balances for both savers. Then set the annualInterestRate to 5%, calculate the next month's interest and print the new balances for both savers.
18. Create a class called Book to represent a book. A Book should include four pieces of information as instance variables-a book name, an ISBN number, an author name and a publisher. Your class should have a constructor that initializes the four instance variables. Provide a mutator method and accessor method (query method) for each instance variable. Inaddition, provide a method named getBookInfo that returns the description of the book as a String (the description should include all the information about the book). You should use this keyword in member methods and constructor. Write a test application named BookTest to create an array of object for 30 elements for class Book to demonstrate the class Book's capabilities.
19. a. Create a super class called Car. The Car class has the following fields and methods. ◦intspeed; ◦doubleregularPrice; ◦Stringcolor; ◦doublegetSalePrice();
    b. Create a sub class of Car class and name it as Truck. The Truck class has the following fields and methods. ◦intweight;
    ◦doublegetSalePrice();Ifweight>2000,10%discount.Otherwise,20%discount.

c.Create a subclass of Car class and name it as Ford. The Ford class has the following fields and methods ◦intyear; ◦intmanufacturerDiscount; ◦doublegetSalePrice(); FromthesalepricecomputedfromCarclass,subtractthemanufacturerDiscount.
d.Create a subclass of Car class and name it as Sedan. The Sedan class has the following fields and methods. ◦intlength;
◦doublegetSalePrice();//Iflength>20feet,5%discount,Otherwise,10%discount.
e.Create MyOwnAutoShop class which contains the main() method. Perform the following within the main() method. ◦Create an instance of Sedan class and initialize all the fields with appropriate values. Use super(...) method in the constructor for initializing the fields of the superclass. ◦Create two instances of the Ford class and initialize all the fields with appropriate values. Use super(...) method in the constructor for initializing the fields of the super class. ◦Create an instance of Car class and initialize all the fields with appropriate values. Display the sale prices of all instance.