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| 1. | Write a menu driven Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers. |
| 2. | Write a Java Program to Print Diamond Shape Star Pattern |
| 3. | Write a program for Sorting a 2D Array according to values in any given column in Java |
| 4. | Factorial of any number n is represented by n! and is equal to 1\*2\*3\*....\*(n-1)\*n. E.g.-  4! = 1\*2\*3\*4 = 24  3! = 3\*2\*1 = 6  2! = 2\*1 = 2  Also,  1! = 1  0! = 0  Write a Java program to calculate factorial of a number. |
| 5. | Write a program to print the details of students by creating a Student class. If no data is passed while creating an object of Student class, then the data should be "Unknown", otherwise should be equal to the values passed while creating object of Student class or data taken from user . Use types of constructors and proper methods . Display data of 5 students by creating array of objects |
| 6. | Write a program to Print a Collection in Java  Expected O/P  Input : List = [3, 5, 18, 4, 6]  Output:  Min value of our list : 3  max value of our list : 18  Input : List = ['a', 'a', 'a']  Output:  All elements are equal |
| 7. | Create an abstract class 'Bank' with an abstract method 'getBalance'. $100, $150 and $200 are deposited in banks A, B and C respectively. 'BankA', 'BankB' and 'BankC' are subclasses of class 'Bank', each having a method named 'getBalance'. Call this method by creating an object of each of the three classes. |
| 8 | An abstract class has a construtor which prints "This is constructor of abstract class", an abstract method named 'a\_method' and a non-abstract method which prints "This is a normal method of abstract class". A class 'SubClass' inherits the abstract class and has a method named 'a\_method' which prints "This is abstract method". Now create an object of 'SubClass' and call the abstract method and the non-abstract method. (Analyse the result) |
| 9. | We have to calculate the area of a rectangle, a square and a circle. Create an abstract class 'Shape' with three abstract methods namely 'RectangleArea' taking two parameters, 'SquareArea' and 'CircleArea' taking one parameter each. The parameters of 'RectangleArea' are its length and breadth, that of 'SquareArea' is its side and that of 'CircleArea' is its radius. Now create another class 'Area' containing all the three methods 'RectangleArea', 'SquareArea' and 'CircleArea' for printing the area of rectangle, square and circle respectively. Create an object of class 'Area' and call all the three methods. |
| 10 | We have to calculate the percentage of marks obtained in three subjects (each out of 100) by student A and in four subjects (each out of 100) by student B. Create an abstract class 'Marks' with an abstract method 'getPercentage'. It is inherited by two other classes 'A' and 'B' each having a method with the same name which returns the percentage of the students. The constructor of student A takes the marks in three subjects as its parameters and the marks in four subjects as its parameters for student B. Create an object for eac of the two classes and print the percentage of marks for both the students. |
| 11 | Create an interface named Account with different abstract methods in it and create different classes named as Saving, Current, Salary which implements account interface. Add more things in the program as per your logic.(Make use of reference object of interface also) |
| 12 | Write a program to create interface Employee and classes as Programmer, Developer, Tester, Network Engineer which implements Employee and make use of appropriate abstract methods to implement it. |
| 13 | Create a class with a method that prints "This is parent class" and its subclass with another method that prints "This is child class". Now, create an object for each of the class and call  1 - method of parent class by object of parent class  2 - method of child class by object of child class  3 - method of parent class by object of child class |
| 14 | Create a class named 'Member' having the following members:  Data members  1 - Name  2 - Age  3 - Phone number  4 - Address  5 - Salary  It also has a method named 'printSalary' which prints the salary of the members.  Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same. |
| 15. | Create a class named 'Shape' with a method to print "This is This is shape". Then create two other classes named 'Rectangle', 'Circle' inheriting the Shape class, both having a method to print "This is rectangular shape" and "This is circular shape" respectively. Create a subclass 'Square' of 'Rectangle' having a method to print "Square is a rectangle". Now call the method of 'Shape' and 'Rectangle' class by the object of 'Square' class. |
| 16 | Write a simple program to handle a minimum of 4 types of exceptions.(Nested Try) |
| 17 | Write a simple program to create your own exception class STUDENT to create student database using methods to accept student details, subject details and display result of a student as distinction, first class, second class, pass class etc and handle different types of exceptions in it. |
| 18 | Write a simple program to create your own exception class STUDENT to create student database using methods to accept student details, subject details and display result of a student as distinction, first class, second class, pass class etc and handle different types of exceptions in it |
| 19 | Write a program to create your own package to accept students' database (Roll no, Name, marks in 5 subjects) and perform different operations on it and display the class of a student as First class, second class and so on. |