

**BTPS**

AN ISO 9001:2008 CERTIFIED COMPANY

117/D/62 CROSSING NO.9, GEETA NAGAR, KANPUR-208025 (U.P.) INDIA * PHONE : +91-9044900033-22, +91-9307585664

WEBSITE : WWW.BTPS.CO.IN * E-MAIL: BTPS.KANPUR@GMAIL.COM

1. Create a Student class with id, name, and marks. Print details.
2. Create an Employee class with id, name, and salary. Display highest salary.
3. Create a Book class with title, author, and price. List books above a given price.
4. Create a BankAccount class with accountNumber, holderName, and balance. Implement deposit and withdraw.
5. Create a Car class with model, brand, and price. Sort cars by price.
6. Create a Laptop class with ram, processor, and price. Display laptop with highest ram.
7. Create a Product class with id, name, and stock. Increase or decrease stock.
8. Create a Person class with name, age, and city. Print persons above age 18.
9. Create a Movie class with title, rating, and type. Print highest rated movie.
10. Create a Flight class with flightNumber, source, and destination. Display flights for a given source.
11. Create a Player class with name, game, and ranking. Sort players by ranking.
12. Create a Country class with name, capital, and population. Display highest population country.
13. Create a Teacher class with name, subject, and experience. Show top experienced teacher.
14. Create a Subject class with name and marks. Calculate average marks.
15. Create a Vehicle class with speed, color, and mileage. Print best mileage vehicle.
16. Create a Company class with name and employeesCount. Find largest company.
17. Create a Food class with name, calories, and price. Print items below specific calories.
18. Create a Course class with name, duration, and fee. Display fee less than given value.
19. Create a Room class with width and height. Calculate area.
20. Create a Box class with length, width, height. Calculate volume.
21. Create a Bus class with busNumber, type, and capacity. Show buses with capacity above 40.
22. Create a Train class with trainNumber, source, destination. Filter by destination.
23. Create a list of Students and filter by city.
24. Create an Employee class and calculate HRA, PF, DA using methods.
25. Create a Circle class with radius and method to find area.
26. Create a Rectangle class with length and width. Find area and perimeter.
27. Create a Triangle class with three sides. Check triangle validity.
28. Create a Doctor class with id, name, and specialization. Filter by specialization.
29. Create a Hospital class with name and beds. Show hospital with most beds.
30. Create a University class with name and ranking. Sort by ranking.
31. Create a Store class with name and itemCount. Print stores with more than 20 items.
32. Create a City class with name and population. Find city with lowest population.
33. Create an Item class with name and price. Apply discount method.
34. Create a Pen class with brand, color, and price. Print costliest pen.
35. Create a Book class and implement method to search by title.
36. Create a Bag class with brand and capacity. Show bag with highest capacity.
37. Create an Order class with id, productName, and amount. Filter by amount.
38. Create a School class with name and studentCount. Show school with more than 500 students.
39. Create a Customer class with name, phone, and address. Search by phone.
40. Create a BankBranch class with branchName and ifscCode. Display branches from a city.
41. Create an Animal class with name, type, and age. Filter by type.
42. Create a Student class and maintain total number of students using static variable.
43. Create a Laptop class and compare prices using a method.



43. Create a Car class demonstrating constructor overloading.
44. Create a Person class demonstrating method overloading.
45. Create a parent Shape class and child classes Circle and Rectangle for runtime polymorphism.
46. Create an abstract class Payment with method pay(), and implement in DebitCard and CreditCardclasses.
47. Create an interface Printable with print() method and implement in two classes.
48. Create an abstract Animal class with sound() and override it in Dog and Cat.
49. Create a class hierarchy: Vehicle → Car → ElectricCar (multilevel).
50. Create hierarchical inheritance: Person → Student, Person → Employee.
51. Create a class with inner class Department inside University.
52. Demonstrate use of super keyword to call parent constructor.
53. Demonstrate use of this keyword for current object.
54. Create a Product class and implement clone() method for copying.
55. Create a final class Example and final method demo().
56. Create an immutable Student class.
57. Use private variables and getter/setter to show encapsulation.
58. Create a Calculator class with static add(), subtract(), multiply(), divide().
59. Override equals() to compare two employee objects by id.
60. Implement Comparable in Book class for sorting by price.
61. Override toString() to print object details properly.
62. Show interface inheritance example.
63. Show multiple interface implementation in a class.
64. Demonstrate composition: Car has Engine.
65. Demonstrate aggregation: Library has Books.
66. Create a class BankAccount and throw exception if withdraw amount is greater than balance.
67. Create a custom exception InvalidAgeException.
68. Create a Student class and validate age; throw exception for invalid age.
69. Create a class demonstrating covariant return type.
70. Create a generic class Box and use it for integers and strings.
71. Create an enum for WeekDays and print all values.
72. Serialize and deserialize an Employee object.
73. Compare objects based on multiple fields (name, age).
74. Create a Library class and perform CRUD operations using ArrayList.
75. Create a StudentManagement class to add, update, delete students.
76. Create an Inventory class to add, remove, update items.
77. Create a User class and implement login simulation using objects.
78. Create a ShoppingCart class to manage items and compute total amount.
79. Create a Billing class to calculate totals with tax.
80. Create a Hostel class that manages rooms and students using ArrayList.
81. Create a MusicPlayer class with play, pause, stop methods.
82. Create a RailwayReservation class with booking and cancellation methods.
83. Create a TollSystem class that calculates toll for different vehicle types using polymorphism.
84. Create a College class and maintain departments inside it using composition.

