**Java Exercises.**

1. Design a class Employee with fields Eno, Ename, Basic Salary, DA, HRA, IT, PF, Gross Salary, NetSalary. Accept the details into the fields Eno, Ename, Basic Salary from constructor Find the NetSalary.
   * 1. DA is 12% on BS
     2. HRA is 20% on BS
     3. IT is 15% on BS
     4. PF is 12% on BS.
     5. GS is BS+HRA+DA
     6. NS is GS – (IT+PF)
2. A passenger of FlyHigh Airlines can travel by two types of ticket reservations, Confirmed ticket and Requested ticket. The Airline reservation has various attributes, such as flight number, date, time, and destination. Both types of classes inherit these common attributes. The Confirmed ticket class would however have a seat number while a Requested ticket would have a status attribute. Draw the class hierarchy diagram for the three classes depicting the inherited attributes of the sub classes and their individual attributes. Implement the system and display the passenger details whose status is confirmed.
3. Write a program to demonstrate runtime polymorphism.
4. Write a program to count number of words of a given string.
5. The Fun Seasons Corp. departmental store is conducting interviews for the post of salesman. Various applicants are applying for the required post by filling an application form. The departmental store performs the selection process of the applicants and the selected applicants are chosen as candidates.

John David, the programmer hired by the departmental store is assigned the task of developing the Java application. He needs to create an application that accepts the applicant ID, in the “A#####” format, and educational status, such as Graduate and PostGraduate, as command-line arguments. Help John David to write a code for the selection procedure.

1. Validate a Credit card. In case credit card number is less than 16 digits, populate Invalid Credit Card Exception.
2. Create a Vector having Integer objects. Copy the Vector elements into an Array and display the Array elements.
3. Create a Hash Map to store the Asia Pacific countries and their capitals. Display the capital based on the country name.
4. Calculate the difference in days between two dates.
5. Sort the items of a Set and display the sorted elements.
6. Display the current user name, current OS version, Java version, Java Home using java code.
7. Display the Currency symbol of countries India, UK, USA, England, and Japan.
8. Implement *i18N* in java. (Use ResourceBundle)
9. Create a new Phone book in a Text file and write some contact data into it.
10. Read an existing Text file and display the contents of Text file in a console output.
11. Write a program that demonstrates a high priority thread using sleep to give lower priority threads a chance to run.
12. Write a program to create two threads. Thread one displays numbers from 1 to 10 and Thread two displays numbers from 10 to 1.
13. Demonstrate a code for Thread Synchronization.

Networking:

1. Create a Chat Server where a Client and Server can communicate with each other.