

## Java1 - Pretest

Write a Java application to manage the list of employees with the specification as follows:

1	<p>Creates an <b>abstract class</b> named <b>Person</b> in package <b>data</b>.</p> <ul style="list-style-type: none"><li>- Fields <b>ID, name, yob</b></li><li>- Default constructor to initialize the above fields.</li><li>- Method</li><li>- public void <b>accept()</b> : allow user input data into data fields. Using try-catch exception for validation: <b>ID, name not null- yob must be in range [1940-2000]</b> .</li><li>- public abstract void <b>printInfo()</b> : print details of an person.</li></ul>
2	<p>Create class <b>Employee</b> derives from <b>Person</b>, in package <b>data</b>, consists of:</p> <ul style="list-style-type: none"><li>- Fields : <b>salary, workedDays, position</b></li><li>- Constructors to initialize the all fields</li><li>- Override methods:</li><li>- <b>accept()</b> : allow user to input additional details for an employee: invoke method <b>accept()</b> of super class. using try-catch exception for validation: <b>salary belongs to [200-10000], salary belongs to [0-27]</b>.</li><li>- <b>printInfo()</b> : display details of an employee including id, name, age, position, salary, worked days, income (salary* worked days/26)</li><li>- <b>toString()</b> : return a string presenting all the details of a employee.</li></ul>
3	<p>Create java main class <b>EmployeeTest</b> in package <b>app</b> for managing a collection of <b>Employees</b>:</p> <ul style="list-style-type: none"><li>- Fields: max, next – <b>eList</b> (array of employees)</li><li>- Methods:</li><li>- <b>void add()</b> - add a new employee</li><li>- <b>void display()</b> - display all employees.</li><li>- <b>void display ( String eName )</b> - search and display employees by the required name.</li><li>- <b>void remove( String eID )</b> – remove an employee by ID.</li><li>- <b>void menu()</b> - allows to manage the list of employees through the menu system as follows.<ol style="list-style-type: none"><li>1. Add a new employee</li><li>2. Display list of employee</li><li>3. Search employee by name</li><li>4. Remove employee by ID</li><li>5. Exit</li></ol></li></ul>