# OOPS

## Problem 1:

Class EMP

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EMPID int

EMPNAME string

DESIGNATION string

BASIC double

HRA double

methods

printDET()

calculateHRA()

PrintDET() methods will show details of the EMP.

calculateHRA() method will calculate HRA based on basic. There will 3 categories supported by the application.

If designation is “Manager” - HRA will be 10% of BASIC

if designation is “Officer” - HRA will be 12% of BASIC

if category is “CLERK” - HRA will be 5% of BASIC

Have constructor to which you will pass, EMPID, Desgination, BASIC and price.

Create Methods to display EmployeeDetails,Employees By Salary,Employee By Designation.

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## Problem 2:

Identify all the Skeleton Classes (Abstract classes, Concrete classes) and the relationship between them for the cricket team of THBS

* THBS Pvt.Ltd has 2 cricket teams (Men & women)
* Each team has Batsman, Bowlers, Wicket keeper and all-rounders.
* Identify all the Skeleton classes at granular level.

## Problem 3:

Create a system for generic Area calculation system for different geometric shapes. Following features should be taken care:

* Currently Square, Circle and Triangle are supported geometric shapes.
* Design should support for new Shapes which can be added in future.
* Each shape will have its own logic for calculating the area.
* Generic unit of measurement can be considered for defining dimensions of shapes.
* Design the Abstract Classes, Concrete Classes .
* Identify and implement the ALL OOPS concepts
* Follow the appropriate naming conventions for each classes, methods and variables.