



ACADGILD

SESSION 5: ABSTRACT CLASS & INTERFACE

Assignment 3

SESSION 5: OOPS: ABSTRACT CLASS & INTERFACE

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1. Introduction

This assignment will test your knowledge on Inheritance and Overriding.

2. Objective

This assignment will help you to master the following concepts:

- Building a mini application
- Inheritance
- Overriding
- Logic Building
- Abstraction

3. Prerequisites

Not applicable.

4. Associated Data Files

Not applicable.

5. Problem Statement

Create an class **Employee** with following properties and functions

Properties:

int empId

String empName

int total_leaves

double total_salary

Methods:

JAVA

```
void calculate_balance_leaves();  
  
boolean avail_leave(int no_of_leaves, char type_of_leave);  
  
void calculate_salary();
```

Create two subclasses PermanentEmp and TemporaryEmp that extends Employee class with following properties and functions

PermanentEmp

Properties:

```
int paid_leave, sick_leave, casual_leave  
  
double basic, hra,pfa
```

Methods:

```
void print_leave_details()  
  
override void calculate_balance_leaves()  
  
override boolean avail_leave(int no_of_leaves, char type_of_leave)  
  
override void calculate_salary()
```

TemporaryEmp

No new properties

Methods:

```
override void calculate_balance_leaves()  
  
override boolean avail_leave(int no_of_leaves, char type_of_leave)  
  
override void calculate_salary()
```

6. Expected Output

Write a program that will compute an Employee's salary and manage their leave details.

Note:

Pf = 12% of basic

hra = 50% of basic

total_sal = basic + hra – pf

7. Approximate Time to Complete Task

2 hrs