import java.util.Scanner;  
  
public class RunEmployee {  
public static void main(String[] args) {  
Scanner in = new Scanner(System.in);  
  
System.out.print("Enter Employee Name: ");  
String name = in.nextLine();  
  
System.out.println("\nEmployee Types:\n F - Full Time\n P - Part Time");  
System.out.print("Enter Employee Type:");  
String type = in.nextLine();  
if (type.compareToIgnoreCase("F") == 0) {  
FullTimeEmployee employee = new FullTimeEmployee(name);  
  
System.out.print("\nEnter Monthly Salary: ");  
employee.setMonthlySalary(in.nextDouble());  
  
System.out.println(employee);  
} else if(type.compareToIgnoreCase("P") == 0) {  
PartTimeEmployee employee = new PartTimeEmployee(name);  
  
System.out.print("\nEnter Rate Per Hour: ");  
double rate = in.nextDouble();  
  
System.out.print("\nEnter Number of Hours Worked: ");  
employee.setWage(rate, in.nextInt());  
  
System.out.println(employee);  
} else {  
System.out.println("Error: Invalid Employee Type!");  
}  
}  
}  
  
abstract class Employee {  
private String name;  
  
public Employee(String name) {  
setName(name);  
}  
  
public void setName(String name) {  
this.name = name;  
}  
  
public String getName() {  
return name;  
}  
}  
  
final class FullTimeEmployee extends Employee {  
private double monthlySalary;  
  
public FullTimeEmployee(String name) {  
super(name);  
}  
  
public void setMonthlySalary(double salary) {  
monthlySalary = salary;  
}  
  
public double getMonthlySalary() {  
return monthlySalary;  
}  
  
public String toString() {  
return "\nEmployee Name: " + getName() + "\nMonthly Salary: " + monthlySalary;  
}  
}  
  
final class PartTimeEmployee extends Employee {  
private double ratePerHour;  
private int hoursWorked;  
private double wage;  
  
public PartTimeEmployee(String name) {  
super(name);  
}  
  
public void setWage(double rate, int hours) {  
ratePerHour = rate;  
hoursWorked = hours;  
wage = ratePerHour \* hoursWorked;  
}  
  
public double getWage() {  
return wage;  
}  
  
public String toString() {  
return "\nEmployee Name: " + getName() + "\nWage: " + wage;  
}  
}