Engineering Enterprise Payroll System

Team Name :G034 - AEY

Name :Emad Hussien Abdelaal , ID: 2016170264 , Section :10

Name : Youssef Mahmoud Isamail Abozaid , ID :2016170513 , Section : 20

Name : Ammar Ahmed Ibrahim , ID : 2016170267 , Section : 10

Name : Sabry tarek sabry ahmed

UML CLass Diagram



Flow Chart



**Class Admin**

|  |
| --- |
| **Constructor and Description** |
| Admin()  Default constructor |

|  |  |
| --- | --- |
| **Modifier and Type** | **Method and Description** |

|  |  |
| --- | --- |
| java.lang.String | getEmail()  query for Admin Email: ammarahmed@outlook.com |
| java.lang.String | getPassword()  query for Admin Password: 12345 |

* **Constructor Detail**
* **Admin**public Admin()  
  Default constructor
* **Method Detail**
* **getEmail**public java.lang.String getEmail()  
  query for Admin Email: ammarahmed@outlook.com  
  Returns:  
  Admin Email
* **getPassword**public java.lang.String getPassword()  
  query for Admin Password: 12345  
  Returns:  
  Admin Password

**Class Employee**

* java.lang.Object
* com.fcis.Employee
* Direct Known Subclasses:  
  Engineer, Trainee

public abstract class Employee

* extends java.lang.Object  
  Abstract base class at the system for sub classes: Engineer and Trainee
* **Field Summary**

|  |  |
| --- | --- |
| **Modifier and Type** | **Field and Description** |
| protected int | Age  age of Employee |
| protected java.lang.String | Department  Specific department for every Employee |
| protected java.lang.String | Gender  Employee Gender |
| protected int | ID  Employee ID used in queries |
| protected java.lang.String | Name  Employee name |
| protected double | Salary  Employee amount of salary |

* **Constructor Summary**

|  |
| --- |
| * **Constructor and Description** |
| * Employee() * Default constructor |
| * Employee(java.lang.String Name, java.lang.String Department, int Age, java.lang.String Gender) * parameterized constructor |

|  |  |
| --- | --- |
| **Modifier and Type** | **Method and Description** |
| abstract java.lang.Object | DisplayAll()  Display all Employees Info |
| double | getSalary()  Query for salary |
| abstract boolean | Remove(int id) |

* **Constructor Detail**

**Employee**public Employee(java.lang.String Name,

java.lang.String Department,

int Age,

* java.lang.String Gender)  
  parameterized constructor  
  Parameters:  
  Name - Employee name  
  Department - assign Specific department for every Employee  
  Age - age of Employee  
  Gender - Employee Gender
* **Employee**public Employee()  
  Default constructor
* **Field Detail**
* **ID**protected int ID  
  Employee ID used in queries
* **Name**protected java.lang.String Name  
  Employee name
* **Salary**protected double Salary  
  Employee amount of salary
* **Age**protected int Age  
  age of Employee
* **Department**protected java.lang.String Department  
  Specific department for every Employee
* **Gender**protected java.lang.String Gender  
  Employee Gender
* **Method Detail**
* **getSalary**public double getSalary()  
  Query for salary  
  Returns:  
  amount of salary
* **Remove**public abstract boolean Remove(int id)  
  Parameters:  
  id - Employee ID used in queries  
  Returns:  
  boolean value = 0 or 1
* **DisplayAll**public abstract java.lang.Object DisplayAll()  
  Display all Employees Info  
  Returns:  
  Object for every Employee

**Class Engineer**

* java.lang.Object
* com.fcis.Employee
* com.fcis.Engineer

public class Engineer

* extends Employee  
  Inherited class from Employee class
* **Field Summary**
* **Fields inherited from class com.fcis.Employee**Age, Department, Gender, ID, Name, Salary
* **Constructor Summary**

|  |
| --- |
| **Constructor and Description** |
| Engineer()  Default constructor initialize all properties with 0 (Dummy Value) |
| Engineer(java.lang.String Name, java.lang.String Department, int Age, java.lang.String Gender)  parameterized constructor |

* **Method Summary**

|  |  |
| --- | --- |
| * **Modifier and Type** | * **Method and Description** |
| * void | * Add\_Engineer(Engineer E) |
| * java.lang.Object | * DisplayAll() * Display all Employees Info |
| * void | * Edit\_Eng(Engineer E) |
| * static int | * Eng\_count() |
| * static int | * getCountID() |
| * static java.util.ArrayList<Engineer> | * getEng() |
| * java.lang.Double | * getGrade() |
| * int | * getID() |
| * double | * getPay\_rate() |
| * java.lang.String | * getPosition() |
| * double | * getSalary() * Query for salary |
| * double | * getTax\_rate() |
| * double | * getWork\_hours() |
| * boolean | * Remove(int id) |
| * void | * setGrade(java.lang.Double Grade) |
| * void | * setPay\_rate(double pay\_rate) |
| * void | * setPosition(java.lang.String Position) |
| * void | * setTax\_rate(double tax\_rate) |
| * void | * setWork\_hours(double work\_hours) |

* **Constructor Detail**

**Engineer**public Engineer(java.lang.String Name,

java.lang.String Department,

int Age,

* java.lang.String Gender)  
  parameterized constructor  
  Parameters:  
  Name - Engineer Name  
  Department - Engineer Department  
  Age - Engineer Age  
  Gender - Engineer Gender
* **Engineer**public Engineer()  
  Default constructor initialize all properties with 0 (Dummy Value)
* **Method Detail**
* **Add\_Engineer**public void Add\_Engineer(Engineer E)  
  Parameters:  
  E - object o Engineer
* **Edit\_Eng**public void Edit\_Eng(Engineer E)  
  Parameters:  
  E - object o Engineer
* **Remove**public boolean Remove(int id)  
  Specified by:  
  Remove in class Employee  
  Parameters:  
  id - Employee ID used in queries  
  Returns:  
  boolean value = 0 or 1
* **getSalary**public double getSalary()  
  Description copied from class: Employee  
  Query for salary  
  Overrides:  
  getSalary in class Employee  
  Returns:  
  amount of salary
* **DisplayAll**public java.lang.Object DisplayAll()  
  Description copied from class: Employee  
  Display all Employees Info  
  Specified by:  
  DisplayAll in class Employee  
  Returns:  
  Object for every Employee
* **Eng\_count**public static int Eng\_count()
* **getEng**public static java.util.ArrayList<Engineer> getEng()
* **getID**public int getID()
* **getGrade**public java.lang.Double getGrade()
* **setGrade**public void setGrade(java.lang.Double Grade)
* **getWork\_hours**public double getWork\_hours()
* **setWork\_hours**public void setWork\_hours(double work\_hours)
* **getTax\_rate**public double getTax\_rate()
* **setTax\_rate**public void setTax\_rate(double tax\_rate)
* **getPay\_rate**public double getPay\_rate()
* **setPay\_rate**public void setPay\_rate(double pay\_rate)
* **getPosition**public java.lang.String getPosition()
* **setPosition**public void setPosition(java.lang.String Position)
* **getCountID**public static int getCountID()  
  Returns:  
  numbers of Engineer in the system

**Class Trainee**

* java.lang.Object
* com.fcis.Employee
* com.fcis.Trainee

public class Trainee

* extends Employee  
  Trainee Class inherited from Employee
* **Field Summary**
* **Fields inherited from class com.fcis.Employee**Age, Department, Gender, ID, Name, Salary
* **Constructor Summary**

|  |
| --- |
| **Constructor and Description** |
| Trainee()  Default constructor |
| Trainee(java.lang.String University\_Name, java.lang.Double GPA, int Academic\_year, java.lang.String Name, java.lang.String Department, int Age, java.lang.String Gender)  parameterized constructor |

* **Method Summary**

|  |  |
| --- | --- |
| * **Modifier and Type** | * **Method and Description** |
| * void | * Add\_trainee(Trainee T) * add new Trainee |
| * java.lang.Object | * DisplayAll() * display All Trainee |
| * void | * Edit\_Trainee(Trainee T) * add Edite Trainee |
| * int | * getAcademic\_year() * Trainee Academic\_year |
| * static int | * getCountID() * numbers of Trainee in system |
| * double | * getGPA() |
| * int | * getID() |
| * double | * getSalary() * Query for salary |
| * static java.util.ArrayList<Trainee> | * getTrain() |
| * java.lang.String | * getUniversty\_Name() |
| * boolean | * Remove(int id) |
| * void | * setAcademic\_year(int Academic\_year) * setAcademic\_year for Trainee |
| * void | * setGPA(double GPA) |
| * void | * setSalary(double Salary) |
| * void | * setUniversty\_Name(java.lang.String Universty\_Name) |
| * static int | * Train\_count() |

* **Constructor Detail**

**Trainee**public Trainee(java.lang.String University\_Name,

java.lang.Double GPA,

int Academic\_year,

java.lang.String Name,

java.lang.String Department,

int Age,

* java.lang.String Gender)  
  parameterized constructor  
  Parameters:  
  University\_Name -  
   GPA -  
   Academic\_year -  
   Name -  
   Department -  
   Age -  
   Gender -
* **Trainee**public Trainee()  
  Default constructor
* **Method Detail**
* **Add\_trainee**public void Add\_trainee(Trainee T)  
  add new Trainee  
  Parameters:  
  T - Trainee object
* **Edit\_Trainee**public void Edit\_Trainee(Trainee T)  
  add Edite Trainee  
  Parameters:  
  T - Trainee object
* **Remove**public boolean Remove(int id)  
  Specified by:  
  Remove in class Employee  
  Parameters:  
  id - Trainee Id  
  Returns:  
  True or False
* **DisplayAll**public java.lang.Object DisplayAll()  
  display All Trainee  
  Specified by:  
  DisplayAll in class Employee  
  Returns:  
  All Trainee
* **Train\_count**public static int Train\_count()
* **getTrain**public static java.util.ArrayList<Trainee> getTrain()
* **getSalary**public double getSalary()  
  Description copied from class: Employee  
  Query for salary  
  Overrides:  
  getSalary in class Employee  
  Returns:  
  amount of salary
* **setSalary**public void setSalary(double Salary)
* **getUniversty\_Name**public java.lang.String getUniversty\_Name()
* **setUniversty\_Name**public void setUniversty\_Name(java.lang.String Universty\_Name)
* **getGPA**public double getGPA()
* **setGPA**public void setGPA(double GPA)
* **getAcademic\_year**public int getAcademic\_year()  
  Trainee Academic\_year  
  Returns:  
  Trainee Academic\_year
* **setAcademic\_year**public void setAcademic\_year(int Academic\_year)  
  setAcademic\_year for Trainee  
  Parameters:  
  Academic\_year -
* **getID**public int getID()
* **getCountID**public static int getCountID()  
  numbers of Trainee in system  
  Returns:  
  numbers of Trainee in system