#include <iostream>

#include<string>

using namespace std;

class Employee{

private:

int ID, experience, project\_completed, total\_project, rating, N;

string empName;

double current\_sal;

public:

friend class HR;

Employee(){}; //constructor

Employee(int ID,string empName,int project\_completed,int total\_project, double current\_sal,int experience,int rating)

{

cout<<"CONSTRUCTOR CALLED"<<endl;

this->ID=ID;

this->empName=empName;

this->project\_completed=project\_completed;

this->total\_project=total\_project;

this->current\_sal=current\_sal;

this->experience=experience;

this->rating=rating;

}

~Employee(){}; //Destructor

void setData() //data is taken by user

{

cout<<"!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"<<endl;

cout<<"WELCOME TO EMPLOYEE MANAGEMENT SYSTEM"<<endl;

cout<<"Enter the total number of Employees"<<endl;

cin>>N;

for(int i=1;i<=N;i++)

{

cout<<"Enter the name of the Employee"<<endl;

cin>>empName;

cout<<"Enter the id of the Employee"<<endl;

cin>>ID;

cout<<"Enter number of project completed"<<endl;

cin>>project\_completed;

cout<<"Enter total number of projects alloted"<<endl;

cin>>total\_project;

cout<<"Enter the current salary"<<endl;

cin>>current\_sal;

cout<<"Enter the total years of experience"<<endl;

cin>>experience;

cout<<"Enter the rating for the Employee out of 10"<<endl;

cin>>rating;

cout<<"!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"<<endl;

}

}

void appraisalEmployee() //calculation of appraisal score

{

double appraisalScore;

for(int i=1;i<=N;i++)

{

appraisalScore = (project\_completed\*100)/total\_project;

cout<<"\nThe employee name: "<<empName<<endl;

cout<<"The appraisal score for current month is: "<<appraisalScore<<endl; //printing score

}

}

};

class GeneralManager : public Employee //inheritance

{

private:

string name;

int IDGM, project\_completedGM, total\_projectGM, experienceGM, ratingGM;

double appraisalScoreGM, current\_salGM;

public:

void det()

{

cout<<"Enter the name of the General Manager"<<endl;

cin>>name;

cout<<"Enter the id of the General Manager"<<endl;

cin>>IDGM;

cout<<"Enter number of project completed"<<endl;

cin>>project\_completedGM;

cout<<"Enter total number of projects alloted"<<endl;

cin>>total\_projectGM;

cout<<"Enter the current salary"<<endl;

cin>>current\_salGM;

cout<<"Enter the total years of experience"<<endl;

cin>>experienceGM;

cout<<"Enter the rating for the General Manager out of 10"<<endl;

cin>>ratingGM;

}

void appraisalGM() //calculation of appraisal score

{

double appraisalScoreGM;

appraisalScoreGM = (project\_completedGM\*100)/total\_projectGM;

cout<<"\nThe General Manager name: "<<name<<endl;

cout<<"The appraisal score for current month is: "<<appraisalScoreGM<<endl; //printing score

}

};

class HR\_Manager:public Employee

{

public:

string department="HR Department";

string nameHR;

double salaryHR;

int experienceHR;

HR\_Manager()

{

cout<<"Enter employee name who is accessing the system"<<endl;

cin>>nameHR;

this->nameHR=nameHR;

cout<<"Enter employee salary"<<endl;

cin>>salaryHR;

this->salaryHR=salaryHR;

cout<<"Enter employee experience"<<endl;

cin>>experienceHR;

this->experienceHR=experienceHR;

}

string hrID="HR123";

~HR\_Manager(){};

void showEmployeeData()

{

hrID="HR123 "+this->nameHR;

cout<<"Employee name is: "<<this->nameHR<<endl;

cout<<"Employee salary is: "<<this->salaryHR<<endl;

cout<<"Employee experience is: "<<this->experienceHR<<endl;

cout<<"HR Department: "<<endl;

cout<<"Employee id is "<<hrID<<endl;

}

};

template< class T , int numOfData >

class Holder{

private:

T object;

int count;

public:

Holder(){

count = numOfData;

}

void inputItems(){

cout << "You will be asked to enter " << count << "items" << endl;

object.inputItems();

}

};

class Employee1{

private:

int EmployeeID;

double EmployeeSalary;

public:

Employee1(){

EmployeeID = 0;

EmployeeSalary = 0.00;

}

Employee1( int theEmployeeID , double theEmployeeSalary ){

EmployeeID = theEmployeeID;

EmployeeSalary = theEmployeeSalary;

}

};

class Projectmanager{

private:

int numOfDataElements;

public:

Projectmanager(){

numOfDataElements = 0;

}

Projectmanager( int numOfData ){

numOfDataElements = numOfData;

}

};

int main()

{

Employee EE;

EE.setData();

EE.appraisalEmployee();

GeneralManager GG;

GG.det();

GG.appraisalGM();

HR\_Manager h;

h.~HR\_Manager();

h.showEmployeeData();

Holder <Employee1 , 2> h11;

Holder <Projectmanager , 12> h22;

system( "pause" );

}

Text

Description automatically generated