1.A clinic must record details of Doctors. The Doctor has ID, name and specialization as attributes and an abstract method computeSalary():double. Write the parameterized constructor and toString() method. The SalariedDoctors inherits from Doctor and has attributes - basicPay and noOfOperations (type int) which denotes operations done per month. The salary is basicPay + noOfOperations 2000. The other class VisitingDoctor is also a sub class of Doctor and has noOfVisits(type int), travelFare, accommodationFare as attributes. The salary is noOfVisits(travelFare+accomodationFare). The Clinic class has main() method which is menu driven with the following options:

1. Add new Doctor data

2. Print all Doctors data

//Doctor class

**package** cn;

**public** **abstract** **class** Doctor {

**abstract** **double** computeSalary();

}

//SalariedDoctors class

**package** cn;

**class** SalariedDoctors **extends** Doctor {

**int** basicPay=5000;

**int** noOfOperations=20;

**double** computeSalary() {

**int** sal=basicPay + noOfOperations\*2000;

System.***out***.println("Visiting doctor salary is "+sal);

**return** sal;

}

}

//VisitingDoctors

**package** cn;

**class** VisitingDoctor **extends** Doctor{

**int** noOfVisits=20;

**int** travelFare=500;

**int** accommodationFare=1800;

**double** computeSalary() {

**int** vsal=noOfVisits\*(travelFare+accommodationFare);

System.***out***.println("Visiting doctor salary is "+vsal);

**return** vsal;

}

}

//Doctord class

**package** cn;

**public** **class** Doctord {

**private** **long** ID;

**private** String name;

**private** String spec;

Doctord(**long** ID,String name,String spec)

{

**this**.ID=ID;

**this**.name=name;

**this**.spec=spec;

}

**public** String toString()

{

**return** String.*format*("ID is %d%n Name=%s%n Specialization=%s%n",ID,name,spec);

}

}

//Clinic class

**package** cn;

**import** java.util.Scanner;

**public** **class** Clinic {

**private** **static** Scanner *s*=**new** Scanner(System.***in***);;

**private** **static** Doctord *doc*[];

**private** **static** **int** *i*=0;

**private** **static** **void** initialize(**int** n) {

*doc*=**new** Doctord[n];

}

**public** **static** **int** menuoption()

{

System.***out***.println(">>>>>>>>>>>>>>>>>>>>>>Main Menu>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>");

System.***out***.println("1.Add new Doctor data");

System.***out***.println("2.Display all doctor data");

System.***out***.println("3.Exit");

System.***out***.println(">>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>");

System.***out***.println("Enter the choice:");

**return** *s*.nextInt();

}

**public** **static** **void** main(String[] args) {

Doctor d;

d=**new** VisitingDoctor();

System.***out***.println("==================================================");

d.computeSalary();

System.***out***.println("==================================================");

d=**new** SalariedDoctors();

System.***out***.println("==================================================");

d.computeSalary();

System.***out***.println("==================================================");

**int** ch;

System.***out***.println("Enter the number of doctor u want to add:");

*initialize*(*s*.nextInt());

**while**(**true**)

{

ch=*menuoption*();

**switch**(ch)

{

**case** 1:

*getDocDetail*();

**break**;

**case** 2:

*printAll*();

**break**;

**case** 3:

System.*exit*(0);

}

}

}

**private** **static** **void** printAll() {

System.***out***.println(">>>>>>>All Doctor Detail>>>>>>>");

**for**(*i*=0;*i*<*doc*.length;*i*++)

{

System.***out***.println(*doc*[*i*]);

}

}

**private** **static** Doctord getDocDetail() {

System.***out***.println("Enter the detail:ID,Name,Specialization");

Doctord temp=**new** Doctord(*s*.nextLong(),*s*.next(),*s*.next());

System.***out***.println("Data is added ");

**return** *doc*[*i*++]=temp;

}

}