a) Write a program to implement Constructor chaining.

Code:

```java
class Person {
  int id;
  String name;
  int age;

  Person(int id_p, String name_p, int age_p) {
    id = id_p;
    name = name_p;
    age = age_p;
  }

  Person(int id_p) {
    this(id_p, "noName", 20);
  }

  Person(int id_p, String name_p) {
    this(id_p, name_p, 20);
  }

  Person(int id_p, int age_p) {
    this(id_p, "noName", age_p);
  }

  void display() {
    System.out.println("ID: " + id + "\nName: " + name + "\nAge: " +
age + "\n");
  }
}

public class Main {
  public static void main(String[] args) {
    Person p1 = new Person(1, "Ajay", 19);
    p1.display();
    Person p2 = new Person(2, "Kevin");
    p2.display();
    Person p3 = new Person(3, 18);
    p3.display();
    Person p4 = new Person(4);
    p4.display();
  }
}
```

Output:

```
PS C:\Users\Ajay kumar\Desktop\SEIT\Java Practical\3 -\q.1> cd "c:\Users\Ajay kumar\Desk
{ javac Main.java } ; if ($?) { java Main }
ID: 1
Name: Ajay
Age: 19

ID: 2
Name: Kevin
Age: 20

ID: 3
Name: noName
Age: 18

ID: 4
Name: noName
Age: 20
```

b) Write a program to print the area of a rectangle by creating a class named 'Area' having two methods. First method named as 'setDim' takes length and breadth of rectangle as parameters and the second method named as 'getArea' returns the area of the rectangle. Length and breadth of rectangle are entered through keyboard.

Code:

```java
import java.util.Scanner;

class Area {
  int length, breadth;

  void setDim(int length, int breadth) {
    this.length = length;
    this.breadth = breadth;
  }

  int getArea() {
    return (length * breadth);
  }
}

public class Main {
  public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    System.out.println("Enter length: ");
    int l = scanner.nextInt();
    System.out.println("Enter breadth: ");
    int b = scanner.nextInt();

    Area areaCalc = new Area();
    areaCalc.setDim(l, b);
    System.out.println("Area: " + areaCalc.getArea());
  }
}
```

Output:

```
PS C:\Users\Ajay kumar\Desktop\SEIT\Java Practical\3 -> cd "c:\Users\Ajay kumar\Desktop
vac Main.java } ; if ($?) { java Main }
Enter length:
3
Enter breadth:
6
Area: 18
PS C:\Users\Ajay kumar\Desktop\SEIT\Java Practical\3 -\q.2> ▊
```

Write a program to print the names of students by creating a Student class. If no name is passed while creating an object of Student class, then the name should be "Unknown", otherwise the name should be equal to the String value passed while creating object of Student class.

Code:

```java
class Student {
    String name;
    Student() {this.name = "Unknown";}
    Student(String name) {
        this.name = name;
    }
    void display() {
        System.out.println("Student name: "+name);
    }
}
class Main{
    public static void main(String[] args){
        Student std1 = new Student();
        Student std2 = new Student("Ajaykumar");
        std1.display();
        std2.display();
    }
}
```

Output:

```
PS C:\Users\Ajay kumar\Desktop\SEIT\Java Practical\3 -\q.2> cd "c:\Users\Ajay
$?) { javac Main.java } ; if ($?) { java Main }
Student name: Unknown
Student name: Ajaykumar
PS C:\Users\Ajay kumar\Desktop\SEIT\Java Practical\3 -\Student> []
```