TD01 Correction

Matière : PROGRAMMATION OBJET | **Classes : DSI2 – RSI2 – SEM2**

package ex01;

```
import java.util.Scanner;
public class ConversionAltitude {
   public static void main(String[] args) {
      float mesure1, mesure2;
      String unite1, unite2;
      Scanner s = new Scanner(System.in);
      System.out.println("Conversion Altitude");
      System.out.print("Mesure1:");
      mesure1 = s.nextFloat();
      System.out.print("Unité1:");
      unite1 = s.next();
      System.out.println("conversion...");
      if (unite1.equals("ft") || unite1.equals("FT")) {
         mesure2 = mesure1 * 0.3048f;
         unite2 = "M";
         System.out.println(mesure1 + unite1 + " = " + mesure2 + unite2);
      } else if (unite1.equals("m") || unite1.equals("M")) {
         mesure2 = mesure1 * 3.28084f;
         unite2 = "FT";
         System.out.println(mesure1 + unite1 + " = " + mesure2 + unite2);
      } else
         System.out.println("Unité inconnue!");
      s.close();
   }
}
```

package ex01;

```
import java.util.Scanner;
public class ConversionTemperature {
   public static void main(String[] args) {
      float mesure1, mesure2;
      String unite1, unite2;
      Scanner s = new Scanner(System.in);
      System.out.println("Conversion Température");
      System.out.print("Mesure1:");
      mesure1 = s.nextFloat();
      System.out.print("Unité1:");
      unite1 = s.next();
      System.out.println("conversion...");
      if (unite1.equals("°c") || unite1.equals("°C")) {
         mesure2 = (mesure1 * 9) / 5 + 32;
         unite2 = "°F";
         System.out.println(mesure1 + unite1 + " = " + mesure2 + unite2);
```

```
        }
      else if (unite1.equals("°f") || unite1.equals("°F")) {
         mesure2 = (mesure1 - 32) * 5 / 9;
         unite2 = "°C";
         System.out.println(mesure1 + unite1 + " = " + mesure2 + unite2);
      } else
         System.out.println("Unité inconnue!");
      s.close();
   }
}
```

package ex02;

```
import java.util.Scanner;
public class EstPremier {
   public static void main(String[] args) {
      int n;
      Scanner s = new Scanner(System.in);
      System.out.println("EstPremier?");
      do {
         System.out.print("n:");
         n = s.nextInt();
         if (n <= 0)
            System.out.println("Donner un entier Strictement positif");
      } while (n <= 0);
      if (estPremier(n))
         System.out.println(n + " est premier");
      else
         System.out.println(n + " n'est pas premier");
      s.close();
   }
   private static boolean estPremier(int n) {
      for (int i = 2; i <= n / 2; i++)
         if (n % i == 0)
            return false;
      return true;
   }
}
```

package ex03;

```
import java.util.Scanner;
public class EntiersPremiers {
   public static void main(String[] args) {
      int n;
      Scanner s = new Scanner(System.in);
      System.out.println("Entiers Premiers");
      do {
         System.out.print("n:");
         n = s.nextInt();
         if (n <= 0)
            System.out.println("Donner un entier Strictement positif");
      } while (n <= 0);
      for (int i = 1; i <= n; i++) {
         if (estPremier(i))
            System.out.println(i);
```

```
        }
        s.close();
    }
    private static boolean estPremier(int n) {
        for (int i = 2; i <= n / 2; i++)
            if (n % i == 0)
                return false;
        return true;
    }
}
```

package ex04;

```
import java.util.Scanner;
public class PremierPremier {
    public static void main(String[] args) {
        int n, pp;
        Scanner s = new Scanner(System.in);
        System.out.println("Premier Premier");
        do {
            System.out.print("n:");
            n = s.nextInt();
            if (n <= 0)
                System.out.println("Donner un entier Strictement positif");
        } while (n <= 0);
        pp = n;
        do {
            pp++;
        } while (!estPremier(pp));
        System.out.println("Le premier entier premier strictement supérieur à "
                + n + " est : " + pp);
        s.close();
    }
    private static boolean estPremier(int n) {
        for (int i = 2; i <= n / 2; i++)
            if (n % i == 0)
                return false;
        return true;
    }
}
```

package ex05;

```
import java.util.Scanner;
public class Suite {
    public static void main(String[] args) {
        int n;
        int val;
        int somme, produit, max, min;
        float moyenne;
        Scanner s = new Scanner(System.in);
        System.out.println("Suite");
        do {
            System.out.print("n:");
            n = s.nextInt();
            if (n <= 0)
```

```
            System.out.println("Donner un entier Strictement positif");
        } while (n <= 0);
        System.out.print("Val1:");
        val = s.nextInt();
        somme = val;
        produit = val;
        max = val;
        min = val;
        for (int i = 1; i < n; i++) {
            System.out.print("Val" + (i + 1) + ":");
            val = s.nextInt();
            somme += val;
            produit *= val;
            if (val > max)
                max = val;
            if (val < min)
                min = val;
        }
        moyenne = (float) somme / n;
        System.out.println("Somme : " + somme);
        System.out.println("Moyenne : " + moyenne);
        System.out.println("Produit : " + produit);
        System.out.println("Max : " + max);
        System.out.println("Min : " + min);
        s.close();
    }
}
```

package ex06;

```
import java.util.Scanner;
public class Factoriel {
    public static void main(String[] args) {
        int n;
        Scanner s = new Scanner(System.in);
        System.out.println("Factoriel");
        do {
            System.out.print("n:");
            n = s.nextInt();
            if (n <= 0)
                System.out.println("Donner un entier Strictement positif");
        } while (n <= 0);
        for (int i = 1; i <= n; i++)
            System.out.println(i + "! = " + factoriel(i));

        s.close();
    }
    private static int factoriel(int i) {
        if (i > 1)
            return i * factoriel(i - 1);
        return 1;
    }
}
```