M3-UF2-P17-(final)

```java
/*
@author armandosanpon
*/
package p17.function;

import java.text.DecimalFormat;
import java.util.Scanner;

public class P17Function {

    static Scanner keyboard = new Scanner(System.in);
    static DecimalFormat df = new DecimalFormat("0.000");
    public static void main(String[] args) throws InterruptedException {
        System.out.println("Author: Armando Sanchez");
        System.out.println();
        keyboard.useDelimiter("\n");
        int option = -1;
        int euro;
        String euro1;
        float euro2;


        while (option != 0) {

            userMenu();
            option = keyboard.nextInt();
            switch (option) {//start of switch
                case 1:
                    System.out.println("How many euro? ");
                    euro = keyboard.nextInt();
                    float result = Function1(euro);
                    System.out.println(euro + " € " + " = " + df.format(result) + " $");
                    break;
                case 2:
                    System.out.println("How many euro? ");
                    euro = keyboard.nextInt();
                    double result2 = Function2(euro);
                    System.out.println(euro + " € " + " = " + df.format(result2) + " $");
                    break;
                case 3:
                    System.out.println("How many euro? ");
                    euro = keyboard.nextInt();
                    String result3 = Function3(euro);
                    System.out.println(euro + " € " + " = " + df.format(result3) + " $");
```

```java
        break;
      case 4:
        System.out.println("How many euro? ");
        euro1 = keyboard.next();
        int result4 = Function4(euro1);
        System.out.println(euro1 + " € " + " = " + result4 + " $");
        break;
      case 5:
        System.out.println("How many euro? ");
        euro2 = keyboard.nextInt();
        int result5 = Function5(euro2);
        System.out.println(df.format(euro2) + " € " + " = " + result5 + "
$");

        break;
      case 6:
        System.out.println("How many euro? ");
        euro2 = keyboard.nextFloat();
        Function6(euro2);
        break;
      case 7:
        System.out.print("Tell me a letter: ");
        char letra = (keyboard.next()).charAt(0);
        Function7(letra);
        break;
      case 8:

        System.out.println("Tell me ur name: ");
          String name = keyboard.next();
        String result8 = Function8(name);
          System.out.println(result8);
        break;
      case 9:
        int number;
 do{
        System.out.println("Tell me a number betweeen 0 and 255: ");
        number = keyboard.nextInt();
 }while (number > 255 || number < 0);

        String result9 = Function9(number);
        System.out.println(result9);
        break;
      case 10:
        Function10();
        break;
      case 0:
        P0();
        System.out.println("Cya");
        break;
```

```java
        default:
            System.out.println("'No valid Option'");
    }//end of switch
    System.out.println("***Press any key to continue***");
  }
}
```

1- (int-Float) Function: Request an amount in euro (int) and return in currency X (float) and visualize: € 000 = 000,000x

```java
        case 1:
            System.out.println("How many euro? ");
            euro = keyboard.nextInt();
            float result = Function1(euro);
            System.out.println(euro + " € " + " = " + df.format(result) +
" $");
            break;

private static float Function1(int euro) {

    float result = 0;
    result = euro / 0.91f; //cast
    return result;

}
```

```
Choose an option
1
How many euro?
23
23 €  = 25,27 $
```

2- (int-double) Function: Request an amount in euro (int) and return in

X (double) currency and displays: € 000 = 000,000x

```java
case 2:
            System.out.println("How many euro? ");
            euro = keyboard.nextInt();
            double result2 = Function2(euro);
            System.out.println(euro + " € " + " = " + df.format(result2)
+ " $");

private static double Function2(int euro) {

    double result2 = 0;
    result2 = euro / (double) 0.91;

    return result2;

}
```

```
Choose an option
2
How many euro?
53
53 €  = 58,24 $
```

3- (int-String) Function: Request an amount in euro (int) and return a string

with the following format: "€ 000 = 000,000x"

```
case 3:
        System.out.println("How many euro? ");
        euro = keyboard.nextInt();
        Function3(euro);
        break;

private static String Function3(int euro) {

    String result3 = Integer.toString(euro);
    System.out.println(euro + " € " + " = " + result3 + " $");

    return result3;

}
```

```
Choose an option
3
How many euro?
65
65 €   = 65 $
```

4- (String-int) Function: Request an amount in euro (string) and return in X
    currency and displays: € 000.0 = 000x

```
case 4:
   System.out.println("How many euro? ");
   euro1 = keyboard.next();
   int result4 = Function4(euro1);
   System.out.println(euro1 + " € " + " = " + result4 + " $");

private static int Function4(String euro1) {

    int result4;
    result4 = Integer.parseInt(euro1);
    return result4;

}
```

```
Choose an option
4
How many euro?
65
65 €   = 65 $
```

5- (float-int) Function: Request an amount in euro and return in currency X and visualize: € 000.00 = 000x [use cast]

```java
        case 5:
            System.out.println("How many euro? ");
            euro2 = keyboard.nextInt();
            int result5 = Function5(euro2);
            System.out.println(df.format(euro2) + " € " + " = " + result5
+ " $");

            break;

private static int Function5(float euro2) {

    int result5 = 0;
    result5 = (int) (euro2 / 0.91);//cast
    return result5;
  }
```

Choose an option
5
How many euro?
23
23,00 € = 25 $

6- (float-String) Function: Ask for an amount in euro and return a Sting with The following format: "€ 000.0 = 000.0x"

```java
        case 6:
            System.out.println("How many euro? ");
            euro2 = keyboard.nextFloat();
            Function6(euro2);
            break;
 private static String Function6(float euro2) {

    String result6 = Float.toString(euro2);
    System.out.println(euro2 + " € " + " = " + result6 + " $");

    return result6;

  }
```

Choose an option
6
How many euro?
12
12.0 € = 12.0 $

7- (char) procedure: ask for a letter and visualize its equivalent in int and binary

```java
        case 7:
            System.out.print("Tell me a letter: ");
            char letra = (keyboard.next()).charAt(0);
            Function7(letra);
            break;

        private static void Function7(char letter) {

    String letterB = Integer.toBinaryString(letter);
    System.out.println(letter + " = " + letterB);

}
```

```
Choose an option
7
Tell me a letter: A
A = 1000001
```

8- (char-binary) - Function: Ask for a name and return its equivalent in binary.

```java
     case 8:

            System.out.println("Tell me ur name: ");
                String name = keyboard.next();
            String result8 = Function8(name);
                System.out.println(result8);
            break;

  private static String Function8(String name) {

    String result8 = "";
    char letter = ' ';
    for(int i = 0; i < name.length(); i++){
        letter = name.charAt(i);
        result8 += Integer.toBinaryString(letter)+ " ";
    }

    return result8;

}
```

```
Choose an option
8
Tell me ur name:
Armando
1000001 1110010 1101101 1100001 1101110 1100100 1101111
```

9- (int-char) - Function: Ask for a number from 0 to 255 and display its equivalent in char

```
case 9:
        int number;
    do{
      System.out.println("Tell me a number betweeen 0 and 255: ");
      number = keyboard.nextInt();
    }while (number > 255 || number < 0);

      String result9 = Function9(number);
      System.out.println(result9);
      break;

private static String Function9(int number9) {

   String aChar = new Character((char)number9).toString();
   return aChar;

}
```

```
Choose an option
9
Tell me a number betweeen 0 and 255:
77
M
```

10- (char-int) - Procedure: put the ASCII table and visualize it: each character with its numerical equivalent and in hexadecimal

```
case 10:
        Function10();
        break;
private static void Function10() {
   System.out.println("");
   for(int i = 0; i < 255; i++){
     System.out.println(i + "\t" +
      Integer.toString(i, 16) + " = " + (char)i);
   }
}
```

```
65        41 = A
66        42 = B
67        43 = C
68        44 = D
69        45 = E
70        46 = F
```