Trazas de programas – Bucles anidados

```java
/****************************************************************************
 * traza_1
 ***************************************************************************/
        int n = 3, a = 0;
        do{
            do {
                a++;
                System.out.println(a);
            } while (a <= n);
            a = 0;
            n--;
            System.out.println();
        }while(n>0);
/****************************************************************************
 * traza_2
 ***************************************************************************/
        int a=3, i, j;
        char car = '*';
        for(i=1;i<=a;i++){
            for(j=1;j<=i;j++){
            System.out.print(car);
            }
            System.out.println();
        }

/****************************************************************************
 * traza_3
 ***************************************************************************/
        int n = 5, i, j, cont = 1;
        for (i = 1; i < n; i++) {
            for (j = 1; j <n; j++) {
                System.out.print(cont % 10 + " ");
                cont++;
            }
            System.out.println();
        }

/****************************************************************************
 * traza_4
 ***************************************************************************/
        int n=5, a=0;
        while(n > 0){
            do{
                a++;
                System.out.println(a);
            }while(a != n);
            a = 0;
            n--;
            System.out.println();
        }
/****************************************************************************
 * traza_5
 ***************************************************************************/
        int b = 3, a = 2, i, j;
        char car = '$';
        for(i=1;i<=a;i++){
            for(j=1;j<=b;j++){
            System.out.print(car);
            }
            System.out.println();
        }
```

```
/******************************************************************************
 * traza_6
 ******************************************************************************/
      int n = 5, i, j, cont = 1;
      for(i=1;i<=n;i++){
          for(j=1;j<=i;j++){
              System.out.print(cont%10+ " ");
              cont++;
          }
          System.out.println();
      }

/******************************************************************************
 * traza_7
 ******************************************************************************/
      int n = 4, i, j;
      for(i=1;i<=n;i++)
          for(j=1;j<=i;j++)
              System.out.print(i + " ");

/******************************************************************************
 * traza_8
 ******************************************************************************/
      int i, j, k, filas = 5, cont=1;
      for(i=1;i<=filas;i++){
          for(j=1;j<=filas-i;j++){
              System.out.print(" ");
          }
          for(k=1;k<=cont; k++){
              System.out.print("*");
          }
          cont+=2;
          System.out.println();
      }

/******************************************************************************
 * traza_9
 ******************************************************************************/

      int i = 0, j = 0, k = 0;
      for (i = 0; i < 3; i++) {
          k = 2;
          j = 1;
          while (j < 3 || k > 0 && i < 2) {
              System.out.printf("[%S]", "hola");
              k--;
              j += 2;
          }
      }
      System.out.printf("%ni = |%+05d|%nj = |%+05d|%nk = |%+05d|%n", i, j, k);

/******************************************************************************
 * traza_10
 ******************************************************************************/
      int n = 2, m = 0;
      do {
          do {
              System.out.print(m++ + " ");
          } while (m <= n);
          m = 0;
          System.out.println(n--);
      }while (n > 0);
```

```
/*******************************************************************************
 * traza_11
 *******************************************************************************/
      int j, k = 0;
      for (int i = 1; i <= 3; i++) {
            j = i;
            while (j < 4)
                    System.out.println(j++);
                    k -= j;
                    System.out.println(k);
      }

/*******************************************************************************
 * traza_12
 *******************************************************************************/
      int A = 0, B;
      for (; A <= 1; A++) {
            for (B = 1; B < 2; B++) {
                    System.out.println(A*B);
            }
      }

/*******************************************************************************
 * traza_13
 *******************************************************************************/
      int x = 0, y;
      while(x <= 8) {
            for (y = 1; y < 3; y++) {
                    switch (x + y) {
                            case 1: x++;
                                    break;
                            case 9: x--;
                                    break;
                            case 4: y--;
                            case 8: x++;
                            default: x = x + y;
                    }
                    System.out.println(x++ + " " + y);
            }
      }
/*******************************************************************************
 * traza_14
 *******************************************************************************/
      int x = 1, y = 2, z;
      do{
          z = y++;
          x+=z;
          switch(x){
                    case 2: System.out.println(x);
                    case 3: System.out.println(y);
                    default: System.out.println(z);
          }
      }while(x==y);
/*******************************************************************************
 * traza_15
 *******************************************************************************/
      int i, j, k;
      for (i = 1, k = 0; i <= 3; i += 2, k += 2) {
            for (j = 1; j <= k; j++) {
                    System.out.println(i * j);
            }
            System.out.println(i * j);
      }
      System.out.println(i * k);
```