

18-03-04-A

```
static int[] filtraVettore(int[] v){
    int[] temp=new int[v.length];
    int cont=0;
    for (int i=1;i<v.length;i+=2){
        if (v[i]>0) {
            temp[cont]=v[i];
            cont++;
        }
    }
    int[] w=new int[cont];
    for (int i=0;i<cont;i++){
        w[i]=temp[i];
    }
    return w;
}
```

```
public class EsA3_2004_03_18{

    public static void main(String[] args){
        int dim=Console.readInt("dimensione matrice ");
        int[][] matrice=new int[dim][dim];
        for (int i=0;i<dim;i++){
            System.out.println("elementi riga "+i);
            for (int j=0;j<dim;j++){
                matrice[i][j]=Console.readInt("");
            }
        }
        System.out.println("\nLa matrice e'");
        for (int i=0;i<dim;i++){
            for (int j=0;j<dim;j++){
                System.out.print(matrice[i][j]+" ");
            }
            System.out.println();
        }
        int[] a=creaVettoreDP(matrice);
        System.out.println("\nRisultato creaVettoreDP:");
        for (int i=0;i<a.length;i++){
            System.out.print(a[i]+" ");
        }
        System.out.println();
        int[] b=costruisciVettore(matrice);
        System.out.println("\nRisultato costruisciVettore:");
        for (int i=0;i<b.length;i++){
            System.out.print(b[i]+" ");
        }
        System.out.println("\n");
        int h=Console.readInt("h=");
        int k=Console.readInt("k=");
        annullaColonne(matrice,h,k);
        System.out.println("\nRisultato annullaColonne:");
        for (int i=0;i<matrice.length;i++){
            for (int j=0;j<matrice[i].length;j++){
                System.out.print(matrice[i][j]+" ");
            }
        }
        System.out.println();
    }
}

static int[] creaVettoreDP(int[][] m){
    //verificare che m sia quadrata
```

```

    int somma=0;
    for (int i=0;i<m.length;i++){
        somma+=m[i][i];
    }
    double media=somma/m.length;
    int size=0;
    for (int i=0;i<m.length;i++){
        if (m[i][i]>media) size++;
    }
    int[] a=new int[size];
    int cont=0;
    for (int i=0;i<m.length;i++){
        if (m[i][i]>media){
            a[cont]=m[i][i];
            cont++;
        }
    }
    return a;
}

```

```

static int[] costruisciVettore(int[][] m){
    //verificare che m sia quadrata
    int dim=(m.length*m.length-m.length)/2;
    int[] b=new int[dim];
    int pointer=0;
    int from=1;
    for (int i=0;i<m.length;i++){
        for (int j=from;j<m.length;j++){
            b[pointer]=m[i][j];
            pointer++;
        }
        from++;
    }
    return b;
}

```

```

static void annullaColonne(int[][] m, int h, int k){
    for (int i=0;i<m.length;i++){
        for (int j=0;j<m.length;j++){
            if (j>h && j<k) m[i][j]=0;
        }
    }
}

```

```

}

```