Ejercicios 1.6

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1. Escriba los procedimientos inp_to_ndc, ndc_to_user, user_to_ndc y ndc_to_dc, que transforman datos entre los diferentes sistemas de coordenadas.

   - -1 a +1 (coordenadas normalizadas centradas).
     - inp_to_ndc

       ```
       inp_to_ndc(double dcx, double dcy)
       {
           ndcx = dcx / ndh - 1;
           ndcy = dcy / ndv - 1;
           return ndcx, ndcy;
       }
       ```

     - ndc_to_user

       ```
       ndc_to_user(double ndcx, double ndcy)
       {
           x = ndcx*2-1;
           y = ndcy*2-1;
           return x,y;
       }
       ```

     - user_to_ndc

       ```
       user_to_ndc(double x, double y)
       {
           ndcx = (x+1)/2;
           ndcy = (y+1)/2;
           return ndcx, ndcy;
       }
       ```

     - ndc_to_dc

       ```
       ndc_to_dc(double ndcx, double ndcy)
       {
           dcx = round(ndcx*(ndh-1));
           dcy = round(ndcy*(ndv-1));
           return dcx, dcy;
       }
       ```

   - 0 a 100

– inp_to_ndc

```
inp_to_ndc(double, double)
{
    ndcx = dcx/ndh-1;
    ndcy = dcy/ndv-1;
    return ndcx, ndcy;
}
```

– ndc_to_user

```
ndc_to_user(double, double)
{
    x = ndcx * 100;
    y = ndcy * 100;
    return x,y;
}
```

– user_to_ndc

```
user_to_ndc(double, double)
{
    ndcx = x/100;
    ndcy = y/100;
    return ndcx, ndcy;
}
```

– ndc_to_dc

```
ndc_to_dc(double, double)
{
    dcx = round(ndcx*(ndh-1));
    dcy = round(ndcy*(ndv-1));
    return dcx, dcy;
}
```