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/* To find the impusle response of the system*/
#include <stdio.h>
#define Order 2      /*Order of the system*/
#define Len 10       /*Length of the output response*/
float y[Len]={0,0,0},sum;
main()
{
    int j,k;
    float a[Order+1]={0.1311, 0.2622, 0.1311};
    /* y coefficient may change in accordance with the difference equation */

    float b[Order+1]={1, -0.7478, 0.2722};
    /* x coefficients may change in accordance with the difference equation
    */

    for(j=0;j<Len;j++)
    {
        sum=0;
        for(k=1;k<=Order;k++)
        {
            if((j-k)>=0)
                sum=sum+(b[k]*y[j-k]);
        }
        if(j<=Order)
        {
            y[j]=a[j]-sum;
        }
        else
        {
            y[j]=-sum;
        }
        printf("Respose[%d] = %f\n",j,y[j]);
    }
}

```