

```

#include <stdio.h>
#include <math.h>

float main()
{
    int G, i, H, j;
    float pis[101], Si, pfs[101], Sf;
    char end;

    do
    {
        Si = 0;
        Sf = 0;
        printf("\n Please input G: \n");
        scanf("%d", &G);
        for(i = 1; i <= G; i++)
        {
            printf("\n Please input pi(j) for j = %d (omit any pi(j) = 0) \n", i);
            scanf("%f", &pis[i]);
        }
        for(i = 1; i <= G; i++)
            Si = Si - (pis[i]) * (log(pis[i]) / log(2));
        printf("\n Please input H: \n");
        scanf("%d", &H);
        for(j = 1; j <= H; j++)
        {
            printf("\n Please input pf(j) for j = %d (omit any pf(j) = 0) \n", j);
            scanf("%f", &pfs[i]);
        }
        for(j = 1; j <= H; j++)
            Sf = Sf - (pfs[i]) * (log(pfs[i]) / log(2));
        printf("\n Si = %f bits; Sf = %f bits \n", Si, Sf);
        printf("\n Information I = %f bits \n", (Si - Sf));
        printf("\n Please enter 1 to continue or 0 to quit \n");
        scanf("%d", &end);
        if(end == 0)
        {
            printf("\n You have been informed!!! \n");
            break;
        }
    }
    while(end != 0);
}

```