```c
#CODE
#include <stdlib.h>
#include <stdio.h>
#include <math.h>
void display(int arr[], int n)
{
    for (int i = 0; i < n; i++)
    {
        printf("%d ", arr[i]);
    }
}
int noisefunc(int arr1[], int arr2[], int n)
{
    int flag = 1, i = 0;
    for (; i < n; i++)
    {
        if (arr1[i] != arr2[i])
        {
            flag = 0;
            break;
        }
    }
    return flag;
}
int main()
{
    int k = 0, kmax = 10;
    int n;
    int d = 0;
    int noise = 1;
    float slot = 0.0000015;
    float Tp = 200.0, Tb;
    float Ftime;
    printf("Enter size of data frame : ");
    scanf("%d", &n);
    int *df = (int *)malloc(n * sizeof(int));
    int *recdf = (int *)malloc(n * sizeof(int));
    printf("Enter the data frame : \n");
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &df[i]);
    }
    while (d < 1000)
    {
        while (k < kmax)
```

```
        {

            // printf("\nOriginal data frame :  ");
            // display(df, n);

            for (int i = 0; i < n; i++)
            {
                recdf[i] = df[i];
            }
            int rem = 0;
            if (recdf[n - 1] == 1 && noise == 1)
            {
                recdf[n - 1] = 0;
                rem = 1;
                recdf[n - 2] += rem;
            }
            else
            {
                recdf[n - 1] = recdf[n - 1] + noise;
            }

            // printf("\nRecieved Data frame : ");
            // display(recdf,n);
            Ftime = Ftime + (2 * Tp) + Tb;

            // check for noise
            int f = noisefunc(df, recdf, n);
            if (f == 1)
            {
                printf("\nData frame has no noise");
                break;
            }
            else
            {
                // printf("\nData frame contains noise\n");
                k = k + 1;
                int R = (pow(2, k) - 1);

                Tb = (rand() % ((int) R-0+1)) * slot;
            }
        }
        if (k > kmax)
        {
            printf("ABORT");
        }
```

```
        d++;
    }
    printf("\nTotal Time Taken: %d seconds", Ftime);
    printf("\nNoise : %d", noise);
}
```

OUTPUT:

```
PS C:\Users\91766\Desktop\ \500082638-PRAKRATI SINGH-DCCN\Lab> gcc new.c
PS C:\Users\91766\Desktop\ \500082638-PRAKRATI SINGH-DCCN\Lab> ./a
Enter size of data frame : 5
Enter the data frame :
1 0 0 1 1

Total Time Taken: -2147483648 seconds
Noise : 1
PS C:\Users\91766\Desktop\ \500082638-PRAKRATI SINGH-DCCN\Lab>
```