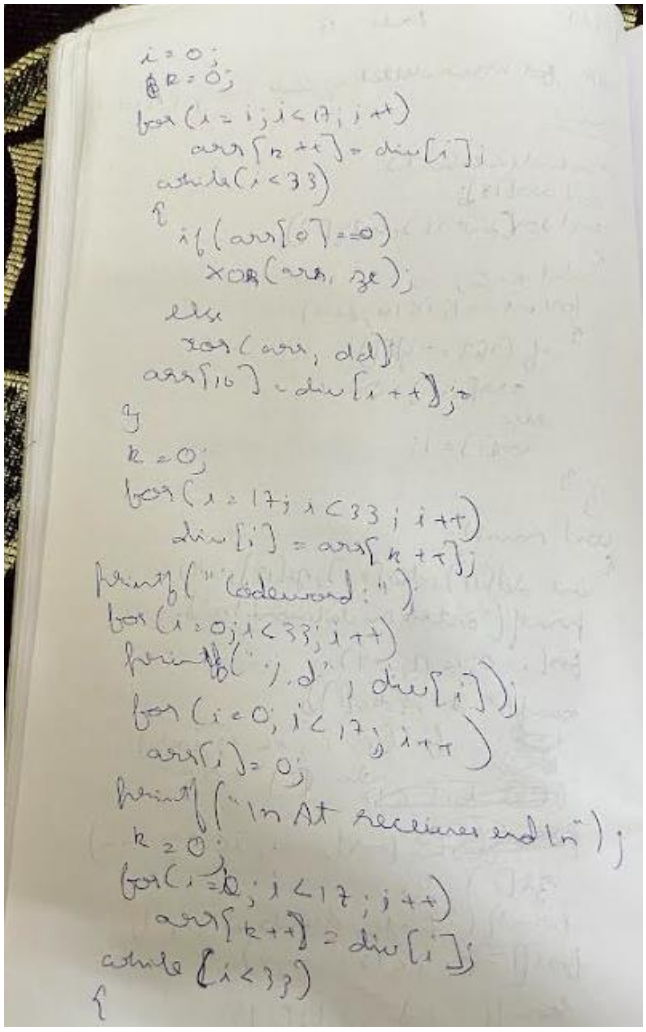
17/8/23 Lab - 13

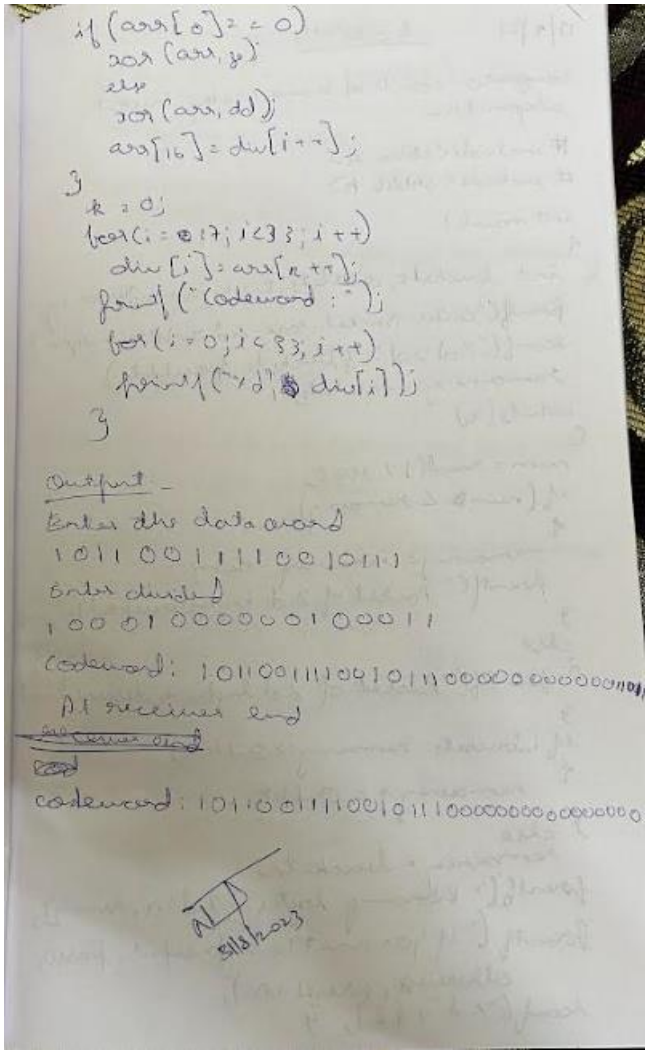
WAP for error detecting code using CRC-CCITT

Code:-

```
#include<stdio.h>
int arr[17];
void xor(int x[], int y[])
{
  int k=0;
  for(int i=1;i<16;i++)
  {
    if(x[i]==y[i])
      arr[k++]=0
    else
      arr[i]=1;
  }
}
void main()
{
  int dd[17], dw[33], ge[17], i, k;
  printf("Enter the dataword \n");
  for(i=0;i<17;i++)
  scanf("%d",&dw[i]);
  k=0;  for(i=i; i<33;i++)
        dw[i] = 0;
  for(i=0; i<17; i++)
  ge[i] = 0;
  printf("Enter divisor \n");
  for(i=0; i<17; i++)
  scanf("%d",&dd[i]);
```



```
i = 0;
k = 0;
for (i = i; i < 7; i++)
    arr[k++] = div[i];
while(i < 33)
{
  if(arr[0] == 0)
    xor(arr, ge);
  else
    xor(arr, dd);
  arr[16] = div[i++];
}
k = 0;
for(i = 17; i < 33; i++)
    div[i] = arr[k++];
printf("Codeword:");
for(i = 0; i < 33; i++)
  printf("%d", div[i]);
  for(i = 0; i < 17; i++)
    arr[i] = 0;
  printf("In At receiver end\n");
  k = 0;
  for(i = 0; i < 17; i++)
    arr[k++] = div[i];
while(i < 33)
{
```



```
Enter data to be transmitted: 1010101111

 Enter the Divisor: 10101


 Data padded with n-1 zeros : 1010101111000000000000000

CRC or Check value is : 1100
 rem strlen is : 4
 1010101111000000000000000
 1010101111000000000000100
 1010101111000000000000110

 Final data to be sent : 1010101111000000000000110

Enter the received data: 1010101111000000000000110


Data received: 1010101111000000000000110
Error detected


Process returned 0 (0x0)   execution time : 38.224 s
Press any key to continue.
```

```
Enter data to be transmitted: 100011100011

 Enter the Divisor: 1001


 Data padded with n-1 zeros : 10001110001100000000000000


CRC or Check value is : 000

 rem strlen is : 4
 10001110001100000000000000

 10001110001100000000000000

 10001110001100000000000000


 Final data to be sent : 10001110001100000000000000


Enter the received data: 10001110001100000000000000


Data received: 10001110001100000000000000
No error detected


Process returned 0 (0x0)   execution time : 20.893 s
Press any key to continue.
```