

## CODE :

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#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/types.h>
#include<string.h>
#include<sys/wait.h>

int main(){
    int fd1[2],n;
    pid_t pid;
    printf("\n Enter the number in the Fibonacci series :\n");
    scanf("%d",&n);
    int inbuf[n];
    int k=0,even_count=0,odd_count=0;
    int odd_array[n],even_array[n];
    if(pipe(fd1)==-1){
        fprintf(stderr, "Pipe Failed");
        return 1;
    }
    pid = fork();
    if(pid<0){
        fprintf(stderr,"Pipe failed");
        return 1;
    }
    else if (pid>0){
        close(fd1[1]);
        wait(NULL);
        read(fd1[0],inbuf,sizeof(inbuf));
        for(k=0;k<n;k++){
            if((inbuf[k]%2)==0){
                even_array[even_count]=inbuf[k];
                even_count++;
            }
            else{
                odd_array[odd_count]=inbuf[k];
                odd_count++;
            }
        }
        printf("\n");
        printf("\nFrom Parent Process(%d) : ",getpid());
        printf("\nEven elements from fibonnaci series:\n");
        for(k=0;k<even_count;k++){
            printf("%d ",even_array[k]);
        }
        printf("\nOdd elements from fibonnaci series:\n");
        for(k=0;k<odd_count;k++){
            printf("%d ",odd_array[k]);
        }
        printf("\n");
        close(fd1[1]);
    }
```

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    }
    else{
        int fibo[n],f=0,s=1,i=0;
        close(fd1[0]);
        for(i=0;i<n;i++){
            if(i<=1){
                fibo[i] = i;
            }
            else{
                fibo[i] = f + s;
                f = s;
                s = fibo[i];
            }
        }
        write(fd1[1],fibo,sizeof(fibo));
        printf("\nFibonacci series from child process(%d) :\n",getpid());
        for(i=0;i<n;i++)
            printf("%d ",fibo[i]);
        close(fd1[1]);
    }
}

```

## Output :

Enter the number in the Fibonacci series :  
10

Fibonacci series from child process(7738) :  
0 1 1 2 3 5 8 13 21 34

From Parent Process(7737) :  
Even elements from fibonnaci series:  
0 2 8 34  
Odd elements from fibonnaci series:  
1 1 3 5 13 21