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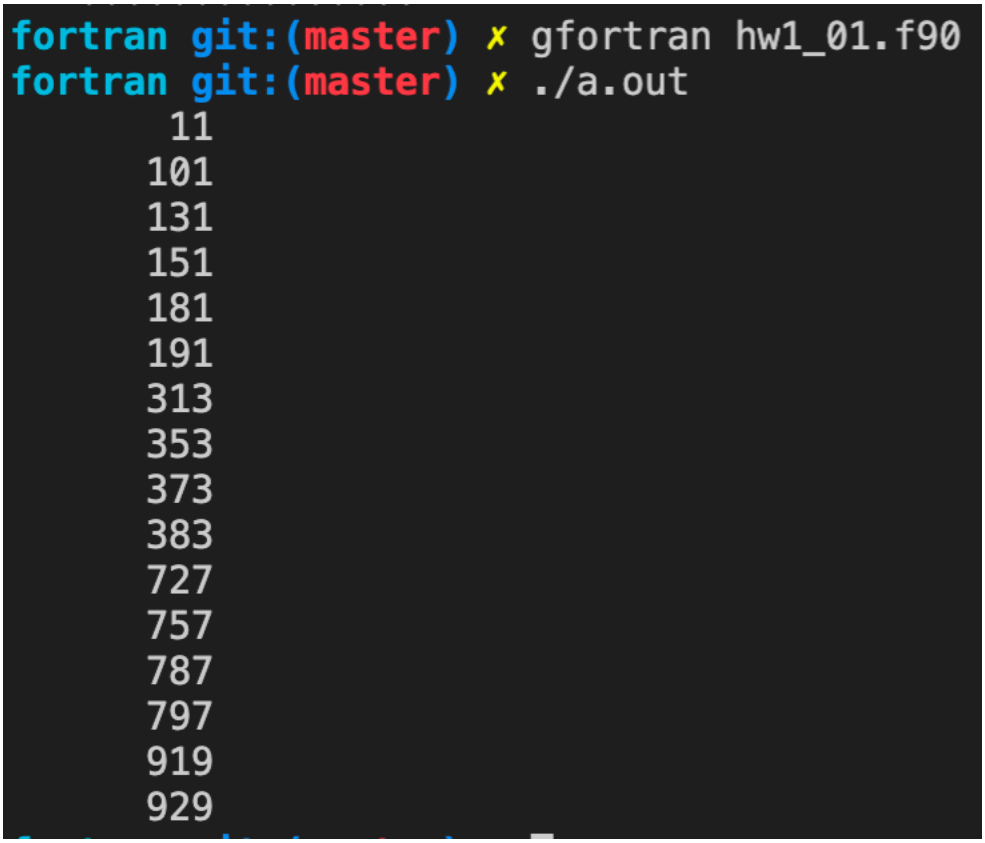
hw1_01.f90

```
program palineprime
    integer len,i,j,flag, num(100), list(10000)
    do i=1,10000
        list(i)=0
    end do

    do i=2,10000
        if(list(i)==0) then
            do j=i*2,10000,i
                list(j)=1
            end do
        end if
    end do

    do i=11,9999
        flag=0
        if(list(i)==1) then
            cycle
        end if
        len=0
        j=i
        do while (j>0)
            len=len+1
            num(len)=mod(j,10)
            j=j/10
        end do
        do j=1,len/2
            if(num(j)/=num(len-j+1)) then
                flag=1
            end if
        end do
        if(flag==0) then
            write(*,*) i
        end if
    end do

end program palineprime
```


fortran git:(master) ✗ gfortran hw1_01.f90
fortran git:(master) ✗ ./a.out
11
101
131
151
181
191
313
353
373
383
727
757
787
797
919
929

hw1_02.f90 > ...

```
1   program anorm
2       real*8 A1norm, a(1000,1000)
3       integer m,n,i,j
4       write (*,*) 'write down m,n'
5       read (*,*) m,n
6       do i=1,m
7           do j=1,n
8               write (*,*) 'write down a(', i ,',',j,')'
9               read (*,*) a(i,j)
10          end do
11      end do
12      write(*,*) A1norm(A,M,N)
13  end program anorm
14
15  real*8 function A1norm(A,M,N)
16      integer m,n,flag,i,j
17      real*8 max,cnt,A(1000,1000)
18      flag=0
19      cnt=0
20      do i=1,m
21          do j=1,n
22              cnt=cnt+A(i,j)
23          end do
24          if (flag==0) then
25              max=cnt
26              flag=1
27          else
28              if (max<cnt) then
29                  max=cnt
30              end if
31          end if
32          cnt=0
33      end do
34      A1norm=max
35  end function
```

```
➜  fortran git:(master) ✗ gfortran hw1_02.f90
➜  fortran git:(master) ✗ ./a.out
 write down m,n
2 2
 write down a(           1 ,           1 )
3
 write down a(           1 ,           2 )
4
 write down a(           2 ,           1 )
5
 write down a(           2 ,           2 )
6
   11.000000000000000
```

hw1_03.f90 > ...

```
program cosx
    real*8 x,ans,cosin
    x=0.5
    ans=int(cosin(x)*(10**7))
    ans=ans/10000000
    write(*,"(F9.7)") ans
end program cosx

real*8 function facto(x)
    integer x,y
    real*8 sum
    sum=1
    y=x
    do while(y>0)
        sum=sum*y
        y=y-1
    end do
    facto=sum
end function facto

integer function check(x)
    real*8 x
    check=mod(floor(x*1000000),10)
end function check

real*8 function cosin(x)
    real*8 x,sum,facto,prev
    integer now, pow, check
    sum=1
    now=0
    prev=0
    pow=2
    do
        if(now==0) then
            prev=sum
            now=1
            sum=sum-((x**pow)/facto(pow))
        else
            prev=sum
            now=0
            sum=sum+((x**pow)/facto(pow))
        end if
        pow = pow+2
        if(prev/=1 .and. check(prev)==check(sum)) exit
    end do
    cosin=sum
end function cosin
```

```
➜  fortran git:(master) ✗ gfortran hw1_03.f90
➜  fortran git:(master) ✗ ./a.out
0.8775825
```