Correction of second Semester Make-up Exam

Exercise 1 (5 points)

```
program exo1
real::x,y,z,m,n
write(*,*) "input x y z"
read(*,*) x,y,z
if( (x<y).and.(y<z)) then
write(*,*) "m=",x,"n=",z
end if
if( (x<z).and.(z<y)) then
write(*,*) "m=",x,"n=",y
end if
if( (y<x).and.(x<z)) then
write(*,*) "m=",y,"n=",z
end if
if( (y<z).and.(z<x)) then
write(*,*) "m=",y,"n=",x
end if
if( (z<x).and.(x<y)) then
write(*,*) "m=",z,"n=",y
end if
if( (z<y).and.(y<x)) then
write(*,*) "m=",z,"n=",x
end if
end program exo1
```

Exercise 2 (5 points)

```
program exo2
real::u(100,100), l(100,100),du,dl
integer::i,j,n
write(*,*) "input n"
read(*,*) n
if(n<100) then
write(*,*) "reading the matrix u"
do j=1,n
  write(*,*) "input colon",j
  do i=1,n
if(i<=j) then
    read(*,*) u(i,j)
else
u(i,j)=0
end if
  end do
end do

write(*,*) "reading the matrix l"
```

```fortran
do j=1,n
  write(*,*) "input colon",j
  do i=1,n
if(i>=j) then
    read(*,*) l(i,j)
else
l(i,j)=0
end if
  end do
end do

du=1
do i=1,n
du=du*u(i,j)
end do
write(*,*) "du=",du
dl=1
do i=1,n
dl=dl*l(i,j)
end do
write(*,*) "dl=",dl
end if

end program exo2
```

Exercise 3 (5 points)

```fortran
program exo3
real::x,y
integer::N
write(*,*) "input x and N"
read(*,*) x,N
if(x**2-1>0) then
y=(x**2-1)**(1./N)
write(*,*) "y=",y
end if
end program exo3
```

Exercise 4 (5 points)

```fortran
program exo4
real::r,h,v
write(*,*) "input r and h"
read(*,*) r,h
v=3.14*r*r*h
write(*,*) "v=",v
end program exo4
```