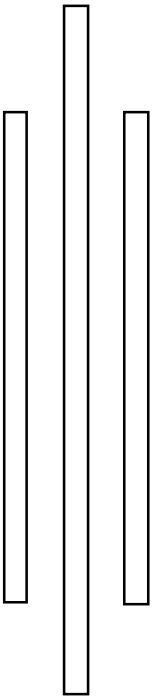
TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

Lab Sheet #12



PURWANCHAL CAMPUS

DHARAN-8

Submitted by:

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Group: I/I 'A'

Date: .....

Submitted to:

Department of

Electronics & Computer

Engineering

Checked by: .....

Title:

Write A FORTRAN Program (WAFP) to display “Welcome to Fortran Language”.

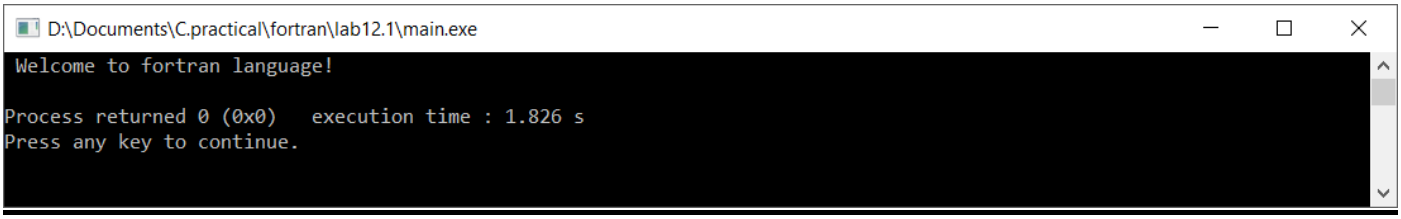
Code:

```
! A fortran95 program for G95
! By WQY
program welcome
  implicit none

  write(*,*) "Welcome to fortran language!"

end
```

Output (Compilation, Debugging and Testing):



Title:

Write a FORTRAN program to read three integers of same width using I format specifier.

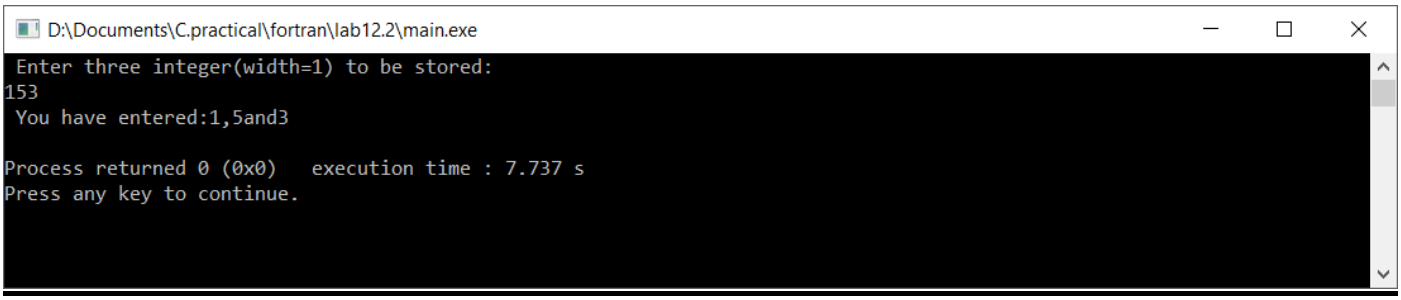
Code:

```
!reading three integer of same width
program main
   integer a,b,c

   write(*,*),"Enter three integer(width=1) to be stored:"
   read(*,101),a,b,c
   write(*,102),"You have entered:",a,',',b,'and',c
101 Format(I1,I1,I1)
102 Format(A18,I1,A1,I1,A3,I1)
```

End

Output (Compilation, Debugging and Testing)



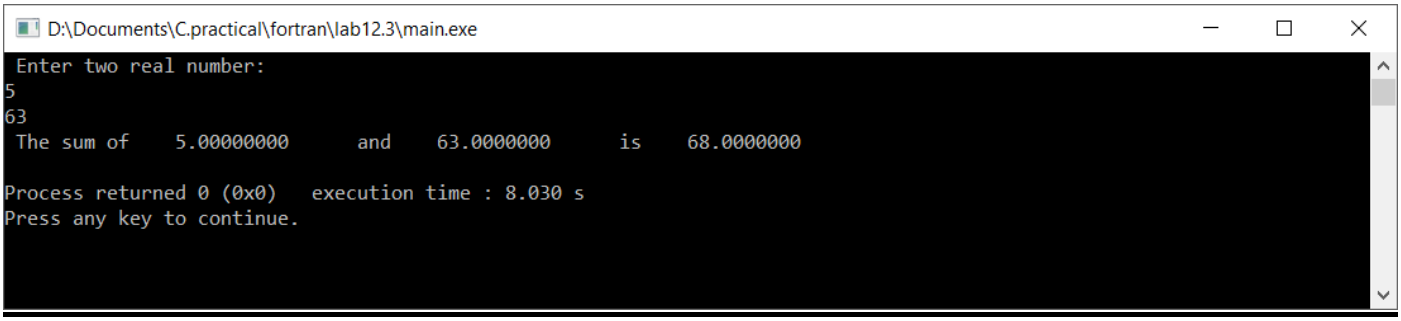
Title:

WAFP to read two real numbers in fractional form and display their sum in exponential form.

Code:

```
!program to find sum
program sum1
   real a,b,su1
   write(*,*)'Enter two real number:'
   read(*,*)a,b
   su1=a+b
   write(*,*)'The sum of ',a,' and ',b,' is ',su1
end program
```

Output (Compilation, Debugging and Testing):



Title:

WAFP to read sex code (1: for male & 2: for female) from user and display corresponding sex using computed GOTO statement)

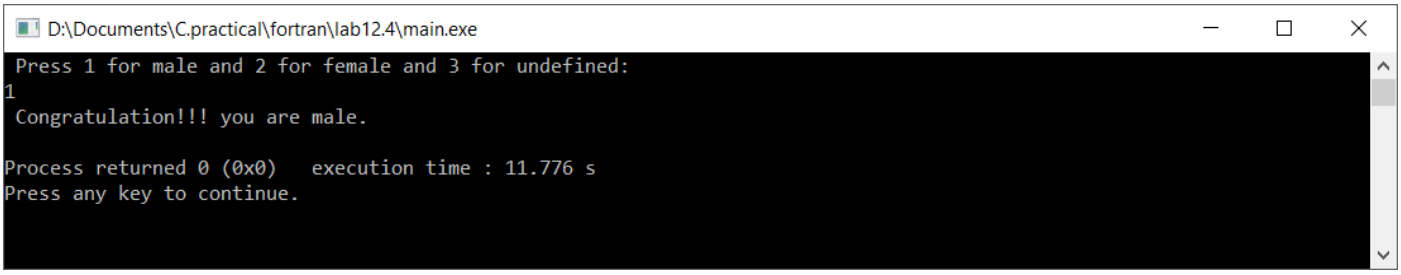
Code:

```
!computed GOTO
program main
   integer s

   write(*,*)"Press 1 for male and 2 for female and 3 for undefined:"
   read(*,*),s

   GO TO(100, 101,102),s
100 write(*,*)"Congratulation!!! you are male."
stop
101 write(*,*)"Congratulation!!! you are female."
stop
102 write(*,*)"Sorry!!! you are sex is undefined."
stop
end program
```

Output (Compilation, Debugging and Testing):



Title:

WAFP to read a number from keyboard and display whether it is positive, negative or zero

Code:

```
!comparing numbers
program main
   real n
   write(*,*)'Enter a number:'
```

```
   read(*,*)n
   if(n)100,101,102
100 write(*,*)'You have entered negative number.'
stop
101 write(*,*)'You have entered Zero.'
stop
102 print *,'You have entered positive number.'  !x>y .and. x<y is also valid
stop
end program
```

Output (Compilation, Debugging and Testing):

Title:

WAFP to find factorial of a number.

Code:

```
!factrioal
program main
   integer n,f,i
   f=1
   write(*,*)'Enter number:'
   read(*,*)n
   do i=1,n
   f=f*i
   enddo

   write(*,*)"The factrioal of",n,"is",f
end program
```

Output (Compilation, Debugging and Testing):

Title:

WAFP to find greatest among five numbers stored in an array.

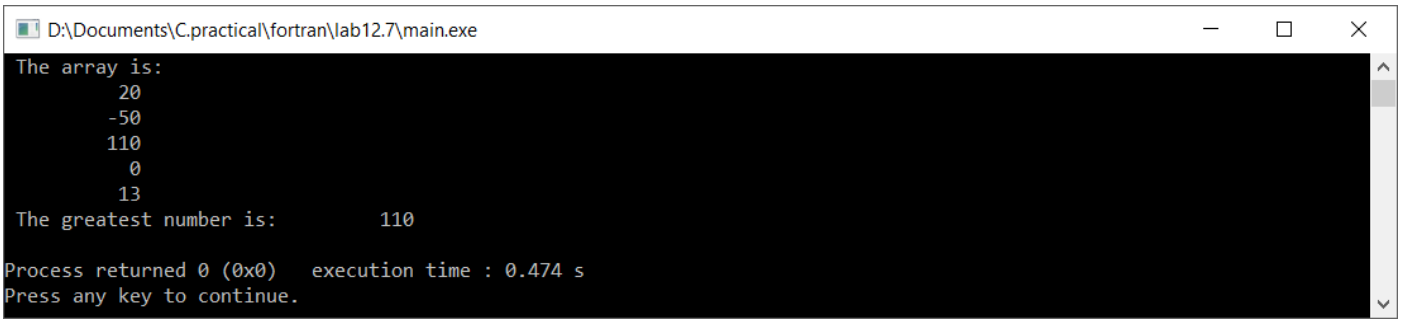
Code:

```
!using array
program main
   implicit none
   integer a(5),i,j
   integer ma

   data(a(i),i=1,5)/20,-50,110,0,13/
   write(*,*)'The array is:'
   do i=1,5
      write(*,*)a(i)
   end do
   ma=a(1)
   do j=1,5
      if(ma.lt.a(j)) then !we can also use '>'or'<'  , power=**
       ma=a(j)
       endif
      end do

      write(*,*)'The greatest number is:',ma
end program main
```

Output (Compilation, Debugging and Testing):



Title:

WAFP to read marks of 10 students in a subject and display top three marks.

Code:

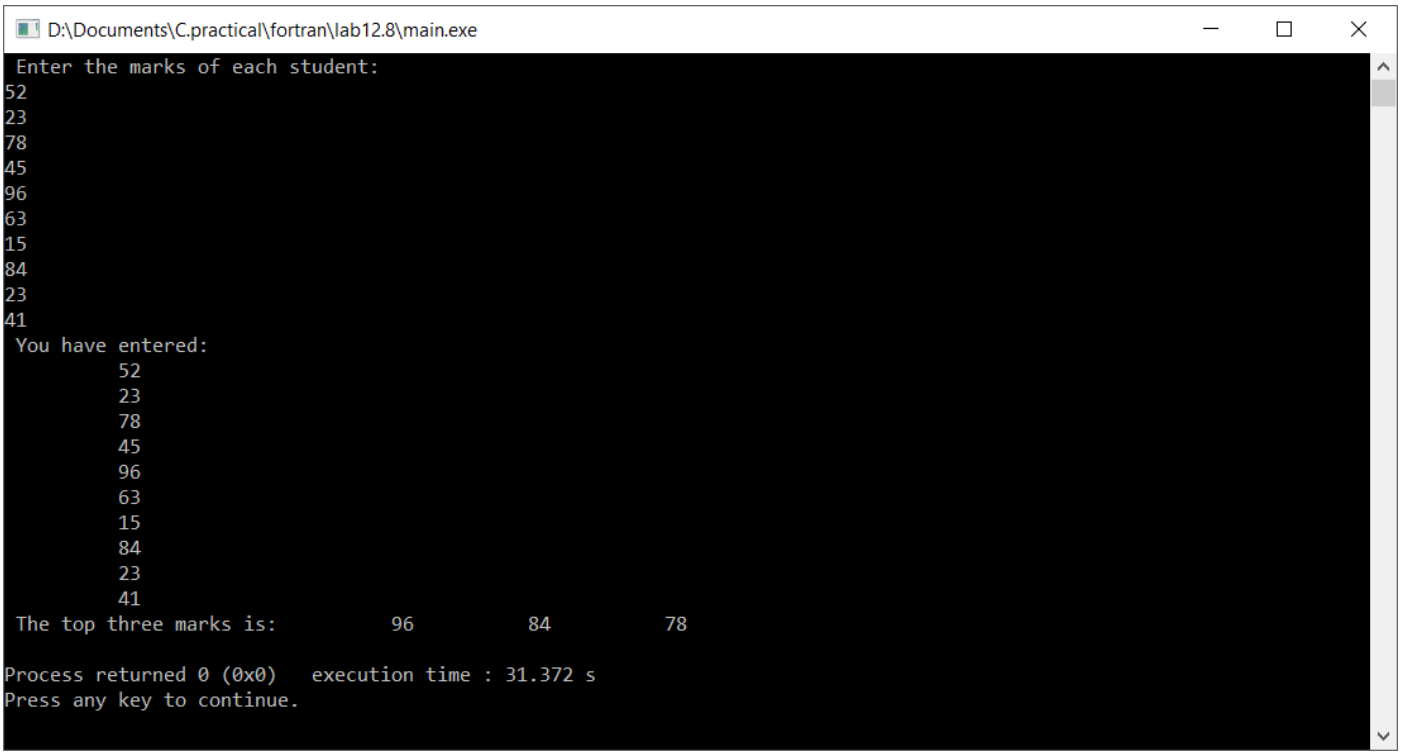
```
!recording student marks
program main
   integer i,j,m(10),temp


   write(*,*),'Enter the marks of each student:'


   do i=1,10
      read(*,*)m(i)
      enddo
   write(*,*)'You have entered:'
   do i=1,10
      write(*,*),m(i)
   end do
   do i=1,9
      do j=i+1,10
         if(m(i).lt.m(j)) then
            temp=m(i)
            m(i)=m(j)
            m(j)=temp
         end if
```

```
    end do
  end do
  write(*,*),'The top three marks is:',(m(i),i=1,3)
end program
```

Output (Compilation, Debugging and Testing):



Title:

WAFP to read two matrix of size 3X3 and display the sum matrix. Also display the transpose of the first matrix.

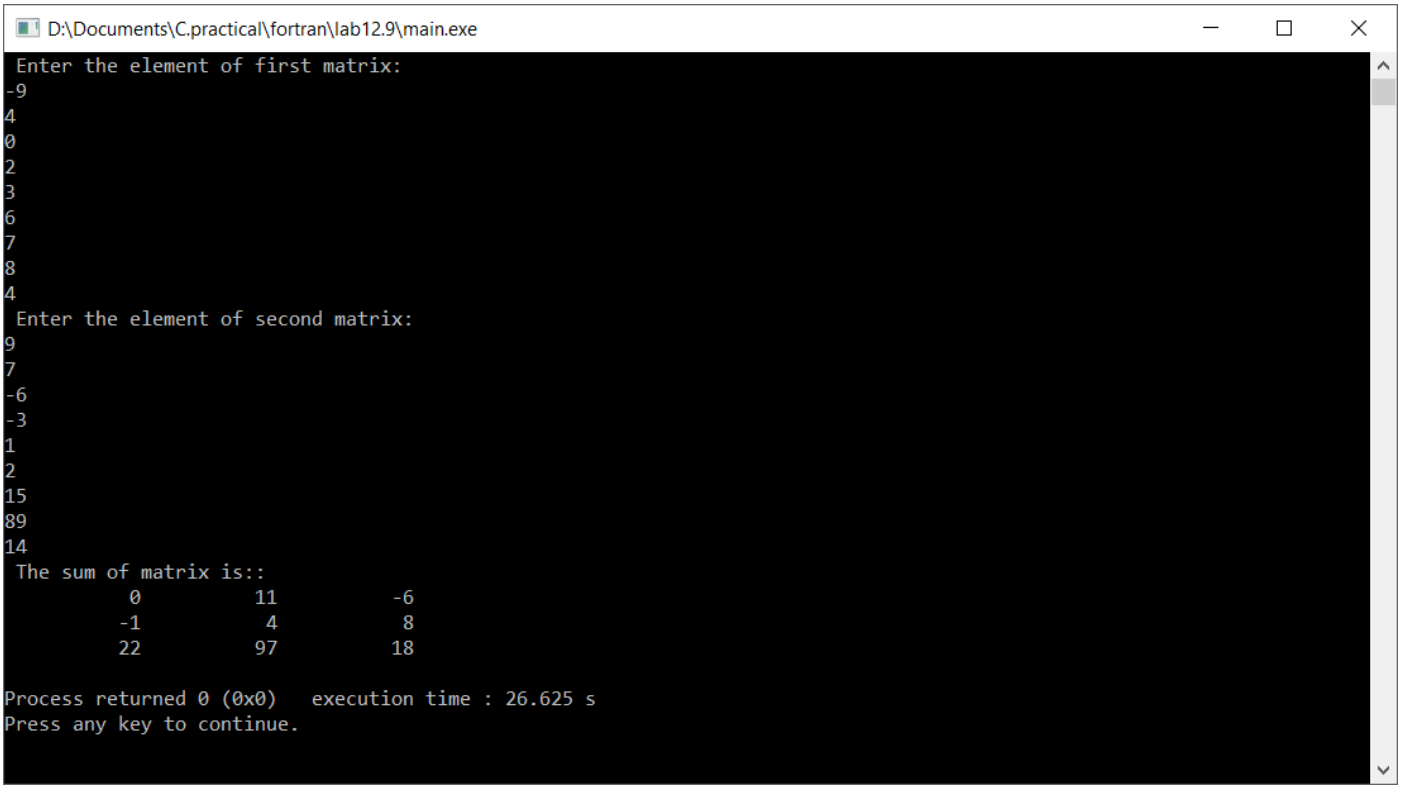
Code:

```
!matrix addition
program matrix
  integer m1(3,3),m2(3,3),m(3,3)

  write(*,*)'Enter the element of first matrix:'
  do i=1,3
  read(*,*),(m1(i,j),j=1,3)
  enddo
  write(*,*)'Enter the element of second matrix:'
```

```
    do i=1,3
    read(*,*),(m2(i,j),j=1,3)
    enddo
    do i=1,3
       do j=1,3
          m(i,j)=m1(i,j)+m2(i,j)
       end do
    end do
    write(*,*)'The sum of matrix is::'
    do i=1,3
    write(*,*),(m(i,j),j=1,3)
    enddo
end program
```

Output (Compilation, Debugging and Testing):



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